A BEST-PRACTICE MODEL FOR TERM PLANNING

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1 Introduction

This document summarises the findings of a research trip to Stockholm on 24-30 August 2009, in which the staff of Terminologicentrum TNC, or TNC as it is generally referred to (and will be in this report), and external experts were interviewed. The aim of the interviews was to find out about TNC's work as an organisation and its work in particular areas, such as research and training; the aim was also to reflect on the strengths and weaknesses of the particular approach taken. Extracts from the interviews (and from other, written, sources) have been used to illustrate the answers to the questions in this document. For a list of the interviewees and their roles, see page 138.

1.1 Introductory notes on the Swedish case

Background

TNC was established in 1941, and has a long history rooted in the engineering and scientific tradition.

> The Swedish national centre for terminology, TNC, is the hub of Swedish terminology work, and also one of the oldest terminology centres in the world. The Swedish Centre for Technical Terminology (*Tekniska nomenklaturcentralen*, TNC) was founded as early as in 1941 on the initiative of the Academy of Engineering Sciences (IVA) and other interested parties, such as engineers and inventors. In 2001 the "old" TNC became the *Terminologicentrum* TNC (The Swedish Centre for Terminology). (Nilsson 2010, 64)

> The first steps were taken in 1936, when a committee for nomenclature within the Academy of Engineering Sciences was established. Engineers, especially inventors and standardisers, took the initiative "to meet the growing need of an adequate terminology". Five years later, in 1941, a permanent centre for technical terminology was established on the basis of the committee and with statutes laid down by the government. Its name became Tekniska nomenklaturcentralen (the Swedish Centre for *Technical* Terminology) and its acronym was TNC. In 2000, the TNC was reconstructed and the name was changed into Terminologicentrum TNC (The Swedish Centre for Terminology). The name was deliberately made more general in order to reflect the widening of the centre's activities. However, the acronym TNC was kept in order to emphasize the continuity of its activities. (Bucher 2007, 39, emphasis original)

TNC's work has not remained limited to the field of engineering.

> During the last 60 years, more and more subject fields have been covered by TNC's activities. TNC's competence and experience have increased, the use of new technology has made work more efficient and far-reaching, and the distribution of results, in the form of glossaries for example, has improved. (Nilsson 2004 [with correction by AL Bucher])

> The overall aim of Terminologicentrum TNC is to meet all kinds of terminological needs of users of languages for special purposes. TNC achieves this through

terminological services and support to authorities, organizations, enterprises that pursue terminological work of their own within various subject fields, and also to individuals

the development of terminological products such as terminological glossaries and databases, compilation of manuals for technical writing, etc.

the formulation of rules and guidelines for the writing of technical texts

collection, processing and dissemination of terminology of specialised subject fields

terminological reviews of standards and other documents containing terminology

lectures and courses on the principles and methods of terminology work and technical writing

co-operation with other language institutions on a national level and with terminological institutions on an international level. (Nilsson 2004)

The terminology work is, however, not as closely linked to LGP work as that of smaller languages might be (although the view that TNC is restricted to traditional standardisation is contested).

In my experience, TNC mostly works within the borders of traditional standardization: they help companies and organizations to create terminologies, and get paid for it. When it comes to terminology used by the media, we're mainly talking terminology on the border of general language, i.e. terminology exposed to the general public in TV, newspapers, etc. Terms of that kind are seldom generated within traditional standardization, and thus not taken care of by terminology bodies like TNC. (Karlsson email)

This is Ola Karlssons view of TNC seen from a distance and from an LGP point of view. It can not be used as a description of TNC, nor of terminology in relation to LGP. TNC rarely works within traditional standardization nowadays. Our customers are to largest extent public agencies (we would very much like to have more companies though). Terminology exposed to the general public can be of any kind, originate from any subject field, and if it is *real* terminology, TNC can very well be involved (or has been involved before it was exposed) in the elaboration of that terminology. Sometimes special measures have to be taken if very specific terminology is exposed to the general public, e.g. sometimes a superordinate term is better to use than a specific. But to "create" terms for the general public, that is not to be recommended. Terms are generated from the subject fields themselves. (Bucher addition)

TNC's terminology, and collections made available to TNC by other organisations, are primarily published in the Rikstermbanken term bank. This has been freely available (at www.rikstermbanken.se) since March 2009. It contains 65,000 terms after one year, but will constantly grow (Bucher addition).

Structure

One unusual aspect of TNC's structure is that it has, since 2001, had company status, although it does not make a profit.

… We were a non profit association and [now we are] a company, a private company – but [the] shareholders don't take out the profit; if there has been a profit it is all

reinvested so it is sort of an ideological private company, they are shareholders not making a big profit so that they can see that this can continue, this work. (Bucher)

OJ: No, that was a real - the TNC is a private company, so it's not an advisory board, it's the ruling board, so to say.

ÚB: So the board of directors

OJ: Yes. It's not executive but like in a private enterprise there is a board which has the uttermost responsibility of this enterprise. I was a member of that board as a sort of linguistic expert. Other members of that board were experts in running enterprises. (Josephson)

Today, the main shareholder is the *Swedish Standards Institute SIS* but among the owners can also be found *the Swedish Academy*, *the Finnish Centre for Technical Terminology* (*TSK*), as well as representatives from areas such as construction, mechanical engineering, geographic information, chemistry and information technology. (Nilsson 2004)

This is sometimes seen as helpful; other times it is a hindrance. There is a certain perception of private companies which has to be overcome.

It is different when we are in the academia, at universities, when we talk to universities, when we meet people from different academic disciplines and they are, 'did they say private company', private company, some are really disturbed by this, so they 'aha' and they ask about profits and 'what do you do this for' and then we have to stress the governmental support that we have, that is fifty per cent, so we're 'ok, so that's fine', and when we are meeting the industry, when we are having courses for companies and when we talk to companies or have projects with companies, they might at some times at the start feel that we are a very academic institution talking about having a theory, a general theory relating to our work or so, that usually changes after a while, so we are always odd wherever we are in one way or another but for different reasons… (Bucher)

Úna Bhreathnach: I suppose placing the emphasis on your government funding sometimes, or emphasising the company status...

Anna-Lena Bucher: That we are a consultant company, we can emphasise that when we are in the marketing… we have talked about this and we have talked to our board about this and that is something to think of when we meet, when we encounter different groups and we all must be aware of it. But I think, yeah, we are odd, but you can also look at it that we are a very flexible organisation. (Bucher)

It's mixed and it's difficult. For a European project it gets more difficult. It was easier before when we were this association. And now it's trickier. (Nilsson)

The advantage is an increased dynamism, flexibility and independence.

ÚB: I suppose being, not being part of the state structure means that you can be more dynamic in ways...

A-LB: Yes, yes and more independent. We are flexible and we can reprioritise and many here have lots of skills that one can teach another one... so with actually only ten terminologists you can do a lot of things. (Bucher)

For procurement I think there could be advantages, as such, and in business areas, promoting yourself as a company or selling whatever kind of product or course or.. (Nilsson)

A contradiction inherent in the company status is recognised by the interviewees.

Most people you ask would think we are a government authority. Which we never were, but then again we have this state-funded grant, and a mission, so it's the combining of these two which has been sort of chameleon or Jekyll and Hyde way, because in some areas it would be considered ugly to be commercial, and sometimes we feel that, we wish we were less commercial, and then times, why should I or why should language services be free, in one sense? Why should I be teaching for free when others do poorer things and they charge lots and lots. Because that's also a way of respecting status for the profession... (Nilsson)

I could think that in one way that it would be easier if it was just state funded and then anyone could ask anything. But then it would take more effort here and more people just doing that. Although we are not over flooded with questions, it's not that, but we would perhaps be if it was free. (Nilsson)

I think we do what needs to be done, but that the organisational form sometimes is a problem. It might be, I know it was for European major projects, it takes more preparation and it's stricter to be part of it, if you compare to a university institution or other kinds of organisational forms, it's easier, slightly easier for them. (Nilsson)

So the thing is that the general notion of the image is still more non-commercial, and in that sense, it makes it slightly difficult to be commercial. If everyone thinks you are an authority and non-commercial and you come and you present it as a commercial thing... (Nilsson)

We're turning into the company that we are now, not only the state-funded organisation but the company, and we need to sell courses. (Nilsson)

This flexibility can backfire, as TNC is largely dependent on obtaining contract work.

OJ: They only do terminology when they are asked for it, when they are paid for it, so that it will get used. Of course that is also a bit of a weak point. Because it means that there are some areas in Swedish society where the terminology is very weak; I think economy is such one. And since no one asks for it nothing is done, and that's a bit problematic. And it can be problematic also for TNC as an institution. It was very big in the middle of the '90s when Sweden entered the EU and a lot of terminological work had to be done, and it expanded a lot. But then when that was finished they were too big really and they had a financial crisis and went bankrupt. Perhaps you know that. And had to reorganise in 2000, 2001. And that is the weak side of this form of organisation.

ÚB: I suppose they're financially dependent on getting work and getting contracts.

Olle Josephson: Yes. And sometimes there are good times and sometimes there are bad times. So that's on the one hand problematic. On the other hand that's the strong side of their activity because when people pay for [terminology] they really want it and they use it. (Josephson)

I think the problematic point is really this organisational form, but it's hard to find another way to do it. It is a bit problematic still. When we discussed organisational matters around 2000-2001, I argued that it would be a good thing if TNC became a department, a rather independent department of the Language Council. And I'm not convinced that I was wrong. But I am convinced that TNC has done a very good job in the last 8 or 9 years without being a department, that's sure. But maybe that would have facilitated some initiatives towards some sectors where terminology is not very well developed. TNC today, the big projects are financed by the public authorities… And one argument for not doing TNC as part of a public authority, was that private enterprises wouldn't ask for service from a department of a public authority. But the problem is that private enterprises do not ask for services now anyway. So that's a bit problematic. I don't know really how to solve this problem, but that is a problem. (Josephson)

..But I think it's a good thing for example that TNC isn't related too much to academia, it should not be a part of a university or such things, no. Because universities have two things to do, research and education, and terminological work, daily work, is another thing, it's practical work and it would be placed in a very unfavourable position if it had to be done at university. (Josephson)

I don't intend to criticise TNC, its work is very important and useful, but having an income based corporation as an official terminology body means that non-commercial terminology needs will suffer. I am myself exposed to this problem: I want to initiate a terminology project dealing with official Swedish geographical names (mainly the names of foreign nations), and I need TNC to participate in order to secure the terminological quality. This is of national interest, but TNC needs money for their participation. Money we don't have. (Karlsson email)

Staff

TNC had thirteen staff and now has ten.

We are thirteen people employed. I and two more are working mainly with administration. Ten are working with terminology, plus we have one who is also the librarian. (Bucher)

From 2010 we are only ten people. The financial crisis had an influence on TNC's project activities, we were assigned less projects, and we had to cut costs. Not only the private companies were restrictive but also public agencies. (Bucher addition)

The staff members have different backgrounds, both linguistic and scientific.

HN: The interesting [thing] here which normally surprises people is that it's sort of two departments, without being departments in an organisational way, so you have a science department, where you have a mathematician, a chemist, a nurse, a geologist and a computer scientist. Then you have the traditional terminology personnel profile, linguistics, language, information science, translation, language consultant... And

normally it surprises people that we have technical people with language interests and language people with technical interests. (Hallberg, Nilsson)

This is a deliberate policy, rooted in TNC's science/engineering tradition, but also in the experience that those with scientific backgrounds tend to be good at terminology.

ÚB: And why do you take that approach? Did that just happen, or was that deliberate policy to recruit people with all sorts of backgrounds?

HN: I remember the last time we did a job ad it was for someone, how was it put, technician with language interests or something. It was quite deliberate.

KH: Because we.. I think that's something that's been in the terminology centre, the Swedish terminology centre already from the start, that we have that interest as it was actually started by scientists, natural scientists, and the Royal Academy of Engineering, so of course they were the ones who had the need, of course you need to have the knowledge of language, you just can assist the people who know the technical background. I think that's a tradition here. (Hallberg, Nilsson)

KH: …I think that people, in my experience, that people coming from a scientific side, they have this analytical way of thinking which is very much, you need [it] in terminology work. You have to analyse and you have to structure...

HN: It's something we've noticed without ever having studied it in depth, just a hunch we get when we teach non-linguistic students, science students, which happens occasionally, or other groups, with engineers or standardisers, it seems that they get the picture quicker or in another way. But sometimes you feel that people with a linguistic background, it somehow changes their perceptions, and this seems to be some sort of defence mechanism – 'I won't take this in because it's not what I've learned and this is against all I know about semantics' or what have you – especially professional linguistic people might have a - not hostile, I wouldn't say, but they're reluctant to change their views on language. (Hallberg, Nilsson)

HN: It's quite interesting, why it's turned out this way here, because normally it surprises people. There's a conception that you need a full linguistic training, otherwise it will be difficult, and we can prove there is another way. (Hallberg, Nilsson)

This perspective is borne out by one of the interviewees, a terminologist with a background in mathematics.

SW: I think it's good because I'm interested in what I'm working on, I'm interested in science and technology, for instance I read three or four magazines, there's a technical newspaper that comes out every week and I read and I think it's really interesting…

ÚB: So you're not just interested in the language, you're interested in the area as well.

SW: Yes, I read it and I see the new concepts, and I see how they're trying to make good terms. I don't know if I'm explaining it, but for instance many of my friends are mathematicians or engineers and if I go to a dinner party they always ask me if I'm studying interesting questions. They think it's really interesting to hear about. I suppose it's the same with a small language or a dialect because they're interested if somebody's working on *their* language, the one that *I* use, that the big institute is not working on because it's too small.

ÚB: So it's good to have, it's good for you personally to have a subject area that you're interested in. It probably means that your work, that you have more specialised knowledge, that you understand concepts and you understand what's going on.

SW: When I call somebody and ask a question, I can usually understand the answer. So it's an advantage, I think. (Waldén)

The importance of having a variety of skills, including interpersonal skills, is emphasised.

You have more and more competence and more different angles used, and not only linguists, I think the ideal is people with double backgrounds, technological or scientific plus some sort of linguistic or translation theory... (Bucher)

It is a fact in Sweden that up till now there has been no or very few trained terminologists to employ. Therefore, when employing somebody who is going to work as a terminologist, i.e. become a terminologist, you could look among persons having varying educational backgrounds, and especially look for new backgrounds which you do not yet have in your team. (Bucher addition)

A-LB: For another terminology centre in another country I think what you can learn from us is to think of these qualifications or qualities in a person when you employ a terminologist or a terminologist-to-be: that should be a person who is socially competent, open to deal with others, analytical and problem-oriented

ÚB: It's not just to do with linguistics....

A-LB: No, no, 'I want to do this, and I prefer to do it on my own', is not the right attitude in terminology work I feel that is a basic, that's our experience, and it is also good when you meet experts, whom you have not met before... It's easy to deal with them if you are open-minded and prepared to cooperate closely. And also what others could learn from TNC is that… it is very fruitful to be together many terminologists because there is so much experience from different projects and to discuss and to deal and to share these experiences is very valuable.

So if you should start [a terminology centre] in some other country three persons with different educational backgrounds would be a good start, I think. (Bucher)

This is rather different from an academic or research-oriented view of terminology, reflecting the fact that most of the terminologists get involved in all aspects of TNC's work, including training and marketing.

One person here has a doctor's degree, but that's only one of us. And whilst at the general language council here you need to have a doctor's degree for certain positions, that's a totally different view of the thing, but looking at what they produce, being universities, mainly teaching, and doing practical stuff when they have time, and we are the other way round.

For the director of TNC, the staff's specific knowledge as trained terminologists is one of the strong points of the organisation.

One thing which we were late in being aware of was the specific knowledge and competence that a terminologist has, and I think that might at least be international or at least European or maybe international since the profession of a terminologist is fairly unknown still, much better known than twenty years ago, but it is still a very [small] group of people working in it, and that implies that we were late, even though it is an old organisation, in realising, in having a respect for our own knowledge, in seeing that we have a very specialised and very qualified experience actually because it was sort of a sign that knowledge had grown and grown and that we sort of learnt by doing and sometimes you couldn't compare your knowledge to the knowledge of other linguists or translators, you couldn't see, but we have much more experience now and we also have one good way of realising our own competence, that is, to give courses, lectures, training. (Bucher)

One pitfall, it sort of didn't come like this, but over the years, when I look back, that is that we did not recognise our own professional role enough. We did that very late actually, so I think that if you start a terminology centre or if you open a department for terminology in a public agency or an organisation, those who take the step should know that this is a very important task and a very specific skill set… (Bucher)

On the other hand, the lack of trained terminologists who can be taken on by TNC is a problem, because of the lack of terminology training in Swedish (see page 106). This means that training work has to be done in-house.

That is always hard because we can't go out and find trained terminologists who can start working as a project leader for terminology tomorrow. So training is done while working, learning by doing, here. (Bucher)

1.2   Notes on the sociolinguistic background

Several points were made during interviews and in source material about the general sociolinguistic situation for Sweden and Swedish, although this was not a specified area for discussion.

Scientific tradition

It was noted that Sweden has a long scientific tradition, which means that terminology is very much accepted.

Sweden has a strong tradition of systematizing and categorizing going back to Linnaeus and Berzelius. (Nilsson 2004)

To have a *scientific tradition* in a country is favourable to the type of work that terminology represents. In Sweden and Finland there has been a strong tradition of systematizing and categorizing knowledge, and this tradition has certainly contributed to the establishment of TNC and TSK [the Finnish terminology centre]. Another part of the scientific tradition is that in Sweden and Finland skills in foreign languages are widely respected and taught at many levels and sectors of both basic and professional education. (Bucher 2000, 4-5)

Social approach to terminology

In general it was felt that there is a social, rather than a cultural, approach to terminology and to language. This means that communication is the aim of terminology work, not the development or the preservation of the language itself in the face of, for example, the threat from English. There is already provision of dictionaries which cover terminology in specific areas, such as business or law dictionaries, although they do not always include definitions.

When it comes to business and law dictionaries there are quite a few Swedish, Swedish–English, sometimes also with German and French equivalents. Some of them have definitions in Swedish, some not. We would argue that dictionaries for students should include definitions – and that is also our aim in our work with Rikstermbanken: most terminology collections that have been accepted for inclusion contain definitions in Swedish. (Bucher addition)

Compared to Catalan and Irish for example it's important to stress that TNC is really working on real language for special purposes and not very much on terminology that is very close to general language. I think, I don't know really, but I think that problems are others when you come to these languages, these big minority languages. (Josephson)

The making of handbooks, grammars, glossaries, dictionaries and so on in support of Swedish has a long tradition. Olle Josephson, the director of the Swedish Language Council, says that language cultivation acts – acts of Sprachpflege if we use the German word – in today's Swedish language community typically are informed by a "social" rather than a "cultural" ideal. The social ideal generates arguments that stress user-friendliness and aims at efficient communication between all citizens and residents on as equal terms as possible. Language cultivation from a cultural point of view focuses on the language, not its users, and rather strives to keep and develop a rich, multifaceted language with strong traditions and to promote an expressive, logical, and consistent language system on the foundation of its historical tradition…

Those gentlemen (yes, it was only *gentlemen!)* that founded the TNC were very far-sighted. Still today, more than 65 years later, we at the TNC agree with the primacy of the social ideal – and we look upon our work as "modern". Our attitude is very pragmatic, we solve communication problems of specific user groups and it is natural to recognize the "social" way as the only feasible way. The needs and demands of doing this come from the roots of specialists' need for an efficient communication. The measure of success, the result, of our work is satisfying their needs, and for that very same reason the result, the terminological outcome, implies agreement and acceptance. Without any normative prescription whatsoever, the agreement comes to serve as the norm for its particular user group. Thus, it is not because of directives from of above but from a particular client group's own felt needs that their terms become the norm, for them. This norm unifies usage in that network of users. (Bucher 2007, 38-40)

Die grundlegenden Prinzipien der Sprachrichtigkeit sind ein gemeinsames Merkmal für die gesamte nationale Sprachpflegearbeit. Die Verwendung der Begriffe *kulturelle Sprach-pflege* und *soziale Sprachpflege* ist ein Indiz dafür, dass die schwedische Sprachpflege einen sozialen Ausgangspunkt hat. Ein sozialer Ausgangspunkt verfolgt

das Ziel, dass allen die Möglichkeit gegeben werden sollte, miteinander so effektiv und gleichberechtigt wie möglich kommunizieren zu können sowie möglichst unter denselben Bedingungen. Die Argumente für die soziale Sprachpflege sind anwenderbezogen: Sprache soll effizient und leicht verständlich sein und gut funktionieren. Die Argumente der kulturellen Sprachpflege sind eher sprachbezogen: ausdrucksvoll, logisch, korrekt, traditionell, reich, nuanciert, konsequent sind wichtige Stichwörter. Der soziale Aus-gangspunkt war sicherlich ein Grund für die Gründung des TNC.[1] (Bucher 2008)

Das TNC muss jedes Jahr dem Ministerium Bericht erstatten, wie die staatliche Finanzierung verwendet worden ist. In jedem Bericht wird begründet, warum eine gleichbleibende oder höhere Finanzierung erforderlich ist.

Als Argument wird der Nutzen für die gesamte Gesellschaft genannt, nämlich, dass schwedische Terminologiearbeit in organisierter Form Schwedens Wett-bewerbsvorteil und Wachstum erhöhen kann, dadurch dass sie zu folgenden vier Punkten beiträgt:

1. Eine funktionsfähige Sprache in allen Bereichen

Passende und funktionsfähige schwedische Fachterminologie, auch in neuen Fachgebieten, ist eine Voraussetzung dafür, dass Schwedisch in allen Bereichen der Gesellschaft angewendet werden kann.

2. Terminologie beim Aufbau von Informationsinfrastrukturen

Mit der zunehmenden Komplexität der Gesellschaft nimmt auch der Bedarf an präzisen sprachlichen Ausdrucksmitteln zu. Heute gibt es immer mehr Gründe, warum Terminologiearbeit benötigt wird, es geht allerdings immer noch darum, die Kommunikation zu verbessern. Es liegt auf der Hand, dass strukturierte Informationen und präzise Terminologie erforderlich sind, wenn Computer in irgendeiner Form in die Kommunikation involviert sind.

3. Deutliche und verbindliche Richtlinien, Rechtstexte und Verwaltungstexte

Gut ausgearbeitete Definitionen in Rechtstexten, Richtlinien und ähnlichen Texten können zu einer einheitlicheren Anwendung von Gesetzen beitragen und sprachlichen Auslegungsstreitigkeiten vorbeugen.

4. Übersetzte Fachtexte ohne Zweideutigkeiten und Unklarheiten

Der Zugang zu einer korrekten mehrsprachigen Terminologie ist ein zentrales Anliegen jeder übersetzungstätigkeit. Ebenso wichtig ist es, dass übersetzer gute Kenntnisse und Strategien besitzen, um terminologische Schwierigkeiten zu lösen, sodass ein eindeutiger Text geschaffen wird. In diesem Zusammenhang sollten übliche und

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[1] 'The basic principles of clear language is a common feature for the entire national language maintenance work. The use of the concepts of "cultural language maintenance" and "social language maintenance" is an indication that the Swedish language maintenance has a social base. A social base means pursuing the goal that everyone should be given the opportunity to be able to communicate as effectively and equitably as possible, and as much as possible under the same conditions. The arguments for social language maintenance are motivated by the user: language should be efficient and easy to understand and well-functioning. The arguments of cultural language maintenance are more likely to be language-motivated: expressive, logical, correct, traditional, rich, nuanced, consistent are important keywords. The social approach was certainly one reason for the creation of TNC.'

festgelegte Termini verwendet werden, anstatt Wörter "nur" zu übersetzen.[2] (Bucher 2008)

This social background is reflected in the fact that TNC is funded by the Ministry of Enterprise, Energy and Communications, while the Swedish Language Council, responsible for general language cultivation, is funded by the Ministry of Culture.

> Hier sei angemerkt, dass das TNC seine staatliche Finanzierung vom Ministerium für Wirtschaft, Arbeit und Kommunikation erhält, da die allgemeine Sprachpflegearbeit beim staatlichen Sprachenrat (die Hauptorganisation für Sprachpflege in Schweden, die dafür zuständig ist, die Entwicklung der gesprochenen und ge-schriebenen schwedischen Sprache zu verfolgen und zu beschreiben) durch das Ministerium für Kultur finanziert wird. Die ökonomische Bedeutung, die der Terminologiearbeit für das schwedische Wirtschaftsleben zukommt, ist einer der Gründe für die jetzige Form der Finanzierung.[3] (Bucher 2008)

It is also reflected in TNC's mission statement, which is focused on communication and clarity.

> We have our mission statement or whatever, for clear-cut communication without any disturbances, and we have used slogans. And, as we have in translation, we make concepts clearer. And… that should be our slogan because we are actually doing it. (Nilsson)

Awareness of language questions

A raised awareness about language in society in general is noted. Domain loss, in particular, is a cause for concern.

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[2] 'The TNC must report annually to the Ministry how the state funding has been used. In each report, the rationale is given for why a stable or increased funding is required. The argument of the benefits for society as a whole is used, namely that an organised Swedish terminology work may increase Swedish competitive advantage and growth, thus that it contributes to the following four points: 1. A functional language in all fields. Swedish functional and technical terminology, including new fields, is a prerequisite so that Swedish can be used in all sectors of Swedish society. 2. Terminology in the development of information infrastructures. With the increasing complexity of society, the need for precise language of expression is increasing. Today there are ever more reasons why terminology work is needed, but it is still a matter of improving communication. It is clear that structured information and precise terminology is needed when computers are involved in any form of communication. 3. Clear and binding directives, legal documents and administrative documents. Well-developed definitions in legal texts, guidelines and related texts can contribute to a more uniform application of laws and prevent linguistic interpretation disputes. 4. Specialised texts translated without ambiguities and uncertainties. Access to a proper multi-lingual terminology is a central concern of any translation activity. Equally important is that translators have a good knowledge and strategies to solve problems of terminology, so that they will create a clear text. In this context, conventional and fixed terms should be used instead of 'just' translating words.'

[3] 'It should be noted that TNC receives its state funding from the Ministry of Enterprise, Energy and Communications, while the general language maintenance work of the Language Council (the main organization for language cultivation in Sweden, which is responsible for monitoring and describing the development of spoken and written Swedish language) is funded by the Ministry of Culture. The economic importance of terminology work for the Swedish economy is one of the reasons for the current form of funding.'

What is really occurring though, is that the use of Swedish has been threatened or even replaced by the use of English in some domains and speech situations in the country. This is particularly true of the production of written treatises and papers in the natural and medical sciences in higher education and research, and, also increasingly, in companies engaged in international business. While Swedish was taken for granted before, a perception has emerged that the choice of Swedish as the preferred language in various domains in-country might need attention and support. (Bucher 2007, 38)

In Sweden, several favourable preconditions have influenced the development leading up to the financial state grants for the creation of a national term bank. One of them is a raised terminological awareness, of which there are several indications in Sweden today: Even though they might not always be referred to as such, discussions in the media often circle around the definition of concepts. More and more companies provide glossaries on their web sites and use terminology as a marketing means. Lately, several job offers for terminologists have also been published, indirectly indicating a raised awareness. (Nilsson 2010,63)

One indication of this interest in language questions is the publication of a glossy magazine about language questions, *Språk*.

Other languages

Swedish is of course not the only language spoken in Sweden.

It is also a fact that many other languages are spoken in Sweden, today as in the past. Labour migration since the 1950s and later other kinds of immigration, and EU requirements as a consequence of Sweden joining the EU in 1995 have had a strong influence on the language situation and awareness of language use in the country. Among the languages that were declared national minority languages about six years ago are Sami, Finnish and the latter's closely related variety Meänkielä. These languages have *always* been spoken on present Swedish territory. But now they became legally recognized, in harmony with EU legislative requirements. The other two now officially recognized minority languages, Yiddish and Romani, also have long traditions of use in-country. (Bucher 2007, 37-38)

New developments

One of the major recent changes noted was the legislative decision to encourage the development of new terminology resources. It became clear during the interviews that because this legislation was so recent – a month old – its effects on TNC were still unknown.

In July 2009 a language law stating that Swedish is the official language of Sweden besides the five official minority languages was instituted, and especially paragraph 12 of this language law is crucial for the continued development of a national terminology infrastructure in Sweden. In this paragraph it is stated that all authorities now have "a special responsibility for Swedish terminology within their respective domains so that such terminology is accessible, used and developed". For the first time, this has been expressed in a legal document. Currently guidelines for how this work could and should become reality are being drafted, but for certain Rikstermbanken will be an

important ingredient in the implementation of this "terminology paragraph". (Nilsson 2009)

This year is very particular because on the fourth of July the parliament established or took a decision on a new act or a new language act which states that Swedish is the main national language, we didn't use 'official' but we used 'national' or 'main' language. We mean that that should be the language used in all sectors of society. And then there are different paragraphs and one paragraph says that each governmental body or public agency should take responsibility for their own terminology. To see that it is collected, presented and used. Something like that. (Bucher)

There are, however, no sanctions associated with the new law.

It's an act without sanctions. If you prefer to use English, there are no sanctions but the use could be observed and any citizen can report it to the Ombudsmen of Justice (JO). The Language Council of Sweden is assigned the task to see how for example public agencies live up to or obey the Language Act. And on paragraph 12, which states that "public agencies have the particular responsibility for ensuring that Swedish terminology is available in different specialist areas", TNC will cooperate with the Language Council, we will have a programme together, so that they inform the public agency that when it comes to Paragraph 12 you should get information about how to work from TNC. (Bucher, with addition)

2   Questions

2.1   Policy and planning: Swedish networks

Which entities share responsibility for standardisation, evaluation and modernisation of terminology in Swedish?

Section 12 of the Language Act (2009:600) gives Government agencies responsibility for terminology in their area.

> Government agencies have a special responsibility for ensuring that Swedish terminology in their various areas of expertise is accessible, and that it is used and developed. (Language Act 2009:600)

It is agreed that TNC is the sole organisation responsible for terminology work for Swedish.

> I would say the only agency responsible for doing terminological work in Sweden, that is TNC. And of course there are some private huge enterprises who do terminological work and so on, but they have no public responsibility. (Josephson)

There are, however, other entities with a peripheral involvement. One of these is the national standardisation organisation, which creates and translates standards for Swedish.

> We have separate bodies for standardisation, we have a national standardisation organisation, SIS, and for the electrotechnical field there is another separate body called SEK. TNC is an independent body working with LSP and particularly with terminology, I would say eighty per cent is terminology and the rest is LSP. (Bucher)

As well as that, different government departments and organisations maintain their own term resources. These are more or less developed, and the resources are not (yet) available in one place, although this is one of TNC's aims.

> HN: That's our aim... our slogan is – what's the slogan in English – the translation is 'all the terms in one place', but it should be more catchy in English. Well, all terms in one place.
>
> ÚB: And is that the case? Are they all there?
>
> KH: No, of course not, that's the objective in the future some place, that's the aim, we should get there, and a user shouldn't have to be searching on the website of the department of this and that.
>
> ÚB: So currently the various departments have their own term resources.
>
> KH: Yes.
>
> ÚB: So there's all kinds of places that you need to look.
>
> KH: Yes. (Hallberg, Nilsson)

> HN: That's one of the main aims, because glossaries, if you can find those, and then when you start looking at reports, documents… There are all those glossaries and you

have to go through 100 PDFs to find two of them. It might be the one you want. So it's a big mission to collect those. (Hallberg, Nilsson)

More than 70 organizations – mostly public bodies but also some associations and private companies – have contributed [to Rikstermbanken] with their terminology collections. (Nilsson 2009)

There are also private companies doing terminology work.

To this model should be added the TCs [Terminology Coordinators] of private companies and other organizations; today Sweden already has several people calling themselves "terminology coordinator" inside large companies, and there are even co-operative networks for terminology and translation between companies, e.g. within the automotive sector. (Nilsson 2010, 74)

TNC also coordinates Joint Groups on terminology in particular areas, such as computing (see the section beginning on page 52). One of TNC's roles is as a coordinator of these different term projects and resources.

ÚB: So really in a way you see the role of TNC as sort of a coordination role. So keeping people aware and then coordinating particular projects, different ones, as time goes on?

A-LB: And also taking part as project leader as well. Just terminologists, highly qualified terminologists, as a consultant...all these types of engagements like what we are having now, but to a larger extent, more of everything. (Bucher)

The Swedish Language Council is responsible for general language. Because they deal with general language, there are overlaps.

And then we have a national public agency called the Swedish Language Council, and they work with the general language. And sometimes of course we deal with computing, internet, email terminology [which] also influences the general language. And in this particular field we cooperate. (Bucher)

The other language cultivation agency in Sweden, the Swedish Language Council, is funded by the Ministry of Culture. The council attends to general language usage while TNC attends to languages for special purposes with a focus on terminology. (Bucher 2007, 40)

The Language Council is also responsible for the minority languages of Sweden, including their terminology.

And they are also now, since two years they are also involved with the minority languages of Sweden. We have by act, by law, five minority languages. And they of course also have to deal with terminology questions. And that is still new and not really sorted out but some knowledge about how to work with terminology in minority languages, they should learn something from us. (Bucher)

It has a supervisory or reporting role for terminology work.

And... they have a sort of responsibility for supervising the development of terminology also in Sweden. They do not do terminology work themselves, but they have to report to the government if Sweden is developing in the right way or in the wrong way when it comes to terminology. As with many other aspects of the language situation. (Josephson)

What are the relationships and partnerships between the TNC, academia, government agencies, the main language planning body and others? Who does what? Is TNC linked to academic research in the terminology field?

For historical reasons, there is a complex network of organisations and agencies responsible for corpus planning for Swedish.

That we have so many different bodies, that evolved historically. The Swedish Academy, that started in the eighteenth century, we started in 1941, the Swedish Language Council in 1944. (Bucher)

Sweden is traditionally well provided with language cultivation organizations. Besides the TNC, the list includes the following organizations:

The Swedish Language Council (*Svenska språknämnden*) [Hallberg note: this is the old name and structure] which is the primary institution for general language cultivation in Sweden with a mission to monitor the development of spoken and written Swedish.

The Swedish Academy which publishes the Swedish Academy Wordlist (Svenska Akademiens ordlista, SAOL) – the (unofficial) norm for the spelling and inflection of Swedish words – and the Swedish Academy Dictionary (Svenska Akademiens ordbok, SAOB).

To these organizations should be added language cultivators at the Swedish Government, at different authorities; journalists; technical writers; the group for media language; and *Språkvårdsgruppen* (a joint group comprising all those mentioned above). (Nilsson 2004)

The importance of creating and sustaining networks is recognised.

A third important factor for the survival of a terminology centre is that it is an active part of a *network of organisations* working within similar subject fields. In principle, the actors in this network will motivate the existence of the others, as they form a group with something in common. The cooperation networks are needed both nationally and internationally. On a national level it is important to work in close cooperation with the organisations that represent subject field expertise, i.e. private companies and professional associations, universities and technical institutes, research institutes and standardization bodies. Equally important is contact with language specialists; institutes and organisations that are involved in general language planning, special language research, translation studies and services and language technology are important partners for a terminology centre. Both TNC and TSK have over the years succeeded in establishing and maintaining good relations with many of these national partners. (Bucher 2000, 6)

As discussed in section 0 below [page 23], there is a good relationship with the other language planning organisations, language consultants, language experts in the media etc. in Sweden with quarterly meetings. The Swedish Language Planning Network

consists of 10 different parties, with a website at http://www.svenskaspraket.nu/ (Bucher addition)

A-LB: The cooperation, the network which I talked about started in 1976 and that was on an initiative from one member of the Swedish Academy, he was not in the Swedish Academy at the time but soon afterwards. And the purpose of this proposal that he came up with was that we, all language institutions in Sweden, we have to know what the other is doing, we have to inform each other and we also have to have a common attitude and approach, for example when it comes to loan words, accept, not accept, do we want to go off on a very puristic line or can we accept... Swedish has always had an influence of words from other languages. So we agree on that.

ÚB: So there is agreement on the basic approach to language.

A-LB: Yes.

ÚB: And that's something that you discuss.

A-LB: We discuss that, yes. And we take this home with us when we do our terminology work. We have this sort of basic agreement. And then of course working with LSP and working with terminology we see other things than they do working with the general language, but the basis still can be applied. (Bucher)

Last year we discussed what to call our network in English, we landed at the Swedish Language Planning Network. And the participants are TNC, the Swedish Language Council, the Swedish Academy, the SIS, the standardisation body, but also the language experts that work within the governmental bodies and also within media, because television and radio, newspapers all have linguistic advisors and they are also participating in this group. (Bucher)

This means that there is cooperation in decisions about language, such as when a new dictionary is published.

ÚB: So for example if a general language dictionary was being published and some 'soft' terminology was included, that would be TNC's terminology...

A-LB: It could be, yes. The Swedish Academy publish one vocabulary which is the norm for spelling recommendations of Swedish. And in the last edition they have entered several terms within computing terminology, coming from the work of another network, the Joint Group for Swedish Computer Terminology. The spelling, for example we say 'webbplats' but we spell it with two b's because that fits into the Swedish spelling system, but with a w because we have other loan words with w in Swedish, e.g. whisky and twist.

ÚB: So you respect the spelling norms that they develop.

A-LB: Yes. We do. (Bucher)

ÚB: So the achievement of coherence between the different groups and between different groups that are working with language and with specialised language, you achieve that by having regular meetings...

A-LB: We have meetings four times a year. Mostly we inform each other what we are doing, what we are up to, what is current, what project is going on. But sometimes we really discuss. (Bucher)

The decision-making is based on consensus.

ÚB: And is it based on consensus, or is there one organisation which is responsible for Swedish, or responsible for decision-making?

A-LB: We are always aiming at consensus, I would say. And usually, yes. Sometimes we have to go home and think and then we take it up at the next meeting again. One of the last things I can remember is whether we should, we have always said 'Bombay' about the city in India in Swedish, and we were wondering should we also go over to 'Mumbai' as I think you do in English. And then we had a debate and just now I can't remember what we, where we landed at, but in such a discussion TNC has no strong points of view, because that is not a terminological question…

ÚB: I'm interested in the cooperation because in the case of Irish there can be sometimes a slightly institutional approach to 'this is our area and that is your area' and 'this has been ours forever and that has been yours forever', a territorial approach to it.

A-LB: No, I don't think so, as I said, we don't interfere very strongly in a discussion about 'Bombay' or 'Mumbai', but we would interfere strongly if we had a discussion on which would be the most appropriate Swedish term for 'home page'. And we would insist that you must take a starting point in finding out what it is, what is the concept behind the term home page, we would insist on that.

And that is also one way of marketing our principles of work, our methodology, because the other persons in the network I would say is not so aware that this is the approach you have to apply in a question like this. The analysis of the concept behind the term 'home page' showed us that there actually are four different concepts – and therefore, if we want to be precise in Swedish, we have to find four different terms. We ended up with these four: 'webbplats', 'webbsida', 'ingångssida' and 'startsida' . This also tells us that English is vague about the meaning of this particular term, and we made Swedish more precise. (Bucher with additions)

There is cooperation with the Swedish Standards Institute (SIS), but more might be envisaged by interviewees.

We do deal with SIS, we would like to deal with them much more, because sometimes, or rather very often to be honest the terminology parts of the standards are not very well done, you can see that it is not done by good methodology. But it is there and the definitions are sort of 'heavy' for that particular document. Sometimes we are involved in the project all way through, sometimes we are engaged to give a course for these groups of experts who are going to elaborate the standard. And sometimes, and that is most common, we get the draft of the standard for comments. But that's at a very late stage and we have told them that is not to be recommended. Critical points of view are hard to accept at a late stage (and usually we have critical points on the terminology section of the standard because it has not been elaborated with terminological methods) (Bucher with additions)

ÚB: And then they [the standardisation body] go off and do their own terminology work.

HN: Yes, and sometimes we get to see the results, too late very often, and we see that it was not professionally done and the translation was poorly done by somebody in the committee.

KH: And they don't even know how the translation process is done in the standardisation body. [Addition: Rather, the translation process within SIS is not a defined process at all, thus inconsistent.]

HN: And there's no connection between the terminology section of the standard and the actual text. Very often we do try to answer as many as we can, [with] official, standard reference, but then it's often too late.

KH: We try to get invited a little bit earlier. (Hallberg, Nilsson, with addition)

One of the other relationships with government departments and organisations is through the subscription service, where time is bought and used for training or dealing with queries.

ST: And also the national board of health and welfare handle, purchased, bought in the services from TNC...

ÚB: Oh, like a subscription?

ST: Yes sort of, we can use them more because, the national board, we have bought their services.

ÚB: I understand, they were telling me about the type of services that people pay a subscription every year and then they get a certain number of hours.

ST: Exactly. Yes.

ÚB: So you are a customer in that way?

ST: Yes (Testi)

[Additional note from AL Bucher: Actually the National Board of Health and Welfare buy more than only a subscription. They do every three years a proper procurement and they use our consultancy services approximately 300 hours/year.]

There are networks in which TNC is not directly involved, however, such as that of the media language interests.

ÚB: And are you observers in the discussion group?

A-LB: In the media language group, we are not participating but we would not mind to be participants. However, the medial language group is also part of the Swedish Language planning network (see above) so we meet in language discussions that way. (Bucher with additions)

TNC is emphatically not linked to academic research in terminology, a fact regretted by some interviewees. It is pointed out that little academic work on terminology is done in Sweden.

ÚB: Are you linked to academic research in the universities, are there connections there?

A-LB: No. Actually first it is important to say that there is not very much research at Swedish universities in LSP and there is no professor or anything in any university in terminology. There have been studies in LSP… but very very little. And because of that there is no strong cooperation from many universities, since there is no professor in terminology, since LSP is not very strong, although we feel that there is very much respect from academia towards what TNC is doing. And a funny thing to say is that although Uppsala University has had for several years, twenty years or so a group of PhD students in the field of LSP, they have not ever been in contact with us. So the

academia look at [things] historically, look at texts but are not so very much interested in practical current work in terminology.

ÚB: Is that something that could be improved?

A-LB: I think it should be improved. I think they should use our experience, use our raw material or use our different working documents, see the stages of original material that we use, our excerpts for example, back to the final glossary… I think that is very interesting to see the problems that we are solving by terminological methods and principles and I think it is a pity it isn't asked for or looked into. I would say so. (Bucher with additions)

ÚB: And what about the relationships between TNC and academia for example?

OJ: Academia? Well, TNC - TNC gives some academic courses, they collaborate mostly with the University of Stockholm but some other universities too in giving courses and so on. But TNC is not a research institute, that's important to note. They are doing the real job, of terminological work. (Josephson)

How is coherence and consistency between different groups working in terminology and in general corpus planning (and language planning) achieved?

Although, for historical reasons, there are several organisations working in corpus planning for Swedish, this is not viewed as a problem because of the high level of cooperation between them. There are meetings four times a year in which language and coordination questions are discussed.

The existence of two language cultivation agencies with different areas of responsibility has never been a problem in Sweden. Both agencies [TNC and the Language Council] are engaged in a network of other language specialists' institutions, e.g. the Swedish Academy, the language consultants in media (newspapers, radio and television), the language consultants in the Prime Minister's Office, the Swedish Standards Institute, etc. This network meets four times a year for mutual exchange of information; also for discussing language policy matters and certain fundamental language or term issues. (Bucher 2007, 40)

ÚB: So there's no disparity in the advice dispensed by one organisation, and the advice dispensed by the other.

OJ: No. They are very close together. And if Swedish Language Council are asked about terminology they always pass it on to TNC and vice versa. No, they are collaborating very closely.

ÚB: So the fact that there are two organisations isn't really a problem.

OJ: No, I would not say that it is a problem. No, it isn't. It could be nice to have one organisation, but there is no problem with having two organisations, absolutely. (Josephson)

Zwischen verschiedenen Institutionen auf dem Gebiet der Sprachpflege in Schweden existiert eine wertvolle Zusammenarbeit: die Schwedische Akademie, der Sprachenrat, das TNC, die Sprachexperten in den Ministerien, Sprachberater in den großen Tageszeitungen, im Schwedischen Rundfunk und im Schwedischen Fernsehen.

Ungefähr viermal im Jahr finden Sitzungen statt, deren Ziel es ist, Informationen auszutauschen sowie einzelne Sprachfragen und sprachpolitische Fragen zu erörtern.[4] (Bucher 2008)

Questions from the media, who have their own discussion network, may be passed on to the meetings of the language institutions.

Like the question about Bombay and Mumbai, they discussed it among the media people and then the representative of the media group brought it in to this language institution's network. Because then they resolved it there. So there are different levels of this work. So I think with the swine flu they would discuss it in the media language group at first… They have a discussion group and maybe they would send a question to us… (Bucher)

What part of the overall language planning work for Swedish is TNC responsible for (examples: advising on policy; establishing and evaluating norms; providing an information service; coordinating and supporting projects; and acting as a clearinghouse for private or outsourced terminology work)? Are areas of term planning not covered by TNC covered by others? Is there an overlap between any of these groups, or are there any gaps? Are there any areas which are not really covered at all?

TNC's tasks are set out annually in a letter from the Ministry of Enterprise, Energy and Communications.

ÚB: So what part of the overall language planning work for Swedish is TNC responsible for, what area are you by your statute..

A-LB: Well we don't have an statutes any more, but still... Actually we get a grant from the Ministry of Industry which is about fifty per cent of our annual turnover. When we get this grant we also get a funding target agreement, that states what we should do for this money. And that is very generally written, it is something like: TNC should work for the development of an efficient terminology in as many subject fields as possible which are good for Swedish society and for Swedish industry.

ÚB: So that's kind of your contract.

A-LB: Yes. That is very general. So that means we interpret that and every year we have to write to the ministry how we used the money the year before. We use it for, shortly said, terminology awareness raising. (Bucher)

The tasks are listed in various publications. From this it is clear that TNC's main tasks are research in defined areas, *ad hoc* (query service) work, education and training, and marketing and awareness-raising.

TNC's activities are centred on the following main areas:

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[4] 'Between different institutions in the field of language cultivation in Sweden, there is a valuable co-operation: The Swedish Academy; the Language Council; TNC; the language experts in the ministries; language consultants in the big dailies, the Swedish Radio and Swedish Television. Approximately four times a year meetings are held, whose purpose is to exchange information and discuss specific questions about language issues and language politics.'

Compilation of terminological and special language resources: terminological vocabularies, terminology databases, style manuals for technical writing, etc.

Teaching terminology theory and terminology practice: at universities, as open lectures, custom-made courses for project teams, companies, etc.

Consulting services varying from operating the query service to leading long-term terminology projects, participating in language planning activities, development of ontologies, information modelling, etc.

Terminology standardization on the national and international level

Promotion of the development and use of terminology in all spheres of professional activities and public life through participation in international and national terminology networks. (Dobrina 2006, 2)

The main objective for TNC was and still is to meet all kinds of terminological needs that particular networks of practitioners in just about any field of work may have. In order to achieve this objective TNC:

Offers terminological services and supports public agencies, organisations and companies that pursue terminological work

Develops terminological products such as glossaries and termbanks

Elaborates rules and guidelines for the writing of technical texts

Collects, records and processes terminological information, e.g. new terms, old terms in a new context, conceptual information

Offers lectures and courses on terminology and technical writing

Cooperates with other language and terminology agencies, on both the national and international level

Participates in international standardization within the framework of ISO and CEN (Bucher 2007, 40)

Nilsson (2010) describes the terminology structures for Swedish as a model, with TNC at the heart.

At the centre of the model, one finds the national centre for terminology, TNC to which all individual segments are connected and which helps with e.g. training, terminological queries, participation in, and management of terminology projects. (Nilsson 2010, 74)

There are areas which are not covered by TNC, such as terminology for Sweden's minority languages.

We do not [work with minority languages] as a regular work; it has come into some of our dictionary projects, vocabulary projects but it is not something that we do regularly. But it is rather the Swedish Language Council that have responsibility for the minority languages. (Bucher)

Terminology research is paid for by the organisation that requests it, and so some areas of terminology work have not been covered.

ÚB: Do you think there are areas of term planning that aren't covered by TNC that are not covered by others either. Are there gaps?

OJ: Not principally but practically, there are. I think the problem is [that] what has been developing very well in Sweden is the terminology of public authorities and government and so on… There is too little terminological work done in private enterprises, in industry and so on. Of course there are exceptions. There are enterprises, ministries and so on that are very concerned with terminology, but there are many sectors where a lot more should be done, when it comes to economy and... A lot more sectors should be done. But they don't ask for it. And when they don't ask for it TNC doesn't do it. And that's a very wise principle of TNC. They only do things they are paid for. When a customer asks for it, because you can be sure that the terminology that they produce will be used. (Josephson)

One area of terminology not dealt with by TNC is that of standards.

ÚB: Are there areas of term planning that aren't covered by TNC that are covered by others?

A-LB: Of course term planning, I would say, part of it is covered by the standardisation bodies, in another way than we do it because every standard more or less starts...

ÚB: These are like ISO standards?

A-LB: Yes, national - now they are not very many national standards, usually we implement European or international standards. But many of them, almost all of them have one paragraph with terms and definitions. (Bucher)

Finally, it was felt by several interviewees that there is a gap in that there is no academic research into Swedish terminology, or any terminology research carried out in Sweden (see the section beginning on page 106).

How is TNC involved in policy formation for Swedish language planning?

The different language organisations form a network and hold quarterly meetings in which issues of policy formation are discussed (see the section beginning on page 19).

2.2 Policy and planning: international networks

Is TNC involved in ISO/TC 37 policy formation? How? What is TNC's involvement in ISO/TC 37 and its subcommittees?

TNC has been involved in TC37, as Sweden's representative, for many years.

We have been involved [in ISO TC37] for many years now… I can say shortly that the SIS, the Swedish standardisation body, has for many years delegated the participation in ISO TC37 to TNC. So we have been representing Sweden in this way. And that started already in the seventies and we have been more or less active over the years in different working groups, we have been very active for at least ten years in the working group developing the standard ISO 1087 for the terminology of terminology. (Bucher)

For many years, the TNC (and Nordterm) has played an active role in the work of ISO's only committee devoted solely to terminology work – *ISO/TC 37 Terminology and other language resources*. At the request of SIS, TNC represents Sweden in TC37 and is responsible for a secretariat for one of TC37's subcommittees, SC1 Principles and

methods. In 2002, a Swedish national committee for terminology and language resources, which is a mirror committee to TC37, was recently founded with TNC in the role of project coordinator. Currently, the committee has nine members. (Nilsson 2004)

This is considered important for TNC's work.

> Well, I think it is important. A standard is always a compromise, and the contents of that standard do not wholly reflect the terminology of terminology used by us. But of course it had given us input and it has also interfered in how we look upon terminology. It has been a valuable change, a knowledge experience and information. So it has been important to participate. And we had also a feeling that we could contribute to the international work on terminology. (Bucher)

What other international networks are there (for example with EU bodies such as IATE, with ISO, with other Nordic language networks, with UNESCO…)? Are there practical benefits and results, and what are they?

There is a deep involvement with the EU terminology structures; this has been going on since before Sweden entered the EU in 1995. One cooperation was during the development of the Rikstermbanken (the national term base), which was based on ideas taken from IATE and other sources, such as EuroTermBank and the Lithuanian national term bank.

> Throughout the development of Rikstermbanken, the cooperation with the European Commission and their IATE team proved pivotal. At a later stage, cooperation with the project EuroTermBank, as well as with the Lithuanian institutions which developed the Lithuanian national term bank, also proven very useful. (Nilsson 2010, 76)

> On the structural level, the same basic structure of terminological entries as in IATE has been adopted, i.e. a three-level structure embracing a language independent level, a language level and a term level. (Nilsson 2010, 71-72)

There were also EU-based projects, most notably the creation of Swedish terminology resources for IATE at the time of Sweden's accession. TNC had two terminologists placed at the terminology department of the European Commission during Sweden's first year of EU membership 1995/1996.

> The TNC has also worked with several MLIS-projects, such as TDCNet and especially Nordterm-Net through which a joint term bank for the Nordic countries was planned and realized. This project in particular laid some important foundations for the creation of a national term bank. (Nilsson 2010, 65)

> Within the MLIS-programme (*Multilingual Information Society*) of the European Commission, TNC conducted two projects: *Nordterm-Net* (MLIS-122) resulting in a joint Nordic termbank on the Internet5 and *Efcot* (MLIS-2007), resulting in a forum for computer terminology and the export of the joint group model to Norway, Finland and Greece. In recent years, the TNC has participated actively in the different working groups for the development of *IATE* (*Inter-Agency Terminology Exchange*), the new interinstitutional termbank. (Nilsson 2004)

When Sweden then joined in 1995, it also meant new translation-oriented tasks for the TNC. During four years, the TNC was entrusted by the *European Commission* to introduce Swedish terminology into their termbank *Eurodicautom*. The TNC supplemented approximately 140,000 term records with Swedish terms and source references, and in many cases also definitions and explanatory notes were added. (Nilsson 2004)

When Sweden entered the EU in 1995, TNC were assigned four comprehensive tasks concerning the updating of the European Commission's termbank Eurodicautom with Swedish terminology. Within a period of five years, TNC updated Eurodicautom with approximately 140,000 Swedish terms, mostly also with definitions, covering about 100 different subject fields. (Bucher 2007, 42)

TNC has had contacts concerning terminology with the EU long before 1995 when Sweden officially joined. When a large number of documents concerning the co-operation between EU and EFTA (of which Sweden was a member) was to be translated into Swedish, a large-scale translation project was started in Sweden and a special translation committee established. The TNC was given the task of providing terminological advice and assistance to the translators. The TNC also built a termbank on the basis of the English and Swedish versions of EU documents. To meet the needs of all those interested in, or professionally associated with the EC and its terminology, TNC also compiled an English–Swedish vocabulary from the material in the termbank. The vocabulary *EC words and expressions* appeared in 1993, as a result of a work process addressing a wide range of practical, theoretical and methodological problems. (Nilsson 2004)

TNC is also involved in EAFT, Termnet and Infoterm.

Henrik and I have been members of the board of EAFT, Henrik for six years and I for two years. We are also members of Infoterm, Termnet, and Nordterm; the Nordic network is also very important for us. (Bucher)

Nordterm was established in 1976 to encourage Nordic cooperation.

Another cooperation, very important for TNC, is the Nordic network Nordterm. Nordic cooperation in terminology has existed since the 40's, and the Nordterm network which was established in 1976 has slightly formalized the cooperation. It was established as a result of initiatives from the agencies themselves. Nordterm is not an independent legal entity and has no funding on its own but may apply funding for certain projects. (Bucher 2007, 40-41)

Well Nordterm is actually kind of a loose organisation, I think it started in the seventies… and it was an open network for those who wanted to participate but there was a feeling that we needed to communicate in different Nordic countries where [there were] different terminology institutions or terminology centres like ours already there to some extent in Norway, not really in Denmark, but in Norway especially, and in Finland of course. (Hallberg)

Interviewees consider the involvement in Nordterm to be one of the most important. It leads to an exchange of knowledge and experience.

A-LB: We have been actively involved since [Nordterm] started in 1976. And maybe that is the most, in one way the most important network because we have very much in common, we can really exchange experiences.

ÚB: Exchanging for example terminology because the languages are very similar?

A-LB: We don't exchange terminology. To coin terms for new phenomena is a very language specific thing and although the Nordic languages are related and similar, we do not always end up with the same recommendations. No, in the Nordic cooperation we rather discuss methodology and terminological principles, methodological experiences, the building of term banks, the writing of definitions, definitions of concrete and abstract phenomena, definitions in partitive and associative relations etc. We discuss things like that. (Bucher with additions)

When it comes to international co-operation, the *Nordterm* co-operation holds an exceptional position. (Nilsson 2004)

It has also led to the publication of a guide to terminology (Suonuuti 2001), although the joint publication of terminology work was not as successful because of the conceptual differences between languages.

Among the results achieved by this network can be mentioned a number of publications (e.g. the handbook *Guide to Terminology* which has been translated into Chinese, Croatian and Esperanto [Hallberg addition: and, not to be forgotten, also into Swedish, Norwegian, Finnish and Icelandic…]), courses and a joint Nordic terminological record format, *NTRF*. (Nilsson 2004)

ÚB: And do you collaborate in publications or do you collaborate in development of terminology?

A-LB: In publication?

ÚB: Yes, for example would you collaborate in Scandinavian documents?

A-LB: Yes, we have done that. Not with so very good experiences so that is why it has been done only a few times. And that was because although we have a lot in common we are still different countries and we look upon certain concepts in different ways. We tried to make a glossary of the working environment in the 80's, and it turned out to be not so easy. It was published but if we would revise it we would do it separately.

ÚB: Because of the conceptual approach or different working methods?

A-LB: No the working methods were similar but the concepts were not always identical, it seemed not to be relevant to compromise too much because then the definitions would not have been useful for anyone. As I remember now, the field of working environment was developing very fast in the Nordic countries but not always in the same direction. This was also a reason why the cooperation was not very fruitful. But, it was definitely an interesting experience… (Bucher, with additions)

ÚB: And do you cooperate in terminology work?

KH: Well actually we did. To some extent we do exchange ideas and especially with the Finnish terminology centre, TSK, we have done some practical work together actually since both of the countries, Finland and Sweden, joined the European Union at the

same time we have the same kind of contracts, these contracts where we added Swedish and Finnish terminology to Eurodicautom. We had quite a lot of exchange and ideas at this period of time and together we developed user manuals or instructions for the experts involved and so on so... I don't think we have a joint project except for there was a joint project on the computer terminology, but it's more of matter of idea exchange than real practical work together. (Hallberg)

There is also a biannual Nordterm conference.

Nordterm Conference (or Symposium we sometimes call it) is organised every second year and Nordterm is more or less the conference that takes place, of course there is cooperation and also the board do prepare for it every second year and of course there are working committees and working groups, for example there has been a working group for… terminological term banks and how to establish a terminological record; the Nordic terminological record format was established within Nordterm cooperation during the 80's and 90's… (Hallberg with additions)

Interviewees felt that Nordterm meant that things were learned that might not otherwise have been, such as participation in ISO or the importance of providing training.

I think we have learned a lot, which we would not have learnt, from our Nordic corporation because we were, when we started in 1976 we were at different stages. TNC had a long tradition of working with terminology in technical and scientific fields. Finland started later but they were a bilingual country, and the first manager of the Finnish centre for terminology had been active, for 20 years or more, in international standardisation within the paper industry and she had dealt with all these ISO standards. So she came into the Nordic corporation with her experiences and she was also one who thought that we should actively take part in ISO TC37 because she had seen that these standards were not used by other technical committees as they should. So that was very good and the Danes were also more advanced in training, they had given courses in terminology at the Copenhagen Business School so they gave us this and Norwegians, when they found oil in the Atlantic that meant that they had to deal with a completely new Norwegian terminology. It was an interesting challenge. Afterwards you can see that they did not develop a Norwegian oil terminology as much as they could have, there are still a lot of American-English oil terms in the Norwegian oil language. Anyway that opened up our eyes to see how broad the field of terminology actually is. (Bucher with additions)

There was a perception that the international networks created were in general very important for TNC.

The value of joint efforts in the field of special languages and terminology is difficult to overestimate. The TNC, in its role as a national terminological centre, maintains a wide contact net including language bodies, publishing houses, terminology groups, etc. (Nilsson 2004)

KH: I think we have a good overview, it strikes me again and again, a good overview of things happening here and internationally… We're aware, like the work we've done for some years preparing this national data term bank, it has forced us to see who is doing

terminology, I mean already for the… all the studies that we've done, surveys of terminological resources, make us quite competent in..

HN: Now we have, especially now, loads of contacts with all these people, and different, and their problems, what they do and how they organise terminology work in their [organisations]... (Hallberg, Nilsson)

We have got a lot of input from all this international work and now since the EAFT was established in the last ten years, we have also had these contacts with Portugal, Spain and how they teach and train and all the theses that have been written in other countries but not yet in Sweden. (Bucher)

We take part in conferences, we are helping, are actively involved in ISO work and I think that has given us a lot of ideas, a lot of input from other countries to see how they do, definitely that has been very very important for our building of new competence, so that is important also to mix with other terminologists having other backgrounds, having other social connotations, having other language problems, bilingual countries are interesting too, interesting to work with and so on. (Bucher)

2.3 Policy and planning: Resource planning

How are decisions made about which domains (or other priorities) to undertake? Who makes the decision? How are domains selected and prioritised?

Because fifty per cent of TNC's funding comes from the Ministry of Enterprise, Energy and Communications, half of the priorities are determined by them. The annual letter of agreement is very loosely worded, however.

We get a grant from the Ministry of Industry which is about fifty per cent of our annual turnover. When we get this grant we also get a letter, funding target agreements, that states what we should do for this money. And that is very generally written, it is something like we should work for the development of an efficient terminology in as many subject fields as possible which are good for Swedish society and for Swedish industry. (Bucher with additions)

That is very general. So that means we interpret that and every year we have to write to the Ministry how we used the money the year before. We use it for, shortly said, terminology awareness raising. And that can be done in many ways of course, but giving these lectures or courses at the universities, this is one way. You can give information to students and it is very important. And also to write articles, to take part in the Swedish Language Planning Network is also one awareness-raising. (Bucher)

ÚB: So one of your main responsibilities then is awareness-raising and the other one is development of terminology, or coordination of terminology.

A-LB: Yes. At least fifty per cent, that is awareness, and for that we are funded by the state. The rest, the other fifty per cent, that is when we get projects from different customers who have the need of doing their terminology more precisely. (Bucher)

Other work is determined by contracts received. This means that TNC does terminology work when it asked to do so, and not where it sees a need, from a language-planning point of view.

> And another thing that I think is very important. It's the basic idea that they do not, TNC do not invent domains and areas and subjects where they will do terminology. They only do terminology when they are asked for it, when they are paid for it, so that it will get used… that's the strong side of their activity because when people pay for it they really want it and they use it. (Josephson)

> ÚB: The other areas of developing terminology for particular fields such as medicine or such as sciences or computing or whatever. Do you deal with that or is that...
>
> A-LB: We deal with that sometimes.
>
> ÚB: When you're asked to?
>
> A-LB: When we're asked. (Bucher)

The advantage of this approach is that if terminology is requested and paid for, it is likely to be used.

> A-LB: That's where I would like to stress that the initiative of a glossary of a specific field, up to ninety-five per cent come from the sector or from the subject field or the branch.
>
> ÚB: So they come to you.
>
> A-LB: They come to us. They have realised that they have a problem. (Bucher)

> They only do terminology when they are asked for it, when they are paid for it, so that it will get used… that's the strong side of their activity because when people pay for it they really want it and they use it. (Josephson)

The disadvantage is that there are some areas that are not covered at all.

> Of course that is also a bit of a weak point. Because it means that there are some areas in Swedish society where the terminology is very weak; I think economy is such one. And since no one asks for it nothing is done, and that's a bit problematic. (Josephson)
>
> [Comment to Olle Josephson's statement: Most areas in the Swedish society has not done anything about their terminology! That is why it is very difficult, impossible?, for us to point at some areas and encourage them to start a terminology project. We would have to point at too many, and the question is what it would bring. I believe more in general awareness raising so that as many as possible realize that they have a terminological problem that can be solved with terminology work. However, we could certainly do much more awareness raising if we had the resources. (Bucher addition)]

> ÚB: And what about areas of 'soft' terminology if you like, like sports terminologies, and things that are slightly more LGP. Do you deal with them?
>
> A-LB: A lot of people have asked. Olle Josephson, for example, he thinks something should be done about sports terminology and I have certainly listened to know what the problems are. But nobody has asked, nobody from the sports sector.
>
> ÚB: If they did..

A-LB: Of course. We would really, yes. (Bucher)

ÚB: So there are a few areas - for Swedish terminology there must be areas that aren't covered at all.

A-LB: Yes, of course. We have also during TNC's seventy years, we have worked mostly with the scientific and technical areas. (Bucher)

It can also be problematic for TNC itself, from a resource planning point of view.

OJ: And it can be problematic also for TNC as an institution. It was very big in the middle of the nineties when Sweden entered the EU and a lot of terminological work had to be done, and it expanded a lot. But then when that was finished they were too big really and they had a financial crisis and went bankrupt. Perhaps you know that. And had to reorganise in 2000, 2001. And that is the weak side of this form of organisation.

ÚB: I suppose they're financially dependent on getting work and getting contracts.

OJ: Yes. And sometimes there are good times and sometimes there are bad times. So that's on the one hand problematic. (Josephson)

Most projects come from the public sector.

Mainly from the public sector. But last year we also had some from the private sector. But the majority of projects come from the public sector. (Bucher)

There is, however, no objection to working for the private sector, although this is not very common.

KH: But of course somebody could come and need some help with their in-house glossary, and of course we structure those needs.

ÚB: And even though you're paid for partly by the State, that's okay?

KH: That's okay, because we do have fifty per cent of our budget we have to finance, of course if we can help, last year I was working for a commercial group, they wanted a terminologist to come in and help them with restructuring their term bank so of course we can help them... (Hallberg with additions)

And one argument for not doing TNC as part of a public authority, was that private enterprises wouldn't ask for service from a department of a public authority. But the problem is that private enterprises do not ask for services now anyway. (Josephson)

TNC is somewhat selective in the jobs it takes on, refusing translation work, for example.

ÚB: Continuing with the question of resources, how do you decide what you're going to do, how do you select your projects? People come to you...

A-LB: Yes. Usually it hasn't been that problem, really. We say no to strict translations even if they are LSP texts. We are not a translation agency. But we instead offer, if they are asking us for a translation, we say that we can check, we can extract the

terms and check them, and we can give you the approved ones. But not general texts. (Bucher)

ÚB: So really it's - not reactive, but you are dealing with requests and that's how you decide what your plan is for the next year, what people have asked you to do.

A-LB: Yes. And of course we have to have intelligence, we have to keep up with what is going on in society and where does our work fit in. Where do we see needs for terminology.

ÚB: So whether the project you're asked to do, whether it's necessary or whether it's useful.

A-LB: Yes, and maybe we can have an influence and an input so that they realise the need. That is very much going on right now because Sweden is working on the government dedication for applying e-government. (Bucher)

Although it had not been necessary to go out and look for work, there is a realisation that this may be changing.

ÚB: So there are really two aims for the marketing, firstly to raise awareness of terminology and to raise awareness that it's there, and secondly as a sort of by product of that, to create customers for TNC?

HN: Yes. Because we need that now, we need to have customers, although we have succeeded, it's more than, I think sixty per cent now which is not from government funding.. (Nilsson)

ÚB: A lot of your terminology work and a lot of your training work seems to be on the basis of demand, so it seems to be that people come to you and ask for things rather than you going out and offering things.

KH: That's true, it's been so, we've managed to gain a living from that, but I think that we should and we do discuss how should we approach new areas and how can we… We need to do that.

HN: We have to change.

ÚB: Is it that you have plenty to do and you don't need to go out [and look for contracts]?

KH: Well now we need to go. There has been a bit of a change in the last 6 months. (Hallberg, Nilsson)

Who is consulted when policy decisions are being made about resource allocation (potential users, service providers, academics, institutions…)? Is planning carried out in conjunction with potential users, service providers, academics, institutions, etc?

This is partly covered in the section beginning on page 31. Decisions are based largely on requests made by customers. The board of directors is also involved in policy decisions.

The board is involved in policy decisions. They also have experiences from their "home organisations" that may indicate needs for terminology work – and they bring this

information to the board meetings. Besides the board we do not really have other advisers. (Bucher addition)

Who pays for the TNC's work? What financial support does it receive?

The annual budget is about 8.5m crowns (€820,000)

> ÚB: What's your annual budget?
>
> A-LB: About eight - I think last year was 8.5 million Swedish crowns. And we get four million [€386,000] from the State. (Bucher)

It is agreed that some public support is necessary for a term planning organisation.

> TNC's and TSK's experiences clearly show how important public support is to the existence of terminology centres. To our knowledge there is, in fact, no terminology centre in Europe organized as a profit centre... Public support is of relevance not only for the survival of a terminology centre, but also for the quality of its work. (Bucher 2000, 6)

About fifty per cent of TNC's funding comes in the form of a grant from the Ministry of Enterprise, Energy and Communications. This funds the awareness-raising work (what exactly this entails is discussed in the section beginning on page 75.

> At least fifty per cent, that is awareness, and for that we are funded by the state. (Bucher)

The funding from the Ministry can be precarious, such as the funding received for the development of Rikstermbanken.

> ÚB: You're responsible for [Rikstermbanken] long term, you're going to be maintaining it?
>
> HN: Hopefully, but then again it all comes down to funding again and we were funded for developing it but now... It takes some funding depending on what you want to do with it, if you want to do loads of developments, which we want to do; just adding content is one thing, it could be added to our state funded tasks, and other [tasks] would be less performed. (Nilsson)

> KH: Right now we don't know about the financials.
>
> HN: Because we had hoped for another financial grant [for Rikstermbanken] which we didn't get. That's why now we have to present a whole list of developments because they don't give money just to run it and they gave money to develop it, but now - 'you're on your own; you have to make it work'. More or less.
>
> KH: Yes, we didn't...
>
> ÚB: That's from the central government?
>
> HN: Yes, the Ministry.
>
> KH: They more or less said that we'd get it, then came the crisis and they said, oops, budget cut. So it has been a bit of a shock. (Hallberg, Nilsson)

Work on terminology projects is, besides the grant, the main source of income. Most of these projects come from the public sector.

A-LB: The rest, the other fifty per cent, that is when we get projects from different customers who have the need of doing their terminology more precise. And as I said before, in the last ten years, many of our projects come from the healthcare sector and that is because they started to use computers about ten or fifteen years ago, both for the medical records and also for a lot of administrative work, for a lot of coordination for being able to have statistics and so on. To be able to do that they need agreements about the terminology used.

ÚB: So you get contracts from government sectors or from private companies as well.

A-LB: Mainly from the public sector. But last year we also had some from the private sector. But the majority of projects come from the public sector. (Bucher)

A very small amount of the budget comes from dictionary sales.

ÚB: How much of your budget then would come from sales of dictionaries?

A-LB: Very little, I think last year it was about 300,000 crowns [€29,000]… A very small part. (Bucher)

Money also comes in through the subscription service, in which customers can buy TNC's time and use it for terminology queries or for training.

In 2009 we had sixty five subscribers (public agencies, private companies, organizations, translation bureaus, technical writers). (Bucher addition)

A-LB: And we also have a subscription system. You pay at the beginning of the year 7,000 crowns (€675) and for that you get nine hours which you can use for the helpdesk, or for us to come on a seminar to talk about terminology.

ÚB: So government departments for example would subscribe.

A-LB: Yes. (Bucher)

ÚB: What kind of people subscribe then, what kind of groups?

SW: I could give you a list, but there are some big companies, like Volvo and Scania.

ÚB: And would there be ministries and organisations like that?

SW: Yes. And then there are translators.

ÚB: So translation agencies and like that.

SW: Yes. These have been translators from big technical companies… (Waldén; Hallberg additions)

The query service together with TNC's other small-scale consulting services is available on a subscription basis. Non-subscribers can choose to be billed. First-time users are usually helped free of charge provided their queries do not require an extensive investigation. (Dobrina 2006, 2)

Courses and classes are another source of income.

ÚB: Is it expensive for an organisation to get TNC in, are you competitively…

HN: I would say that our courses, compared to a lot of courses on the market in a similar - not of course the same - are not very expensive. It would be €350 for one person for a one day course (8 hours). (Nilsson, with Bucher addition)

Is outsourcing of research work for term creation used? How does this work?

Term creation work is not really outsourced to external contractors.

ÚB: So you don't use any contractors or outside terminologists.

A-LB: We could do that - now we have had some who have worked here and left for other work, and maybe if it were a real emergency situation maybe I could think of one or two that I could ask.

ÚB: But not usually.

A-LB: Not usually. There is no-one. Maybe there are people that we have met in projects and at conferences that we can see that this person is potentially a terminologist (having the right kind of terminological awareness). She is a translator or a linguist or chemist or something. We could ask them if we have the feeling that this is someone who quickly could… (Bucher with addition)

In terminology projects, however, a range of experts is consulted – see the section beginning on page 52.

Who are TNC's 'customers' or term users, and how is this determined?

The users of the term bank are largely 'public persons', that is, public sector workers, and translators, both in Sweden and abroad.

ÚB: A basic question - who are your customers? And how do you know? Who are the customers of the term bank?

A-LB: Well, we have some statistics… but that is a lot of public persons, desk officers in public fields, there are translators of course, there are also translators from the EU institutions but there are also not so few users from abroad, and we suppose they are mainly translators. A large amount from Finland of course, but also from Italy, Germany, France. But in Sweden I would say it is translators, people from different ministries, public agencies, but also private companies.

ÚB: And what about private individuals, the general public?

A-LB: Some... We have a function that you can send in comments, and since we introduced that functionality we can see that some are also ordinary private persons. (Bucher)

The users of the query service are also relatively easy to measure, because details are compiled in a database. The query service user may be slightly different from the 'usual' TNC customer, though.

A query service user stands somewhat apart from consumers of TNC's other services. An employee of a large company, a freelance translator, a university student or a librarian contacting the service usually seeks a solution to his or her own terminological problem but the information produced by the query service in response to a query usually benefits a wider community. (Dobrina 2006, 3)

The service is moving away from the traditional science and engineering (the organisation was founded by engineers). EU translators are also users.

> In the past, the majority of users had backgrounds in science and engineering. Not any longer: humanities and social sciences, economics and management are now widely represented. When in the middle of the 1990s Sweden joined the European Union, Swedish translators of the European Union's documents became avid users of the query service. And now subject-field experts and government agency officers, students, and teachers, journalists and the public at large are among the users' ranks. (Dobrina 2006, 3)

Dobrina (2006, 3-4) lists three main categories of queries:

- concept-related queries

- term-related queries

- language/style queries.

Both experts working in a monolingual context and translators are users of TNC resources.

> ÚB: And would your typical users of terminology resources for Swedish, would they be monolingual experts who are working in Swedish, or translators who are translating into or out of Swedish?
>
> HN: I would say both, because of many of the projects have been initiated by experts who see the need for a monolingual context, we need to understand each other. Then again we would need perhaps equivalents, because there was Nordic cooperation for some glossaries, or even it was sent out to international organisations, making, creating a product which was interesting also for translators… it is used by many translators, we know. (Nilsson)

Nilsson (2009) breaks down the term bank customers in a more detailed fashion, but this is a theoretical perspective, not based on user statistics.

> Rikstermbanken could help domain experts in their internal and external communication, translators in and outside of Sweden who need quick and easy access to up-to-date Swedish terminology and also companies trading with other companies abroad. The media, technical writers, standardisers and other language professionals can easily get an overview over a subject field and will no longer need to be in doubt as to what established terminology ought to be used in different types of texts. With the precise definitions of concepts provided by Rikstermbanken, a further coordination can be achieved and less duplication of effort avoided, which will eventually lead to a smoother public administration and a more clear-cut communication with the citizens.
>
> In connection to the aforementioned EAFT seminar, a list of target groups for terminology work was also developed, and again this list coincides with many of the possible users of a term bank:
>
> A. "Customers" (users of terminological products and services)
>
> i. "Technical communication" professionals (primary users), e.g. technical writers, translators, journalists, information professionals, education & training professionals, standardisers
>
> ii. "Specific domain" professionals (secondary users), e.g. lawyers, doctors and so on.

B. "Manpower" (directly involved in the production of terminological products and services)

i. Language experts, e.g. terminologists, lexicographers, linguists

ii. Subject field experts

iii. Other participants in networks, work groups etc.

C. "Investors" (indirectly involved in the production of terminological products and services)

i. Commercial sponsors

ii. Non-profit organizations

iii. Public funding authorities

D. "Authorities"

i. Language planners

ii. Educational policy makers

iii. Legislators (Nilsson 2009)

2.4 Research: theoretical approaches

Where does terminology work stop - how strict a distinction is made between general language and specialised language?

A distinction is made between LGP and LSP, and only LSP is dealt with; this distinction is not always easy to make, however, and must be emphasised in training.

> ÚB: I get the impression that the work here is quite specialised; that you don't deal with things that are kind of on the borderline between general language and LSP?
>
> KH: Hmmm...no I think we deal with, we specialise, of course, but then, I mean in our training, we try to teach about the difference, because there is a difference and you should not really mix the two, your methods would be different – if you deal with general language you have different methods, not to do with... (Hallberg)

> Clarification: TNC is the centre for terminology and LSP in Sweden, so naturally our activities focus on LSP; however this distinction is not always easy to draw, because in everyday work and in many terminology projects that we are involved in, LSP is constantly "confronted" with LGP (or vice versa). In all our training we place emphasis on this "grey zone" between LGP and LSP and how it can influence a terminology project and its participants; and on how terminology methods may help sorting out these kind of "border line cases"; i.e. when a LSP term is used in LGP with a somewhat "diluted" meaning or, the even more problematic case in terminology, when a LGP word is used in a more restraint "meaning" in a specific domain and thus has become a term standing for a specific concept in that domain. (Hallberg addition)

In the case of the query service, for example, issues of LGP are dealt with by a separate service provided by the Language Council. There is cooperation in matters like computing terminology.

> In general language you come across LSP expressions and some of them travel [to LGP], and when you have a broad [area], like the computing terminology one we did cooperate with the general language office for questions concerning this because they have a broad public and there is not some kind of border line there, I mean... it was technical terms that were used in a general context and we were still very keen on having the expert point of view and see what is this... we need to put down what is the concept behind the words, there is always the conceptual view... (Hallberg)

> Clarification: It's more a matter of who is the intended user of the term/word. The Language Council must take into account a more general and broader user group than we do; however when dealing with LSP terms "travelling into" LGP, as in the case for many terms in the area of computing, it is important to have the LSP knowledge (or at least the access to this knowledge) of these terms before discussing and, if necessary, coining new LGP words for these concepts. And yes, we do cooperate with the Language Council when such borderline cases are discussed in media or academia; which was the case concerning the "correct" naming of the "swine flu" in Swedish media recently. (Hallberg addition)

In selecting material from outside sources for inclusion in the Rikstermbanken, LSP status was one of the priorities.

A preliminary evaluation included the answering of the following questions: Is the material informative, (technically) manageable, reliable, recent, and unique (the last aspect naturally raising in importance with the amount of accepted and imported material)? Then, a set of demands were set up according to which accepted material should be… Reversely, these priorities meant that the following types of material did not make it into the term bank: general language material, material not containing terms in Swedish or any of the official minority languages, incomplete material, terminologically unstructured material, material demanding too much preparation time, politically incorrect material and material protected by copyright for which no permission was granted. (Nilsson 2009)

Is a semasiological or an onomasiological approach to research taken, or is this distinction considered relevant? Is the work based on translation of existing terms in other languages, or is the research done from the Swedish side (on concepts)?

Swedish terminology is different from that of lesser used languages, in that few new terms are created. The emphasis is rather on researching and documenting existing terms, and, sometimes, recommending one rather than another.

> The main part in our terminology work lies in the concept analysis and the writing of definitions. We also work together with experts of the field, that is why we take established usage into great consideration. It is seldom the case that we have to coin new terms. The Internet- and web terminology is a rare case where coining happened several times. (Bucher email)

Translation from other languages is not seen as a particularly good method of research. Customers, however, sometimes ask for this, and may be redirected to more appropriate translation services.

> KH: Equivalents in foreign languages really comes at the end in a terminology project. We try to convince people, like when we work with the Swedish higher education authority, who already have an English equivalent but are not really sure of the Swedish concept. Our advice to them is that they have to check, have to write the definitions, so to clarify the Swedish concept before judging whether an English equivalent is matching it or not.
>
> ÚB: So there aren't cases where you get given a list of English terms and they say we want Swedish equivalents for these, or..
>
> KH: Oh, of course it happens, that's what people really like to come to us with and when it happens we tell them that we would like to have some definitions, subject field etc. Only those who really want to start a terminology work with their terminology in the Swedish language (and with its equivalents in English) remain, others are directed to translation companies. Our glossaries, for instance, are all done with this *onomasiological approach*. (Hallberg)

Is terminology research reflective of real use, including for instance terms other than nominative ones (such as verbs or adjectives)?

Terminology research is at least open to including terms other than nominative ones.

If there is a need, like, if you really feel that the verb is a very special concept to that subject field then yes, of course. Like the verb 'doktorera' (English equivalent: 'doing a doctorate') in the field of higher education (Hallberg)

In some terminologies, e.g. cooking, a large amount of the terms were indeed verbal in nature (particle verbs). In some cases, difficulties in definition might be solved by defining a verb instead of a corresponding noun or vice versa. Recently, a student has shown interest in conducting terminometric studies, i.e. investigating quantitatively the actual usage of recommendations given, and this could be seen as another effort to join research and practice. (Nilsson addition)

Where do most new terms come from? Who ultimately decides on their use or meaning?

Swedish terminology is different from that of lesser used languages, in that few new terms are created. The emphasis is rather on researching and documenting existing terms, and, sometimes, recommending one rather than another.

The main part in our terminology work lies in the concept analysis and the writing of definitions. We also work together with experts of the field, that is why we take established usage into great consideration. It is seldom the case that we have to coin new terms. The Internet- and web terminology is a rare case where coining happened several times. (Bucher email)

There is an acceptance that the terms in use are the ones to document.

We know that sometimes some of our glossaries have been revised two or three times, the glossary of forestry for example and some others, and then we can see that in the first edition we recommended some Swedish term and then ten years later when we revise that glossary we can see from excerpts and from asking the experts that no, that recommendation was not accepted by the users, they still use the English term. So then we have to change. And then we do that for the next edition to have, to make, harmonisation as much as possible, within the established usage. (Bucher)

We look at the actual use, we go into the corpora, in the corpus of what they [the experts or members of the sector who commission the terminology] provide us with, and legal texts of course, trying to see the term in its context… (Hallberg)

There is a preference for Swedish terms, however.

We as linguists like to present a Swedish term, but then we have to take in consideration the actual use of a term. If the experts are using an English term in the Swedish context, maybe we just have to say well this is the term which is used and accepted by the users within that subject field … It's kind of a realistic and pragmatic approach. What you can do is suggest for instance maybe a synonym and see how it's accepted. It could be done. Some of it has been done and I remember some cases where the Swedish term was a success and in some other cases the Swedish term was never used. So of course we can do some kind of a, try to act on, for the Swedish language and try to suggest a Swedish term for some… (Hallberg, with addition from Bucher)

SW: To be as clear as possible you should write 'black diode lamp'

ÚB: But the other one is actually more used.

SW: Yes.

ÚB: So you say that back to the customer, you give them a choice.

SW: Yes. This is more used, but that is not the one that the term group would recommend. Because 'diode' can mean something else as well, or it can be another type of diode, not just the type that is used in lamps.

ÚB: So when you go back to the customer you recommend that they use one term but you note that the other term is more in use, so it's up to them what they want to do.

SW: Yes. We tell them how we came up with the conclusion. But we give a recommendation.

ÚB: So what they get back is a recommendation and the reasoning for that.

SW: Yes. (Waldén)

What is studied (social use; popularisation and functioning of terms; corpora…)?

There is an interest in the social use of terms.

ÚB: Do you ever go into a much broader sociological [study]… trying to create a discussion with the public in general about the use of terms or about what do people use, or that kind of thing?

KH: I can see that we are doing more and more so, especially now with the possibility to use a blog or something… we should open a blog where these types of discussions could go on. So of course, the choice of term and how do you do. Maybe not within a project, that depends on the aim, but generally, yes. I think we, I think that we would like to participate more in the general discussion of language. (Hallberg)

The new language law may, it was felt, lead to new research into the terminology practices of government agencies, using term extraction techniques.

We have a couple of strategies right now. We are doing one big marketing effort together with the University of Linköping because they have an automatic extraction programme that could be a start, just to find out the terms, and then we could continue from then. (Bucher)

It is felt that students could do this kind of work as their research, and that this would help TNC.

HN: [If we give] students ideas for things we can't research ourselves, can they do it for us? If we give them a good tutor, one or two, something we want done… We're doing that in the language technology programme in one of the universities and for library science we just received a girl, she had very interesting - I haven't read it yet but she compared terminological quality in Wikipedia, the major encyclopaedia and terminological dictionaries.

ÚB: So you encourage other people to do research.

HN: Try out automatic extraction and the tools, you know? Some students did that...

KH: And we also have one next week, a translation student that will come and do her practical work here. So we have quite some students, and we like to. We like them to do the research that we don't have the time for. (Hallberg, Nilsson)

Is the use of terms outside their original fields (popularisation and determinologisation) studied?

Popularisation and determinologisation are not studied; this is done by the Language Council

of Sweden. Terms can occur in different fields, however, and these are dealt with.

> We do not have the resources to study the use of terms outside their original fields. That is more a task for the Language Council of Sweden. However, it happens quite often that terms from one field also occur in another field and then we have to deal with these terms in that other field. For example, mathematical terms occur in many technical fields, psychological terms may occur in terminology of higher education, terms from higher education may occur in terminology for specialized training in medicine etc. (Bucher addition)

How much *ad hoc* work is done in response to enquires etc?

The query service is a distinct part of TNC's work.

> TNC's terminological query service is one of the services offered to those who need terminological information and assistance in terminology-related issues. What distinguishes dealing with terminological queries from other terminology production, glossaries for example, is its just-in-time character. On the other hand, what unites this activity with glossary production is that it embraces almost the same activities: searching terminological information, analyzing and, in many cases, producing new terminological knowledge in the form of new terms, definitions, concept descriptions etc. One might see the processing of a specific query as a kind of terminology project on a lesser scale. The accumulation of queries and communication between TNC and clients also stimulate larger projects. (Bucher 2007, 42)

The query service is run on a paying basis (see the section beginning on page 35). This can

cause problems, in that not everyone is willing to pay for the service. On the other hand, it is

felt that if the service is paid for by the customer, the resulting recommendations will probably

be implemented.

> SW: I don't think it's that often that I get a question and then I tell them that we can't spend many hours on it for free and then [they pay] - well, sometimes, they ask for the price, the time price, but it's not often that we send out a quotation and they accept it and we get money that way. But I think it's a good way anyway of saying that we can't spend hours and hours on this question for free because most people understand that... Because they realise that they - that nobody works for free. And then I think if they think it's something that is a big problem, then they will go back and consider paying for it. They know that they can be solved here, but that they might need to get money and I guess they also think about the questions they want to ask too, I think.
>
> ÚB: So if they pay for it, they really want it.
>
> SW: Yeah, I think it's that... (Interviewee A, Waldén)

> ÚB: So people get in touch by email or by phone or whatever.

SW: Yes.

ÚB: And then what do you do?

SW: Well we get a question and the first thing I do anyway is to check if they are someone who is subscribing to the service that we have, because if it is somebody subscribing to the service, then we can spend more time on it, or we can at least ask them if they would like to use their hours on this question, but if it is somebody...

IA: Not paying

SW: Yes, not paying. Then we either have to not spend too much time on it or ask them if they would like to pay for the time, or... (Interviewee A, Waldén)

It is acknowledged that it might be easier to have a free service, in ways.

I could think that in one way that it would be easier if it was just state funded and then anyone could ask anything. But then it would take more effort here and more people just doing that. Although we are not over flooded with questions, it's not that, but we would perhaps be if it was free. (Nilsson)

Although the service is paying, first-time users or potential customers are usually helped.

The query service together with TNC's other small-scale consulting services is available on a subscription basis. Non-subscribers can choose to be billed. First-time users are usually helped free of charge provided their queries do not require an extensive investigation. (Dobrina 2006, 2)

SW: And she only spent fifteen minutes. But she gave her something to go by anyway.

ÚB: So it was an answer.

SW: Yes. We often do that. We give something. Especially if it's someone that we want to come back and become customers. (Waldén)

ÚB: So if somebody phones you up and they're not paying, would you spend a bit of time and try and figure out the answer?

SW: That also depends. I usually do a search in the database that we have. If I find an answer that quickly, I just do a search and there's an answer, then I usually tell it, and if the question is interesting somehow to a bigger group of people, if there is something that is interesting for the Swedish language, then I might spend time on it anyway.

SW: If I say that I can't spend many hours on this for free but if you are willing to pay, blah blah blah, but I say that I can make a search in our database and see what I can find, and I find something, often they are very happy with that. (Interviewee A, Waldén)

If the question is interesting or important, though, it usually gets answered anyway, even if that takes quite some time.

And then this one is also a free question, but it's from the Ministry of Finance and Justice Ministry. So that is a very important question for Sweden and we'll do it for free anyway. And I think this took hours - yes, 720 minutes. (Waldén)

Then this was asked by Språkrådet, the language council in Sweden. And we give them a bit of time for free if they have a question because it's often something that the general public is interested in. (Waldén)

Requests are documented for future reference.

ÚB: What do you do with these when you finish with them?

SW: We import them into the internal term bank like this [showing document], so if I later on search on TDIN for instance, then I can also see who asked the question, we can search also on how many questions, we don't maybe use it like that but it's possible. (Waldén)

ÚB: So actually most of the answers, you already have them.

SW: Yes or we can find them in the library, we can look them up. (Waldén)

There is no typical user, but patterns have changed over the years.

TNC has been providing a terminological query service to specialist language users and members of the public alike since its foundation. Typically, in the earlier days many queries concerned concepts and terms that belonged to the basic and general technical vocabulary. It was natural, at the beginning of TNC's existence, that people sought recommendations on how to distinguish between general technical terms such as *machine*, *instrument* and *apparatus* since until then, the only advice that could be found was what general dictionaries stated and that was mostly of a descriptive rather than a collaboratively normative nature. (Bucher 2007, 42-43)

From the 1940s to the 1960s, the majority of the queries concerned scientific and technical fields. Today it is a wider variety of subject fields: medicine and health care, law, chemistry, public administration, training and teaching, computer science, life sciences and telecommunications. A similar development pertains to the variety of occupations of present day service users; formerly the majority of users were subject-field specialists and today's users tend to work in public administration, or as translators, teachers, technical writers, journalists etc. (Bucher 2007, 43)

The kinds of queries, and the kinds of customer, vary from government bodies to private enterprise to private citizens. There is no typical customer. Approximately 140 to 150 queries are received and answered annually (email Katja Hallberg, 21.09.10).

IA: I don't think there is a typical question.

ÚB: Or typical customers, maybe?

IA: The last few months, it has been from the patent agencies, a few PR agencies as well who work in communications. I think that is a new category who are getting big in the market - everybody needs them [laughter]. (Interviewee A, Waldén)

A query service user stands somewhat apart from consumers of TNC's other services. An employee of a large company, a freelance translator, a university student or a librarian contacting the service usually seeks a solution to his or her own terminological problem but the information produced by the query service in response to a query usually benefits a wider community. (Dobrina 2006, 3)

And this is a private person that asked about a roof. He wanted to - it was somebody, an insurance matter I think, he wanted to change the roof on his house and he wanted to know what is included in the concept 'roof', is it [just] tiles or the foundations [and] everything? So I gave him some definitions from the building term glossary that we have which is actually a complement to the law about building... And he was really happy with the answer because it meant that he would get everything changed that he wanted to get changed. [laughter] (Waldén)

There are areas in which more questions are asked, however, such as information and documentation or life sciences, and some questions come up again and again.

Of some 6,000 queries recorded in TNC's query database... the largest group is constituted by queries relating to the field of information and documentation closely followed by queries concerning life sciences. The number of queries dealing with new and rapidly evolving subject fields with explosive development of terminology certainly exceeds that of queries relating to old established domains with a more stable terminology. (Dobrina 2006, 4)

ÚB: Would you get the same questions again and again?

SW: Yes, like this one with the plus and minus sign in temperatures, and the 'technik' and 'technology', that's happened many times. (Waldén)

One reason for this repetition of questions may be because the results of the query service's work are not available in the Rikstermbanken (see the section beginning on page 44).

PS: For instance we have in this network, in several of the networks we have different categories of recommendations, first the traditional term record type, but also this with questions and answers.

ÚB: So they don't go in as traditional records, then?

PS: No, they are also not isolated to one concept so you can't have a term record for them. A term record is just one concept.

ÚB: So they're not processed.

PS: That would be a future [plan], to be able to store that in a good way in the term bank, because they are not published now, so we have a separate and will continue to have separate websites for each group. Where all the data is. (Svanberg)

In some cases, though, often among the media, TNC is not consulted.

A-LB: Sometimes we are asked, sometimes we could get questions like that to our helpdesk service, somebody, what should we say, 'swine flu' or should we say 'new flu'

or should we say 'NH flu'? It wasn't done in this case but if they do [ask] we answer and give a recommendation to say this and not that.

ÚB: Are you the first port of call for journalists, if journalists are dealing with something like that, do they automatically think of you?

A-LB: Not automatically, not everyone. Some do, but not automatically. (Bucher)

Dobrina (2006, 3-4) lists three main categories of queries: concept-related queries; term-related queries; and language/style queries.

IA: The first and biggest [type of question] is, we get questions about the definition of a term, or questions about how to, about the term, the term equivalent to English, very common.

ÚB: So 'how do I say this in Swedish?'

IA: Yes.

SW: It could be other languages as well, but...

IA: And like grammar and linguistics…

SW: How to spell a certain term or how to – yeah, grammar questions, basically. It could be that they have the concept but they don't know what the term for the concept is. They describe the concept and ask if we have any term for it in our collections, or any recommendation. (Interviewee A, Waldén)

ÚB: And would there be many translators, or people who work in companies, or people who deal with manuals for companies, or is it that kind of thing..

IA: Yes. And then we get those kind of translation issues, often they are not already introduced in the Swedish language. (Interviewee A, Waldén)

The rest of this section will set out how *ad hoc* (query service) research is done.

The questions are researched in the internal term bank, where, as seen above, the solution is often found, and in other sources.

SW: Yes. There are a lot more sources there than in Rikstermbanken. And then we look in the library or in the old card file, and Google [laughter] to see the frequency it's used, if it's used in Swedish or only in English, and how it's used. And usually we can find some good web page that describes the concept and you can get other links referring to it and then you get more information there. (Interviewee A, Waldén)

Experts are sometimes consulted, although there is not always enough time for this.

ÚB: And do you have experts that you speak to, say biochemists or whatever that you would speak to about particular questions?

SW: It depends also on the subject field, there is a list of doctors in different fields of medicine that we can call, but for science and technology, for example, there is no list. But I often call people, I usually look at the different universities and try to find somebody that's written something about the subject and I call that person.

ÚB: You contact them and ask for help.

SW: Yes. (Interviewee A, Waldén)

SW: I think calling experts is good, we should do it more often. (Interviewee A, Waldén)

IA: And of course always time, the best thing is always to phone many experts, it takes so much time. First you have to explain where you're calling from and why, and what I'm doing and then trying to... (Interviewee A, Waldén)

Other online resources are searched, and interviewees felt that this is usually done well.

SW: I think we are good at finding good sources for the concepts, I talked about Google and Wikipedia and so on, that's not good sources, I didn't mean that we [just] use that. I think we are good at finding a good source. And I think we are - sometimes I think we spend a lot of time trying to find all the sources, which is not always meaningful, but it's, I think we're good at finding the right sources anyway. I don't think we miss many times any possible terms or something like that. If you find a couple of suggested terms then they are often the ones that are used… But they are the major one. (Interviewee A, Waldén)

If the question is particularly difficult, it is discussed among colleagues at the coffee break.

In the case of complicated queries concerning, e.g. concept differentiation or finding a Swedish term for a new concept a terminologist on duty usually asks colleagues for assistance. A brainstorming session, say, at a coffee break seldom fails to produce an acceptable solution. (Dobrina 2006, 8)

SW: If we have a couple of suggested terms, then we usually talk about them together, we bring them up when we have a coffee break at half past two every day, and we bring them up then and talk about them. Many times there isn't any good suggestion for a term and then we try to recommend something or come up with something and then we also do it together. Then you [Interviewee A] or I compile the information we have got about the concept and we have gathered that the concept is something like this. And then we discuss together... (Interviewee A, Waldén)

There is no particular checklist or protocol for the query service work, and different terminologists take different approaches to it.

ÚB: Do you have a sort of protocol, if you get a query of what is the Swedish for this, first do this then do this. Is it set out what you do or do you work more on your own?

IA: We work on our own. I think we have, we had a lot...

SW: Yes, the kind of checklist just for your own - you don't have to follow it

ÚB: Of course, but a list of have you looked here, have you looked here,

SW: Yes. But there isn't any method that we all use the same. (Interviewee A, Waldén)

ÚB: What other languages would you look at? You look at English and what other languages - would you look at how they've dealt with the term, or…

SW: Yes, or we look at Swedish. It depends on what we are doing.

ÚB: If somebody asks what is the Swedish for this?

SW: Yes

IA: It could be interesting to check Norwegian or Danish, I rarely do, though, but I think it *has* happened [laughter]. (Interviewee A, Waldén)

A record is compiled once the research has been finished, and stored for future reference. It is also circulated to colleagues for comment.

IA: We're always ready to change the register of the questions, and then we send them, just for review… to everyone. And we get feedback on the questions, and that's the way we get – 'ah, you should have looked here as well', or things like that.

ÚB: So everyone sort of contributes.

SW: Yes. Even though it might be one or two months later, but still it's one way of doing it. (Interviewee A, Waldén)

A response is ideally sent within 24 hours.

The requested information is searched for, hopefully found, a response is compiled and (within 24 hours) delivered to the enquirer. (Dobrina 2006, 1)

It depends on the question. It says in this [Dobrina 2006] that they got the answer within 24 hours. It's not always true, it could come with the question about the roof; I talked to him on the phone so he got the answer within 15 minutes, but this one probably took a week or something because there are other things coming up. But we tell them that this takes a bit of time, and we'll get back to them. (Waldén)

The number of queries varies, but it is not very high.

ÚB: And would you get many in the query service, is that what you work at most of the time, or would that be occasional, or how much of your time is taken up by dealing with queries?

IA: For the last few months it has been very little, because of vacations. But normally, how much can it be? Maybe one day a week or something, twenty per cent of the time.

SW: Yes, maximum.

ÚB: So really it's quite a small amount of your work.

SW: Yes. (Interviewee A, Waldén)

Who is consulted during the research process (linguists, terminologists, domain experts…)? When and how are they consulted?

There are several ways in which experts are consulted. They can be contacted informally as research is being done by the query service.

SW: I often call people, I usually look at the different universities and try to find somebody that's written something about the subject and I call that person. (Interviewee A, Waldén)

ÚB: And are they usually interested and helpful?

SW: Yes. Or they can give you a name of someone who can help.

ÚB: But you don't have formal agreements with particular experts.

SW: In some areas, like medicine, and then there's Datatermgruppen in computing. I suppose it's possible to call them.

IA: But there's no special agreement.

SW: No, there's no written agreement.

ÚB: But there's a general good will towards TNC.

SW: Yes, and they have an interest in dealing with this. (Interviewee A, Waldén)

In specific research projects, groups of experts are deeply involved. There are also coordination groups, called Joint Groups, for particular interests (see the section beginning on page 52).

I am thinking of Internet-, web- and e-mail related terminology. In Sweden we established, a little bit more than ten years ago, a special coordination group for that kind of terminology, because at that time a lot of English terminology practically flowed into Swedish and these were terms that a lot of people had to use with so there was a great demand of advice and assistance. (Bucher email)

2.5   Research: Methods

How is terminology research carried out? What are the process and the research methods?

As discussed in the section beginning on page 31, proposals for terminology projects do not originate with TNC, but from external groups. This means that different projects vary according to the needs of those groups and the scope of the projects. The description below is of a 'typical' project, but even then the steps are not taken one after the other.

> The different steps are not taken in a straight order, because you can jump between one step and another. (Hallberg)

It is also the case that three different types of terminology research (*ad hoc*, traditional-type projects and translation oriented projects) are carried out at TNC, and that the methods vary considerably between them. Terminology projects (rather than *ad hoc* terminology) are considered in this section.

> We distinguish between mainly three different types of project at the TNC: 1) ad-hoc terminology, as our term inquiry service, 2) more traditional terminology project and, 3) translation-oriented terminology project. (Hallberg addition)

If a term collection is requested, a working group is established. Terminologists form a part of this group.

> KH: You need to form a working group, not too many, say five to eight people altogether.
>
> ÚB: And they would be experts in the area?
>
> KH: They would be experts in the area, they would be part of that group, they should be part of the group that feel this need, that their subject area needs a dictionary or a glossary. So that they are motivated.. And of course there should be terminologists in the group, or one or two who could teach the group about terminology methods. (Hallberg)

> ÚB: So usually in a project like that you'd have maybe five or six subject experts involved.
>
> KH: Yes, depending on the means, but that could be a good idea, that's an ideal working group. Five to eight members. (Hallberg)

It is then necessary to decide the limits and purpose of the terminology work – who are the users and what is the precise topic.

> KH: Let's say the first, the main step of a working group of a terminology project is that you have to consider what the needs are, who is going to use this and what are the needs.
>
> ÚB: And how do you work that out?
>
> KH: Well you have to define who are the potential users, what are your needs? Do you need to communicate better within your project field, is that the main need, or do you

want to communicate to others, do you want to communicate between experts? Is the need to communicate to the general public? …The needs could be very difficult, so you have to identify them and judge them, what are the needs, and then you decide who are the users, who would be the potential users of this and that can be quite tricky, you need people… (Hallberg)

And then secondly after this you also have to delimit, because many people come and say [something like] 'we want to do a glossary of forestry', well that's a big area and you have to really select what special field… it's not us doing the glossary, they have to delimit, they have to put out what kind of subfields do you want to cover. It's [their] job. We can help them, they say what documents do you want to include..

ÚB: So you're really clarifying their thoughts about it.

KH: Yes. That's a very important first step so they can't just say 'yes we want a five thousand word glossary' - and five thousand is a big big area to start with, if they want a terminological glossary, of course. If there is going to be definitions and maybe they have to decide what language, if they need equivalents. That comes, that's also part of the needs, who are the potential users. And of course delimit, really set up what kind of areas do you want to cover. If it's forestry, is it forestry production, is it forestry, really biology, or insects that attack the forestry, they need to really clarify this. (Hallberg)

Although TNC is commissioned by particular groups to do terminology work, these are often groups representing a sector of activity, so terminology work does not have to be limited to the usages of one particular company. In-house terminology work for a company is not excluded, however.

ÚB: The fact that a glossary can be commissioned by a particular group, would that limit the kind of terminology that's in it? Say that there's forestry company A decides that they need a glossary, and they say we want you to make our glossary and here's our stuff, our documentation, but then there's forestry group B who also work in forestry but might have different documentation or might use different terms. But you'll be limited to one group, that mightn't be as useful in the end, maybe.

KH: Of course, then you just have to tell them, it's often when there is a need for a whole subject field, it often comes from a, how do you call these bodies, maybe not just one company comes to us but more the whole subject, covering the whole subject field, there is interest from the whole area, but of course somebody could come and need some help with their glossary in-house, and of course we structure those needs. (Hallberg)

We do have fifty per cent of our budget we have to finance, of course if we can help, last year I was working for a commercial group, a big Swedish truck company, Scania, and they wanted a terminologist to come in and help them with restructuring their term bank so of course we can help them structure it but it's another kind of problem, it's not a whole glossary, but of course we can do that if they want to, because we need to bring in money, but then we don't use public money for doing this, so it could be hard to finance, so it's a bit separate.. If the money comes from an organisation that covers a whole subject field like forestry for instance, that would be different. (Hallberg)

The next step is to use available documentation to identify the concepts.

> And then they can come up with material, documents, etc, or former glossaries that had been made and so that we can identify the concepts. So we can really identify what concept goes under, is this related to this. If this is included we need to have maybe the closest concepts, subordinate concepts, so they can see some kind of a structure. (Hallberg)

Terms are extracted from the materials supplied.

> And then we have to gather and register all the terminological data that they have to tell you. That's part of the terminologist's role – you have to bring us if you want to extract terms, and you should help us in classifying those, we can help you extracting terms but you have to provide us with what you consider being important documentation so that the concept could be identified. (Hallberg)

Automatic term extraction has not been found to be satisfactory, although this may change in the future.

> ÚB: And you do automatic term extraction?
>
> KH: Well we haven't used that much, that's a problem because it's not really a system that is so satisfying from what we have [seen]… But we are now developing a cooperation with a company that are doing automatic extraction and put our competences together to see what it could bring. It's interesting. (Hallberg)

> ÚB: So that term extraction, is that done in a systematic way, or is it done - you said before that a lot of the extraction from corpora is done manually, is this done manually as well?
>
> KH: Yes, I would say that it is done manually because we read papers - even though it is electronic - we still just take it out and one person is responsible here to put it together and interpret it, so we just hand over our copy. (Hallberg)

The research is done on the Swedish terms.

> Of course the first step is really the Swedish equivalent, is the Swedish term the best term for this or are there any other terms with this concept in use, then you can eliminate are they synonyms or not. So this is where you clean the terms, when the definitions are there, then you clean, you look at the Swedish terms. (Hallberg)

The extracted terms are stored in a database or in lists, depending on the size of the project.

> ÚB: So once you have your terms what happens then? Are they in a database or something?
>
> KH: Yes, normally they are in some kind of a database or just a list depending on how many concepts you have to treat. (Hallberg)

A concept system is created based on the extracted terms.

> …After the term list of course we could set up also a conceptual system. And for that we can draw up your diagrams, your conceptual diagrams. So that should be done, we are trying to do that to be able to…it's also part of the structuring work, we covered

this area, and do we have everything that we need in that particular sub area... (Hallberg)

Definitions are also written (though not for every project, depending on the needs).

> ÚB: So then once you have your conceptual structure is that when you start doing definitions?

> KH: Yes, that's when we start to write the definitions. (Hallberg)

Sometimes definition work is not needed.

> If it's a question about two to three hundred terms in a very specific field and you want really to go deep into it, if that's the need, but it's always related to what needs [there are]; the first question, the first step. Who needs this, is this maybe just for translators to get an equivalent? Maybe you can cut some of that, like the definitions. Maybe it's enough with an extraction of official documents that you can just have the term in a context. We've done a glossary like that. Without definitions, because the definition-writing is quite time-consuming and maybe that's not really the need. So it's really important that the first step is done properly, such as who will use this? You should not maybe do this kind of work. This is only on the kind of expert level, maybe they need a real.. whereas if the translators need quickly some information about a term, how the term is used, they can just get, oh yes, this is in the legal texts of this or that so I can use it, it's officially proven. Then there's another kind of job, that's what we call the translation-oriented terminology work. (Hallberg)

Experts are involved in all stages of this work, and there is constant to-and-fro.

> ÚB: Okay, so at that stage you have your definitions and you have your concepts and you have your terms, and then what do you do?

> KH: Hopefully you will send it out and of course the experts should have a look - but this is all in cooperation, I mean it's sent out for their approval and maybe we try to help them in writing definitions and see that it really sticks to the conceptual system and you don't put in too many characteristics in the definitions and so on. (Hallberg)

Ideally, the work is done on Swedish terms, and equivalents in other languages, including English, are added at the end of the work. This is not always what happens in practice, however, due to clients' demands.

> ÚB: So there aren't cases where you get given a list of English terms and they say we want Swedish equivalents for these, or..

> KH: Oh, of course it happens, that's what people really like to come with and then you can say well, firstly we don't really work with English language but if it has to be, we would like to have some definitions in what subject field they are and… but normally, this is how we would like it to work, it works when we rule the project so that's how we like to work, that's how we work. Our glossaries, for instance, are all done like that. (Hallberg)

> Equivalents in foreign languages really comes at the end… It should be but this is a very... We try to convince people, like when we work with the higher education authority, they already have English equivalent but they weren't really sure of the Swedish concept and it would not… and we said you have to check, you have to write

the definitions, to clarify what the Swedish concept is before we can see if that English equivalent is matching or not. So it really comes as the last step, I would say. (Hallberg)

If new terms are being created – which is not often or usually the case – this is done by research into the concept, into related terms, and by consultation with experts and with the TNC database.

> ÚB: And if you're creating new terms, how do you choose a new term, or do you look at the historical language or do you look at internationalisms? How would you go about recommending a new term?

> KH: First we will see what is, what is the concept, it sounds like a repetition, but we still have to see what is this thing or function or really go down to the… And what is it related to, how are they named, maybe there's something that is similar or whatever so that you can see the conceptual strategy, maybe a closely related one has a name in Swedish, so we can see how it's named and so on, so you really go on the concept level to see what's.. And then of course you try to find an analogy, a similar...

> ÚB: So they're not created in a void.

> KH: No, I think they are really looked into, that's how we think also. What could be something like this, what kind of term is used for this, so that you can see some kind of structure.

> ÚB: And presumably you would speak to experts in that field.

> KH: Yes, experts in the field, of course, but also of course we have to look into the linguistic - would it fit in, is it similar, is the right prefix used for that, of course there are some [rules]. We can help the expert and say maybe this would be better, or...

> ÚB: So I suppose the experts are really the term users, they're the people you consult.

> KH: Yes, and of course our databases, because we can see if there is a history. There could be a history, and some thing that people call new is not new at all, maybe it's similar to something that we have for a long time, or maybe we have a Swedish term for it. So you do some research. Is this concept really new, is it really, and how is it related. So we do quite a lot of research. (Hallberg)

There is a list of principles to be followed in these cases of new terms.

> The [joint computing term] group established some principles for how to handle the English terms. The superordinate and overwhelming principle was to analyse and find out the concept behind the term (of course, since we are terminologists). After that we considered the term and recommended them according to one of the following criteria:

> 1) Use an already existing Swedish term that (nearly) corresponds to the concept

> 2) Translate the English term

> 3) Coin a new Swedish term

> 4) Take the English term but adapt its spelling and inflection to the Swedish language system (Bucher email)

In certain cases, new Swedish terms have to be proposed.

> ÚB: Do you do any sort of term creation or recommending new terms?

> KH: We do, when there are new concepts coming up, when new collections are coming up, or when new subject fields are - like we have had a lot of problems with when

there are most English words quite dominating and we just had to find some. That is when we're doing some term planning. (Hallberg)

The size of projects varies considerably.

Yes, two to three hundred terms [is usual], but… when we were working with the national, the public authority or the government office of national education, or higher education, they would have around a thousand concepts, or terms also so it was very [big], but then there were at least ten different working groups to identify and to write definitions and so on. (Hallberg)

The amount of time required by the research work depends on the amount of research and elaboration work to be done.

KH: We have a Finnish sister organisation, they have made a calculation and cost-benefit and everything analysis and they said that one term record in the glossary will take about five to six, up to seven hours to create. Selection of the term, all the setting up of the concept system, and finally the…

ÚB: And would you say that that's about right?

KH: That's pretty much about right if you want to do it the whole way, if you want to have a real… If it's a question about two to three hundred terms in a very specific field and you want really to go deep into it, if that's the need. (Hallberg)

Besides work on particular term collections or projects for contractors, there is another way in which TNC collaborates with experts for terminology work. This is the use of 'joint groups'.

In 1996 when the use of Internet and e-mail was still relatively new, there was an increasing number of queries about Swedish equivalents for terms such as homepage, e-mail, web, chat. Shortly after that, the Swedish Language Council and TNC formed The Joint Group for Swedish Computer Terminology. Later we created other similar groups, among them the Joint Group for Swedish Life Sciences Terminology. (Bucher 2007, 43)

In 1999, the Joint Group for Swedish Life Sciences Terminology (Svenska biotermgruppen) followed. Since this subject field is still new, and since its terminology has not yet influenced everyday life and language in the same way as the computer terminology, this group is smaller and has so far attracted mainly researchers and teachers in this field. The specialized press in the field closely monitors the results, however. (Nilsson 2004)

The third joint group, the Joint Group for Swedish Terminology of Built Environment (Svenska termgruppen för byggd miljö), was formed in 2002, and has terminology in the fields of planning, construction and facility management as its scope. This group is, from an organizational point of view, still somewhat different from the other joint groups. The main actor in the building information area (Svensk Byggtjänst) has teamed up with the TNC, organized a reference group of subject field experts, and launched a combined termbank/thesaurus system based on subscriptions and membership. (Nilsson 2004)

The computer term group responded to a particular need, because of the amount of English terms appearing.

> I am thinking of Internet-, web- and e-mail related terminology. In Sweden we established, a little bit more than ten years ago, a special coordination group for that kind of terminology, because at that time a lot of English terminology practically flowed into Swedish and these were terms that a lot of people had to use with so there was a great demand of advice and assistance. (Bucher email)

These groups have a more explicit general, language-planning role than the rest of TNC's work.

They generally work on an ad-hoc basis, as questions arise.

> The objective of these groups is to consolidate and, as inadequacies in current usage may require, create an adequate terminology that does not require switching from Swedish to English, as well as to harmonize the existing terminology by analyzing concepts and providing plausible definitions and explanations. The groups consist of general-language cultivation experts, terminologists, subject field experts, sometimes also media representatives. These groups are not like the project groups that produce a glossary in a special field, they are rather to be understood as emergency wards that solve ('heal') term problems for laymen and experts alike, i.e. not only experts. The groups often treat individual concepts rather than entire concept systems as an immediate measure to propose terms that serve evolving usage well. (Bucher 2007, 43)

A committee working method is used.

> A core group of five to six people meet once a month to work out pre-recommendations containing a Swedish equivalent to an English computer term and an accompanying comment, definition or explanation. These recommendations are then sent out for reference to a larger group. The whole group meets once a year and corresponds by e-mail in the meantime. Besides language cultivation representatives, subject field experts and media representatives take part, all on a voluntary basis. With the help of a website, where the terms and recommendations are published for anyone to use, the group has managed to establish itself as the reference for proper Swedish computer terminology, and the recommendations gain ground and appear in the media and as part of newly published glossaries. (Nilsson 2004)

The groups have a broad composition.

> In this [computer terminology] group, domain experts, terminologists, media representatives and general language planners meet and discuss concepts and give recommendations for corresponding Swedish terms; these are later published on a website. (Nilsson 2010, 67)

This composition, and particularly the media representation, is a factor for success.

> Since the [computer term] coordination group among its members also had people from the media, the recommendations were very fastly spread and used in papers and on TV. (Bucher email)

> With the participation of many companies and organizations, and of different sorts (newspapers, TV companies, computer magazines, IT experts, linguists, publishing

houses, etc.), the terminology recommendations are well rooted and well spread. (Karlsson email)

If you really want the media to use standardized terminology, and the media companies themselves are urging for terminology help, the best approach is to start terminology projects where media companies are represented. (Karlsson email)

Another kind of research done by TNC is analysis of terminology used in journals and publications. Terms are extracted on a continual basis and added to the internal database, for future reference.

What we also do with the public funding is that we read the electronic version of a journal, some of us have specialisations, so we go through and we extract terms and we use that ourselves for our internal database, that's how we use the public funding, so that we can build up ourselves, it's not just depending on different projects we have, so we do that kind of excerption.

ÚB: Do you do much of that?

KH: Oh yes, we do, our extraction base, excerpt base - I can't tell you the number right now but I think it's about fifty or sixty thousand, or I don't know how many excerpts we have.

ÚB: That's excerpts from journals and from the media or whatever, seeing what's happening.

KH: Yes, we keep an eye on new terms, and we check whether this has already been excerpted, and we do excerpt some things again because then we can see… (Hallberg)

SW: I was reading a new book on mathematical terms, because I'm a mathematician, and I was reading, editing it to put it in our internal term bank, because they haven't agreed to put it in the Rikstermbanken.

ÚB: So you put an electronic version into the term bank.

SW: Yes, they agreed to that. And then I was reading it thoroughly because we were using many of these terms… (Waldén)

There is also a large reference library.

The TNC reference library should house any terminological dictionary which contains Swedish terminology and the library currently has some ten thousand volumes of glossaries, handbooks, terminology literature, magazines, etc. The library also includes a collection of Swedish standards. (Nilsson 2004)

What internal research systems are used (e.g. in-house or commercial software, particular methods)?

Dobrina (2006) lists three research resources, including the internal database and the reference library.

In query processing three main types of terminological resources are used:

TNC-bas (TNC's internal terminology database) of over 250,000 terminological entries including terminology from terminological vocabularies compiled by TNC and other

terminology centres in the Nordic countries, excerpts from Swedish standards, collections of terminology compiled by the JGTs, etc. It also includes TNC's query database of nearly 6,000 queries starting from 1971.

TNC's reference library containing about 10,000 volumes: terminological vocabularies, dictionaries, handbooks, monographs, catalogues, the query service archives starting from the middle of the 1940s, etc.

Web resources in the form of a collection of links to special language dictionaries, terminology databases, etc. (Dobrina 2006, 6)

TNC has an internal and an external database, which are not identical. The internal database contains excerpts from texts, a result of TNC's term extraction work, and responses to *ad hoc* queries. The external database (Rikstermbanken) contains TNC's published term records and those of other organisations which have given permission for publication. Both were created in-house, which is seen as an advantage.

A-LB: I think that it is also good that we are not dependent on external consultants for the building of a software for the term bank since there are very few commercial softwares that would be enough for a huge term bank like this.

ÚB: It's nice that you can develop them in-house.

A-LB: Yes, because you have to know something about terminology as well. (Bucher)

The internal database has a long history.

At the end of the 1960s, TNC began to use computer-aided methods in elaborating glossaries and this led to the development of an electronic term bank which, in the middle of the 80's, could be accessed via modem. In 1987 TNC published its termbank on a CD-ROM for the first time. Other publications of TNC's termbank took place in 1989, 1992 and 2005. (Bucher 2007, 43-44)

Actually we are talking about six kinds of term banks here: the first computer-based term bank which could be accessed via modem (Termdok; 1979-1980), three versions of Termdok on CD-ROM (1987, 1989, 1992), one version of the term bank on CD-ROM under a new name, TNC-term (2005) – and in order to be complete: the term bank Rikstermbanken on the Internet (2009). The contents of the term banks on CD-ROM was not the same in the four versions. The reason for why we changed the name from Termdok to TNC-term was due to copyright things and that TNC had been reorganized in 2000. (Bucher addition)

The database (called TNC-bas) contains all of TNC's work.

PS: But then we have this internal database which stores, which we can load with what we get. So there is, that's all our earlier work, all our books we have done here, but also lots of other sources for the term bank and also this, all the questions we have answered over the years are documented there.

ÚB: So it's all in one place and it's easy to find.

PS: Yes. (Svanberg)

ÚB: What do you do with these [query responses] when you finish with them?

> SW: We import them into the internal term bank like this, so if I later on search on TDIN for instance, then I can also see who asked the question, we can search also on how many questions, we don't maybe use it like that but it's possible. (Waldén)

There are discussions about possibly switching to an internal version of the Rikstermbanken, and perhaps providing a login to external terminology providers to allow them to manage their own term resources directly.

> In connection to this organizational network, Rikstermbanken and its secretariat will constitute an important asset for the work of the terminology coordinators, especially when it starts being used not only as a search and retrieval tool, but also as an editing and storage tool. The ambition is to also allow different actors to use Rikstermbanken also for editing and storing their own terminology, i.e. as a full-blown terminology management system. This raises new questions: Should organizations already maintaining a term bank (few today) continue this or should they hand it over to Rikstermbanken? Should those without a term bank still invest in a proper TMS? And so on. Those questions remain to be answered, and as shown above, the intention of the first phase of realizing Rikstermbanken is merely to provide a search and retrieval tool. (Nilsson 2010, 74)

> ÚB: Why do you have two databases? You have an internal database and you have an external database. Why are they not the same?
>
> PS: Well the internal database is not at all... it's a commercial product to start with and it's not suited for a web interface. It's a normal computer interface, can only be used internally.
>
> ÚB: So it's on a local server or something like that.
>
> PS: Yes. And as it is sources we don't have permission to make public, that's just for our internal use. And also that was started lots of years ago, so it's other technology and so on. But there are thoughts that perhaps in the future if this national term bank and the software works and works well, maybe we'll have some kind of internal version of that also for the internal work. But that's not yet. For the moment the software, for instance you can only store concept based terminological references, you cannot store questions and answers or excerpts or other things. So you have to evolve that first. (Svanberg)

How is the research work documented (e.g. training manual, history of database changes)?

A manual published by Nordterm, *Guide to Terminology,* is seen as a basic description of TNC's methods, as well as the ISO standards.

> KH: I'm just thinking of this guide to terminology, we were actually, a couple of years ago we didn't have even a small material in Swedish presenting in theory and practice terminology work, so this [Guide to Terminology] is a translation of..
>
> ÚB: Oh yes, I read the English.
>
> KH: So we did the translation of it, and we adapted it quite a lot.
>
> ÚB: And that's your textbook for your courses.
>
> KH: Yes, this is kind of the introduction to terminology work in theory and practice. (Hallberg, Nilsson)

Well, I would say that the different steps in a terminology project are standardized and used in all our projects. The steps are described in ISO/TC37-standards but also in the manual *Terminologiguiden* mentioned above. (Bucher addition)

There is no protocol describing the steps of terminology projects in TNC in greater detail, however.

ÚB: And do you have manuals for documenting what you've done? If somebody walked in tomorrow and said, show me exactly how you do this. Would you have protocols, or do you set it out that formally?

KH: No, not really, still. Some projects are better than others, of course, depending on.. But I would say we can still find ways of tracing our steps, yes, of course. (Hallberg)

There is a manual for *ad hoc* term work, but because of the nature of the work, it isn't completely standardised.

We do have a manual for our (ad-hoc) term inquiry service; how to go about it when we receive an inquiry… how to search, what to document etc. etc.) (Hallberg addition)

ÚB: Do you have a sort of protocol, if you get a query of what is the Swedish for this, first do this then do this. Do you have a, is it set out what you do or do you work more on your own?

IA: We work on our own. I think we have, we had a lot...

SW: Yes, the kind of checklist just for your own - you don't have to follow it

ÚB: Of course, but a list of have you looked here, have you looked here,

SW: Yes. But there isn't any method that we all use the same. (Interviewee A, Waldén)

The handling of the queries to the help-desk service is not so easy to standardize, that is why we can't have a protocol really. However, it is always important to ask for information about the subject field and if possible, a piece of text that shows the context in which the term occurs. It is also important to ask if the person has thought of any ways to solve the problem himself. (Bucher addition)

When projects are undertaken, the documentation depends on who is responsible for administration, TNC or the client.

ÚB: Is the work that you do, say on particular projects, how do you document that? Do you keep the history of what you've done and the documentation of the stages, the decisions that you've made and so on?

KH: Yes, normally it's following normal administration of a project, for each project that you can see, you keep a... Of course it's different when you're [working] here. If everything is done here, we have the full control, we can control what we would like to keep or not to keep. And when you work with someone else who has the administrative part as well, then.. But of course, it's documented, yes. (Hallberg)

How is the research work structured – are concept systems used to lay out the work?

Concept systems are used, but most of the work is based on initial term extraction from texts and other resources.

ÚB: And do you start off by identifying concepts and then looking for terms? The kind of classic theory or do you do the term extraction and then...

KH: Well, it's a bit hard to say because the terms... if you go from text you encounter the terms and then you have to go that way, that's if you work with texts, if you work with let's say the experts themselves they often have a term... the concept's in use... there could be a clash, maybe it would have to be decided that you use three different terms for one and the same concept and there is some kind of "we want to use this" and "we want to use that" and you have to discuss, but still, when you work from texts, you see the terms and then you have to define are these synonyms, are these different concepts or are they used properly and how do you - so of course... (Hallberg)

It depends, having the terms is just to see, to capture concepts actually so and see that there is a sufficient number of concepts and we have the right concept and after the term list of course we could set up also a conceptual system. Yeah, and for that we can draw up your diagrams, your conceptual diagrams. So that should be done, we are trying to do that to be able to... It's also part of the structuring work, we covered this area, and do we have everything that we need in that particular sub area... (Hallberg)

Clarification: In a terminology project you can only start it off by identifying and collecting the concepts via their terms. Once the terms are identified and selected for the project you start off with the concept analysis. So first there is a term/linguistic representation (the only thing visible in a text) and, then there is the concept analysis resulting in concept systems. (Hallberg addition)

How much of the research work carried out by TNC is based directly on current theory about how research should be done? How pragmatic is TNC when theory and the reality of research vary? [Could you give me some examples?]

There are three types of terminology project at TNC, and each entails different theoretical approaches.

We distinguish between mainly three different types of project at the TNC: 1) ad-hoc terminology, as our term inquiry service, 2) more traditional terminology project and, 3) translation-oriented terminology project. (Hallberg, addition)

As seen above in the case of concept structuring, there is an acknowledgement that sticking to the theory of how terminology should be done is not always possible. This is the case for *ad hoc* terminology work (first response, below) and for terminology projects (second response, below).

ÚB: How closely do you stick to the theory? For example, finding the definitions first and then looking for denominations for terms afterwards. How pragmatic are you about that or do you stick closely to the theory of how terminology work should be done?

IA: I think so but it's very hard to find the definition first especially in Swedish. So we are happy when we find excerpts where it's used and then we can try to find something that describes the concept, and then maybe you find a definition. It's not, it's rarely we find a definition first. (Interviewee A, Waldén)

ÚB: And do you start off by identifying concepts and then looking for terms? The kind of classic theory or do you do the term extraction and then...

KH: Well, it's a bit hard to say because the terms... if you go from text you encounter the terms and then you have to go that way, that's if you work with texts, if you work with let's say the experts themselves they often have a term... the concept's in use... there could be a clash, maybe it would have to be decided that you use three different terms for one and the same concept and there is some kind of "we want to use this" and "we want to use that" and you have to discuss, but still, when you work from texts, you see the terms and then you have to define are these synonyms, are these different concepts or are they used properly and how do you - so of course...

The term is not always defined.

ÚB: And do you always define the term?

IA: No. I wouldn't say so.

SW: No, but we find the concept and sort of close in on it, this is the concept. We don't make the definition because it might take too much time to make it properly.

IA: We suggest that this could be the definition, or if we include this. (Interviewee A, Waldén)

If it's a question about two to three hundred terms in a very specific field and you want really to go deep into it, if that's the need, but it's always related to what needs [there are]; the first question, the first step. Who needs this, is this maybe just for translators to get an equivalent? Maybe you can cut some of that, like the definitions. Maybe it's enough with an extraction of official documents that you can just have the term in a context. We've done a glossary like that. Without definitions, because the definition-writing is quite time-consuming and maybe that's not really the need. So it's really important that the first step is done properly, such as who will use this? You should not maybe do this kind of work. This is only on the kind of expert level, maybe they need a real.. whereas if the translators need quickly some information about a term, how the term is used, they can just get, oh yes, this is in the legal texts of this or that so I can use it, it's officially proven. Then there's another kind of job, that's what we call the translation-oriented terminology work. (Hallberg)

ISO standards are generally followed, though.

ÚB: And do you adopt the ISO standards in your work?

KH: Yes, we try to follow them of course because we were a part of establishing them...

ÚB: Would you say for example that the methods used here are pretty much according to ISO?

KH: I would say so, yes.

The interviewees saw themselves as practical rather than based completely in research.

KH: Since we do not really do research we're quite practical, we have to do the projects, keep on running, money has to come in. So we don't have the task of really doing some research, we're not the university. (Hallberg, Nilsson)

2.6 Standardisation

What does 'standardisation' mean for TNC?

There was considerable discussion of the idea of standardisation of terminology and what relevance it has in the Swedish case, and the meaning of 'standardisation' for TNC was further clarified in additional commentary. The term 'standardisation' is not used. It is felt that TNC's work is generally a recommendation, and has no particular legal or administrative authority.

> What is said… is pretty "confusing", probably due to the fact that we mean one thing and you another when we use the term "standardisation". We'll try to summarize this confusion briefly: 1) generally, Swedish language policy (språkvård) gives recommendations and, not "decrees" 2) recommendations from TNC are the result of our efforts in trying to bring some order to unclear term or concept clusters, considering both the "content" and "linguistic" side of the term. We have no means to [force somebody] to use these recommendations but since in nine cases out of ten the initiators to trying to solve a problematic terminology situation are representatives of that specific field; they are thus willing to accept the solutions offered to them; solutions which are always elaborated with their cooperation. 3) we do not use the terms "term standardisation" nor "language standardisation" about our work. (KH addition)

> ÚB: You don't do term standardisation.

> KH: No. We recommend terms, there is a consensus in terms, but I don't think we ever call it term standardisation. (Hallberg, Nilsson)

> ÚB: So you do do a sort of standardisation, even if you don't call it that, you do sort of a...

> HN: We prefer one term to another.

> KH: I would say recommendation, actually, we recommend based on research. (Hallberg, Nilsson)

> ÚB: So it's usually - a typical scenario, a typical query would be that you need to go away and do some research on what's available and then go back to the person and tell them that this is what's used. That's much more typical?

> SW: Yes. Or that we find two or three terms that are used and one of them is obviously better than the others or something, and then we recommend that one, because it's easy to see which one is better. (Interviewee A, Waldén)

Recommendation, for TNC, means that a group of experts has worked on a term.

> KH: They [TERMCAT] standardise a term. Because we say that all our work is descriptive, and you're talking about normative terminology. Some of our glossaries, further on, we can say that this is normative terminology, it has been agreed among this specific user group, say, the geologists, this is what this group says you should use. We should use it in our work. So that's kind of a normalised terminology. (Hallberg, Nilsson)

> KH: A recommended term means that there has been a project, there has been a working committee, I would say, that's how I would... (Hallberg, Nilsson)

There is no normative body for Swedish terminology; this was tried with the national board of health, but was retracted. Different organisations feel responsible for their own areas.

> HN: They will tell you at the national health board, they had the lead, of it was called normalisation, [fr] *normalisation*, normalisering, this is the norm, this is what you have to use
>
> KH: It's a kind of legal obligation, more or less.
>
> HN: But it was removed again, that right, because it was very unclear, because you had the recommended ones and you had the ones that were norms, and what was the difference? And how.. (Hallberg, Nilsson)

> ÚB: So currently there isn't any organisation that sets the norm.
>
> HN: Not in a legal sense, but unofficially it would be the Riksbank [the central bank of Sweden] would have a certain thing to say about some of the interests or, rather, any authority, their own subject area would make them, if they say something it would mean more than if someone else said it. (Hallberg, Nilsson)

Occasionally, however, TNC collections are mentioned in legislation, and thus indirectly become standards.

> SW: So I gave him some definitions from the building term glossary that we have which is actually a complement to the law about building.
>
> ÚB: So it's legal?
>
> SW: Yes, because they say in the law that for the definitions of the terms, look in the glossary. (Waldén)

> The most typical case is the different editions of the Glossary of Planning and Building mentioned above. The Planning and Building Act has referred to TNC's glossary since the middle of the 70's. Before that terms and definitions were included in the Act, but after the 70's they were presented separately. That also meant that definitions were dealt with, elaborated separately, using terminological methods. And that was a good thing, something we often refer to as something that should be applied in the writing of other (all!) Acts. In the newest version of the Act, the definitions have been re-included.
>
> Beside this, single definitions, from TNC's glossaries are referred to in legislation, but not very often. (Bucher addition)

There is also a close connection to the standardisation body.

> HN: Since we always have a close connection to the standardisation body, I think it is always of the standard of ISO, or standard organisations. Standardisation, in that sense. (Hallberg, Nilsson)

Because of TNC's status, terminology is often perceived as normative, even if it isn't.

TNC's staff still has to explain from time to time that TNC does not act as a "language police force". (Dobrina 2006, 5)

Users' belief in TNC's absolute authority in the matters of Swedish special languages is sometimes quite touching. (Dobrina 2006, 9)

ÚB: And unofficially would you be the norm for a lot of things, unless it's the health service for example where they have their own particular terminologists, if it's a general, not general but say geology or something like that, if you say this is what you should use, is that the norm for Swedish?

HN: More or less

KH: Well, more or less, in our glossary of geology this was the term that was recommended.

HN: The material is often used as a reference. When we say something, it's considered rather heavy. But not in that sense, like in Lithuania or something you have that the term bank must be used. (Hallberg, Nilsson)

HN: Now we're perceived as being normative, so the minute we say something it's perceived as normative because you said so. There might not be a full investigation behind it in all cases because it's…

ÚB: So it's a perception thing, it's a status thing, rather than - it's not like legal means, it's just because you're TNC and you've been here a long time and you're...

HN: Yes. (Hallberg, Nilsson)

One of the reasons that questions of term standardisation are not a priority is that new terms are rarely created, and that it is much more common for one of several possible terms to be recommended.

It's very rare that we make up terms or invent terms. It's not that usual. (Interviewee A, Waldén)

It is seldom the case that we have to coin new terms. The Internet- and web terminology mentioned above is a rare case where coining happened several times. (Bucher email)

Occasionally no recommendation at all is made.

IA: I'm thinking of this 'shared space' example, and then we had very many, a lot of terms or suggestions for terms. Then we discussed for a long time.

SW: But that was also, it's a bit the same as the 'urban sprawl', because it was so difficult to agree on a concept, it wasn't really that...

ÚB: So a definition of 'urban sprawl'.

SW: I don't think there is a really good definition of it in English and I think there might be some - it might be defined in America or Australia but that definition is not really working on European cities. It's not the same thing here as it is there, I think. I think that's the conclusion we came to.

ÚB: So what did you do, did you draft a definition or did you - how did you solve the problem?

SW: I think in both those cases we didn't come up with any recommendation.

IA: No, which is really not that common. Most times I think we do but … it's actually used in Sweden, the concept, but it's not really that common.

SW:… And then in the end because we couldn't describe the concept properly, I made a summary of all the different ideas, and I sent a copy to everyone that had participated. And they were actually happy with us not giving any recommendation because they agreed that they didn't know how to describe it. (Interviewee A, Waldén)

In TNC's Swedish-English Dictionary of Building and Civil Engineering, published in May 2008, we say the following after *urban sprawl*: "no well established Swedish equivalent exists but … (here we encounter 7 Swedish terms) are sometimes used, covering different aspects or parts of the concept". (Bucher addition)

The fact that terms are recommended or deprecated by TNC is seen as already being out of line with the purely descriptive language climate.

HN: But it's not in line with the general language climate, it's rather, for general language it's very accepting, not fully but still descriptive. This is possible but this is also possible. Rarely, 'this is wrong', 'well it's less common, it might be changed into this'. And we're still 'no, this is deprecated'. Don't use it. Use this, and if you have to, use this term. It's still more normative. (Hallberg, Nilsson)

In the rest of this section, the creation of new terms – although not 'standardisation' in a legalistic sense – is discussed.

When is standardisation considered needed?

There was no answer to this question.

Who is responsible for term standardisation? Are there national committees for term standardisation? If so, what is the structure? Who are the members of national committees for term standardisation, and how are they chosen? How often do they meet? What do national committees for term standardisation discuss? Is standardisation work carried out at meetings or online?

No-one is responsible for term standardisation for Swedish, although TNC is generally supposed to be.

TNC's staff still has to explain from time to time that TNC does not act as a "language police force". (Dobrina 2006, 5)

Users' belief in TNC's absolute authority in the matters of Swedish special languages is sometimes quite touching. (Dobrina 2006, 9)

ÚB: And unofficially would you be the norm for a lot of things, unless it's the health service for example where they have their own particular terminologists, if it's a general, not general but say geology or something like that, if you say this is what you should use, is that the norm for Swedish?

HN: More or less

KH: Well, more or less, in our glossary of geology this was the term that was recommended.

HN: The material is often used as a reference. When we say something, it's considered rather heavy. But not in that sense, like in Lithuania or something you have that the term bank must be used. (Hallberg, Nilsson)

HN: Now we're perceived as being normative, so the minute we say something it's perceived as normative because you said so. There might not be a full investigation behind it in all cases because it's…

ÚB: So it's a perception thing, it's a status thing, rather than - it's not like legal means, it's just because you're TNC and you've been here a long time and you're...

HN: Yes. (Hallberg, Nilsson)

The only committees that deal with recommending (not standardising) terminology are the Joint Groups (see the section beginning on page 52).

How is standardisation carried out for Swedish?

There was no answer to this question.

Are the subject experts alone considered responsible for term creation decisions?

In term research, as seen in the section beginning on page 52, subject experts commission and then help to carry out term research. There is a close cooperation with them, especially through the Joint groups.

> Long experience has given the query service staff the ability to quickly familiarize themselves with the subject field a query belongs to but if this does not suffice, TNC's wide network of subject-field experts can be contacted. These include participants in TNC's many completed terminological projects, language planning experts, members of the Swedish joint groups for terminology, etc. (Dobrina 2006, 6)

ÚB: So usually in a project like that you'd have maybe five or six subject experts involved.

KH: Yes, depending on the means, but that could be a good idea, that's an ideal working group. Five to eight members. (Hallberg)

ÚB: And presumably you would speak to experts in that field.

KH: Yes, experts in the field, of course, but also of course we have to look into the linguistic - would it fit in, is it similar, is the right prefix used for that, of course there are some. We can help the expert and say maybe this would be better, or... (Hallberg)

Are new terms based on the historical language, on the language as it is spoken now, or on new creations?

As mentioned in the section beginning on page 65, new terms are rarely created. New terms, if needed, are rooted in terminological research – this is considered very important.

First we will see what is the concept, it sounds like a repetition, but we still have to see what is this thing or function or really go down to the.. And what is it related to, how are they named, maybe there's something that is similar or whatever so that you can see the conceptual strategy, maybe a closely related one has a name in Swedish, so we can see how it's named and so on, so you really go on the concept level to see what's.. And then of course you try to find an analogy, a similar... (Hallberg)

Yes, and of course our databases, because we can see if there is a history. There could be a history, and some thing that people call new is not new at all, maybe it's similar to something that we have for a long time, or maybe we have a Swedish term for it. So you do some research. Is this concept really new, is it really, and how is it related. So we do quite a lot of research. (Hallberg)

The linguistic context is important too.

But also of course we have to look into the linguistic - would it fit in, is it similar, is the right prefix used for that, of course there are some. We can help the expert and say maybe this would be better, or... (Hallberg)

HN: I would say every case is different, of course usage is a heavy indicator and then, on top of that, linguistic matters, pronunciation, spelling, and then does it resemble anything else, is the concept clear-cut with a list of criteria, some criteria to try to.. Is it short enough, could it be shorter, but then again is it clear enough? (Hallberg, Nilsson)

Sometimes the English term which is in popular use is accepted.

HN: Sometimes we have things in another language, the English word 'headset', it's the one used, and we won't be able to change it.

KH: So we just try to concentrate on how you should inflect it and so on. (Hallberg, Nilsson)

How are term candidates themselves evaluated, and for what? (examples: compliance with terminological standards, formal and methodological consistency, accuracy of information, correct allocations of terms and equivalents to concepts, correct spelling and grammar…).

There was no answer to this question for standardisation work, but for term creation in general, it is discussed in the section beginning on page 70.

Are ISO/TC 37 and its standards used as a model? Are they adhered to? Why and how?

TC 37 standards are adhered to.

Oh yes, I think we have said earlier that ISO/TC37-standards, mainly the ones about theory, methodology and principles, are adhered to. It is natural because TNC has had a great influence on their contents since we have actively been participating in ISO/TC37 since the beginning of the 70's. (Bucher addition)

Are term users consulted about proposed terms (before or after term standardisation work, or both), and how?

Usage is taken into account, although there are no implantation studies yet.

ÚB: And when you make recommendations, do you base that on what's in use or what the experts say, or what's the most important factor? How realistic are you?

HN: I would say every case is different, of course usage is a heavy indicator. (Hallberg, Nilsson)

We use the criteria for motivation of terms which is mentioned in ISO 704. One criterion is usage and that is certainly a heavy criterion. If the used term is "old", it is difficult to get away from it and recommend something else, if the used term is "young", it may be possible to recommend another term, based on other criteria. However, sometimes the commonly used term is a very good term fulfilling many important criteria, e.g. it is linguistically correct, it permits derivation, reflects characteristics of the concept. Then there is no reason to try to select another term. (Bucher addition)

As said above, a student recently showed interest in performing a terminometric study where the implantation of certain recommendations would be studied in detail with a mix of methodologies (including the one recently introduced by Termcat). (Nilsson addition)

Does the organisation's terminology work have a descriptive or a prescriptive role? Has this situation changed over the years? Are terms regarded as having socially allocated, negotiated meaning? Who decides on meaning?

Interviewees feel that TNC has both a descriptive and a prescriptive role (in the sense of recommendation, not standardisation). This is particularly the case with the Rikstermbanken, where some of the (prescriptive or recommended) material is a result of TNC projects, where other (descriptive) material is collected from other sources.

KH: We normally would be seen as being very normative, what we said, what has been in our dictionaries is what is right, but that's only based on that so many people are behind our glossaries, the actual field is probably behind them, so many people have been involved in approving these terms, so it's not us. Of course we spend.. So of course it's normative and we have a sign on doing normative terminology.

ÚB: So it is prescriptive in a way.

KH: Yes, prescriptive, in a way… And it's not guaranteed… We also have that [descriptive] role of course, we can say look, this is what you can find, this is what the Ministry of Finance says, this is how the National Bank of Sweden says. But we need to put together a project to be able to do prescriptive [terminology]. (Hallberg)

This distinction can sometimes be lost on users.

ÚB: So in fact there's quite a clear distinction made between stuff that you're standing over and saying, look, we recommend this and stuff that is just documenting what is available and describing what there is - especially in the term bank. There's quite a sharp distinction between what is descriptive and what is prescriptive.

KH: Yes, but people don't really read the instructions, but we do both, we do absolutely both and of course it's difficult for somebody from the outside to see this but we try to say that... (Hallberg)

ÚB: And is that problematic for users, I wonder?

KH: I think it could be, because people think that what we say is the law and we say, hey, you have to make your own decision here, we only try to collect and describe and then you - it's not really a problem but it's interesting because we are always connected to being a normative body and a prescriptive body... (Hallberg)

In the query service, both approaches are taken – a description of the terminology in use is given, and a recommendation is sometimes made.

SW: To be as clear as possible you should write 'black diode lamp'

ÚB: But the other one is actually more used.

SW: Yes.

ÚB: So you say that back to the customer, you give them a choice.

SW: Yes. This is more used, but that is not the one that the term group would recommend. Because 'diode' can mean something else as well, or it can be another type of diode, not just the type that is used in lamps.

ÚB: So when you go back to the customer you recommend that they use one term but you note that the other term is more in use, so it's up to them what they want to do.

SW: Yes. We tell them how we came up with the conclusion. But we give a recommendation. (Waldén)

Sometimes, as in the case of 'urban sprawl', no recommendation is given, and the research work is purely descriptive.

IA: I'm thinking of this 'shared space' example, and then we had very many, a lot of terms or suggestions for terms. Then we discussed for a long time

SW: But that was also, it's a bit the same as the 'urban sprawl', because it was so difficult to agree on a concept, it wasn't really that...

ÚB: So a definition of 'urban sprawl'.

SW: I don't think there is a really good definition of it in English and I think there might be some - it might be defined in America or Australia but that definition is not really working on European cities. It's not the same thing here as it is there, I think. I think that's the conclusion we came to.

ÚB: So what did you do, did you draft a definition or did you - how did you solve the problem?

SW: I think in both those cases we didn't come up with any recommendation

> IA: No, which is really not that common. Most times I think we do but ... it's actually used in Sweden, the concept, but it's not really that common.

> SW:… And then in the end because we couldn't describe the concept properly, I made a summary of all the different ideas, and I sent a copy to everyone that had participated. And they were actually happy with us not giving any recommendation because they agreed that they didn't know how to describe it. (Interviewee A, Waldén)

Whether the situation has changed over the years is unknown.

There are discussions in the literature of the steps of term research or of database creation and a list of the attributes needed for successful terms: transparency, consistency, appropriateness, linguistic economy, derivability, linguistic correctness, and preference for native language. Does this correspond to the attributes considered important in TNC's work?

New terms, if needed, are rooted in terminological research – this is considered very important

(although, as stated above, new terms are rarely created).

> First we will see what is the concept, it sounds like a repetition, but we still have to see what is this thing or function… And what is it related to, how are they named, maybe there's something that is similar or whatever so that you can see the conceptual strategy, maybe a closely related one has a name in Swedish, so we can see how it's named and so on, so you really go on the concept level to see what's.. And then of course you try to find an analogy, a similar... (Hallberg)

> Yes, and of course our databases, because we can see if there is a history. There could be a history, and some thing that people call new is not new at all, maybe it's similar to something that we have for a long time, or maybe we have a Swedish term for it. So you do some research. Is this concept really new, is it really, and how is it related. So we do quite a lot of research. (Hallberg)

The linguistic context is important too.

> But also of course we have to look into the linguistic - would it fit in, is it similar, is the right prefix used for that, of course there are some. We can help the expert and say maybe this would be better, or... (Hallberg)

> HN: I would say every case is different, of course usage is a heavy indicator and then, on top of that, linguistic matters, pronunciation, spelling, and then does it resemble anything else, is the concept clear-cut with a list of criteria, some criteria to try to.. Is it short enough, could it be shorter, but then again is it clear enough? (Hallberg, Nilsson)

Sometimes the English term which is in popular use is accepted.

> HN: Sometimes we have things in another language, the English word headset, it's the one used, and we won't be able to change it.

> KH: So we just try to concentrate on how you should inflect it and so on. (Hallberg, Nilsson)

In general, the criteria specified by ISO 704 are used.

We use the criteria for motivation of terms which is mentioned in ISO 704. (Bucher addition)

2.7   Dissemination: Awareness-raising

What is TNC's approach to marketing? What marketing work is carried out? Are efforts made to increase awareness about terminology or about term planning? How is this done?

Marketing and awareness-raising occupy a central place in TNC's work. This is one of the tasks given to TNC by the Ministry of Enterprise, Energy and Communications in its annual grant letter.

Overall, it was felt that marketing is important, due to more challenging conditions, and because of the need to support those doing terminology work.

> ÚB: And how high is that in your list of priorities, how high is that in TNC's - getting out there and getting in the media and getting the terms used.

> HN: It hasn't been but it will more and more because we try more and more, but it's not on the top because since we are too few to have a marketing department. But then again you have to do it - if you don't do it, nothing will. There used to be a tendency of 'we will get things, people will contact us' and I think that's changing. We have to come to them now. (Nilsson)

> Any contact is good that we have because we know that there are people who are trying really hard, and we have provided them with arguments. 'These are the main arguments why you should do terminology work.' (Nilsson)

> And awareness-raising, the approach is doing the best we can with the means that we have, it could sum it up. (Nilsson)

> What would be the best for Sweden's purposes, for professionals in communication, that would be to make an overall - to overall raise the terminological awareness as I said before. (Bucher)

Although there is not a dedicated marketing department, there are staff members in TNC with an interest in or experience of marketing work. External consultants could be used, but this is not done due to financial considerations.

> But then again we don't have a marketing department, there's two of us doing more of it... She [Sofie Waldén] used to work selling systems, complicated mathematical systems. So she was into that - particular customers, products that need a certain explaining before you can arrive at the point. (Nilsson)

> And we do have some competency in-house, but not enough time to do it properly. I could devote so much more time to it if I had the time, but we do with the means that we have, we try as best we can, that is how I would put it. Although as always it could be more prioritised. (Nilsson)

HN: I think we could perhaps try more with external actors and see what they could do; then again we have tried that and it didn't always turn out very good because…

ÚB: So what, they would do..

HN: How would they present this tricky, a vaguely tricky product, or how could it be used or what could they do. This is a financial matter now, we don't have the means to…

ÚB: To get a consultant

HN: No. (Nilsson)

There are different kinds of awareness-raising done, not just − not mainly, even − about available terminology resources. A lot of it is about the importance of terminology in general.

I think you are right, that for us the marketing of the idea in order to raise awareness, that is very important and that the governmental grant that we get, it says something in the funding target agreements that we get from the government that that's what we should use the money for. So I think that is very important. That doesn't say that we should not put efforts in also marketing [of] the results, the glossary and over the years - maybe that is one pitfall - maybe we have put too little resources into that part. Work for a glossary project usually lasts from two up to ten years, the glossary of geology took ten years, and when it was published, finished, then, sort of, we started another project. Actually we should have had then some other resources taking care of the marketing. And part of that work is the work of the experts who were involved, of course, because they are out where this is needed, but if we had had more resources it would definitely have been a good idea. (Bucher)

ÚB: When we talk about marketing, just to be clear, what do you mean when you talk about marketing, are you talking about the marketing of TNC, the marketing of TNC's services, marketing of terminology as a concept, marketing of the term bank - what do you mean by marketing?

HN: We could adapt it to all of those things and we do all of those things more or less, because since we are the national centre, any promotion of terminology work would somehow end up with us anyway, but of course we would.. some of the things we do would be raising terminological awareness, it won't give any profit.

ÚB: So, making people aware that terminology is there and that you really have to use it.

HN: Yes, that's the long term strategy. (Nilsson)

ÚB: So there are really two aims for the marketing, firstly to raise awareness of terminology and to raise awareness that it's there, and secondly as a sort of by product of that, to create customers for TNC?

HN: Yes. Because we need that now, we need to have customers, although we have succeeded, it's more than, I think sixty per cent now which is not from government funding. (Nilsson)

Some of TNC's marketing initiatives are discussed in the remainder of this section.

One new marketing initiative, on foot of the new law (see page 15), is to develop a package, nicknamed Term-O-stat, which would involve research for government departments and

bodies into their term resources, term extraction, the development of terminology resources, and terminology training. This was still in development at the time the case study research was carried out (August 2009).

> ÚB: How will that [new law] affect you?
>
> A-LB: We hope - this is very new - we hope that this will force some public agencies and also raise the terminological awareness in agencies. We are prepared, we know very well what we could do to realise this paragraph, what are the concrete decisions, what are the concrete actions that should be made in order to live up to this.
>
> ÚB: So you imagine that they will come to you and outsource the work to you?
>
> A-LB: We have a couple of strategies right now. We are doing one big marketing effort together with the University of Linköping because they have a sort of automatic extraction programme that could be a start, just to find out the terms, and then we could continue from then. So that is one thing. Then we are taking part now this autumn in some conferences where we will talk about the paragraph, and we have also some information about the paragraph on our website, and we say that if you want more information about how this could be dealt with in concrete terms, come to us and we will tell you. (Bucher)

> HN: We have another major launch called Term-O-stat, where we tend to relate to the language law.
>
> KH: 'Stat' in Swedish means the state
>
> HN: Which is a way for them, a four-step programme to realise, to actually make the twelfth paragraph a reality, what does that mean.
>
> ÚB: So you go to the ministries and you offer that.
>
> HN: These four steps is what we suggest and depending on where you are, because there are groups, not only ones like National Healthcare, there are groups working on concepts and so we have been invited to teach or assist them in their work. (Hallberg, Nilsson)

One of the concrete marketing actions used by TNC is an occasional e-newsletter (a subsequent edition contained, for example, a snippet about this researcher's trip to TNC).

> Our newsletter, which was restarted as electronic publication or newsletter, it was published in print until 2000, when it all went bankrupt and then restarted, and then we wanted a new one after a few years, electronic. So we have some set sections and then we fill it with contents. Some news, new books, the normal things for a newspaper. And we have 400 or 500 subscribers. That's free, of course. And we try to do three or four numbers per year. (Nilsson)

> ÚB: So you send out a newsletter now and again about, with information about terminology?
>
> SW: Yes, about every few months or so, something like that. And I think - if they ask a question and they realise, oh, I have to pay for it and I don't have the money, I have to go back and collect money, that's easy to be forgotten, but if you get the newsletter, then you somehow keep that thought up to date. (Interviewee A, Waldén)

SW: …And then I also sent emails, 'if you're interested in this type of questions you can subscribe to our free newsletter'. And then most of them actually replied back that they wanted to have a subscription on that because it's free. (Interviewee A, Waldén)

There is also direct contact made with would-be customers.

SW: And I've been working in sales before so I think it's really important to collect emails and make sales efforts, I collected the emails, the email addresses I mean, and then I sent them an email one or two months later and asked them if they were happy with the answer and if they had anything else. (Interviewee A, Waldén)

Sofie, she phones a bit and I think she's going to start phoning more, phoning companies offering services, to say we offer this and that and what you need, we could come to you and present what we do and is this useful for you? We know that you have a major term bank etc. (Nilsson)

That's been a successful thing we did, breakfast seminars on different subjects, terminological maturity or the role of the terminologist or how do you make a glossary. They're all free and they gather lots of people, different kinds of people. (Nilsson)

So there are loads of potential customers, you can just tip them open and.. they're almost there. Just a little push. (Nilsson)

There are lots of novel ideas for marketing campaigns; some have been put into action.

So we've tried the campaigns, the walking poster exhibition thing, now I have the roll-ups, those basic things, nothing fancy, brochures, we did a new brochure in connection with the launch, sort of just to send off with all the books. The new thing now is the catalogue for the courses, to present a section of courses already, which we never did, which was strange, when I think, why did we not do that? And the whole term planning, look these are all - for this semester we offer all these courses. So there's long-term planning, more than we did before. (Nilsson)

We have used [an image of] tradition at points, there's these old archives, we have this old tradition of the file cards. It's basically old but it's still modern. Because of the term bank. Longer experience, which is a tricky way because it could be, people could perceive it in totally the opposite way, so it's a tricky course to tread. (Nilsson)

HN: …We tried gadget things, we did the magnetic bookmark for the launching of the term bank, we had this whole theme of the royal theme with these - I don't know what you call them in English…

ÚB: A sash?

HN: Yes, and it was embroidered 'National Term Bank' and everyone wore it, or was supposed to wear it every time we'd speak - a gimmick image. Regal. (Nilsson)

It's the year of astronomy this year and I wanted to use that as a marketing, a commercial thing, to use something that's happening now, and to use that to put forward terminology. (Nilsson)

Or maybe film or using the new media... providing all the suppliers [of terms to the Rikstermbanken] with a brand, or the thing that a dog gets at the award show.

ÚB: [laughter] A rosette.

HN: Yes, that kind of thing. We're in the National Term Bank. (Hallberg, Nilsson)

There is also interest in using new media opportunities, such as a blog or Facebook, or email marketing.

And we should I think look more at actually participating in debates. And that's why the new website will have this blog functions, so we'll be starting a terminology blog, because there are things we would love to say, but to get an article published is not that easy, and it takes lots of work in production. Just to look at something in the media in the current events, to pick it up and produce a short text, not a Twitter one, but a slightly longer one, still prepared and [that] might involve an expert or two, or might not arrive at a final recommendation or, just that this is happening and that this discussion could be better and why wasn't this used etc. So that's new, with new media. (Nilsson)

Now with Facebook things, we haven't really, we have discussed it but not really started it yet... (Nilsson)

The TNC website (www.tnc.se) is another marketing tool.

ÚB: And what about the TNC website, how important is that as a marketing tool?

HN: More and more, I think. And I think we could use much more of it than we do, and it's not that modern, in a way, it's in a way decisively archaic, but for a reason - to be very clear and nothing fuzzy. But we could of course be using more of the latest technology, more of semantic web, but we're thinking now more of doing that with the national term bank, how could we adapt, creating interfaces with people at their websites instead of focusing on your own. Getting your website on other people's. (Nilsson)

And I think a lot of people use the website for [information], because we have quite a good overview of events and terminology and news. (Nilsson)

The new term bank is seen as a natural way of raising the profile of TNC as the centre for terminology, and as a way to encourage participation in terminology work.

HN: We had quite a breakthrough at the launch, with television and radio and lots of articles.

ÚB: So you had a bit of press coverage.

HN: Yes, we did, more than we usually do. (Nilsson)

ÚB: Are the media interested in what you do?

HN: This time they were, actually, to some extent. They turned it their way and looked at, they went to a kitchen and asked about terminology in different kitchens. Just to make something understandable. (Nilsson)

We're hoping that the contacts in themselves will pay off, and the raising of awareness, I think it [the term bank] has raised awareness definitely. Because we do get letters, we're not in the term bank, could we participate, how should we do it and what could we do and how do we deliver? (Nilsson)

ÚB: So people see it as a status, being in the term bank.

HN: That was our idea, that's why I wanted to use this rosette thing, it was something to give them, a reward for it. Because that's part of the whole marketing thing, raising the level, it's also our mission, to raise terminological levels, at the same time we are a company and up until now we haven't – how shall I put it, marketing is not the thing that we do, but we have to do it more and more and with traditional means, we are using... (Nilsson)

I think we do have a certain recognition and we have a power of speech which is difficult to obtain but which we could perhaps use more. This is the national centre, go with us, why use someone else, like a cocky way of presenting yourself. I'm not sure. We've been more humble .. We did launch it in Swedish as *The* national term bank, the definite form, there can only be one. (Nilsson)

ÚB: And do you have as part of the funding, do you have money to market [the Rikstermbanken] and to push it, to make sure people use it?

HN: Yes. I think we should push it much more than we do. We did one presentation seminar and loads of people came to that. There was nothing special, to me it was nothing, just here it is, you can do this and that, this is what it contains, but people were very happy and interested. They wanted to know more about it, and to just go around with a touring thing is what I have in mind. Because there are clusters of authorities based in different parts of the country, so you can go and have a presentation at different kinds of trade fair. (Hallberg, Nilsson)

Other aspects of TNC's work also count as marketing, of course, such as training.

KH: We need to train people to make them able to ask us to go and work for them, to do the terminological... in some ways it's also that, we need to train the people. (Hallberg, Nilsson)

KH: Yes, it's a way of getting business… Because we need to get them trained so that they understand that they need help, that the terminology work is needed within the company. Because if they don't, if they're not trained and thinking of it, they don't see the need and they don't know where to turn. So they turn to different solutions. (Hallberg, Nilsson)

The marketing work to be carried out, the need for it, the results, and the best way to approach it are clearly subjects of discussion.

And we did have a seminar in 2004, for the marketing of terminology, since it's considered to be a tricky thing or hasn't been the main thing - it's sort of a difficult product, what do we really do, takes a lot of explaining, which means it takes a long time before you arrive at, you need some background understanding. (Nilsson)

But we need to do more and that has been an issue for a long time, I looked at a report from the eighties and it said, how do we market our terms? And those things are still valid. (Nilsson)

So we try to have a section for ideas, and if you have an idea, a new exercise, a new course, a new anything, put it in there straight away. And we have sessions where we sit down and we have that internal marketing group .. It's not that we don't do it but through the years it hasn't been the main focus and it's become more and more important. And still we don't - we should devote more time to it... (Nilsson)

Despite the interest in and imaginative approach towards marketing work, interviewees feel the results are not particularly good, and that there is not much knowledge of TNC itself.

ÚB: What do you think people think of TNC, what do you think they associate with you?

HN: Those that know it, I think still think it's not known enough. Which is partly our blame, of course, but then again the whole thing of being the little sister of any language matters.

ÚB: Do you think the person on the street would know about it?

HN: No, very few. (Nilsson)

ÚB: And would you say that, and this is a very general question, whether people are sort of aware of terminology, aware of the need for terminology and aware of where to go to find it?

ST: I think that they are aware of the need but maybe they don't know quite what it actually is. The method, I mean, we work with the same method as TNC, but em, maybe they know the word terminology and they know that yes it is important to define our concepts but what is it, how does it differ from an explanation, rules... maybe that is not so well known. (Testi)

ÚB: And do you think that TNC would be well known?

ST: In some areas but maybe not generally. In this area of course... But generally not so but I think it comes more and more. (Testi)

ÚB: But translators and so on would all know about you.

HN: Most, I would think, now, or at least many more than an average person. It would perhaps still be thought of as geeky, somehow, or by some I think archaic, but in other circles modern. Versatile - I hope they think it's a versatile organisation. And I think when they do meet us and they do listen to us they do... (Nilsson)

Media interest is seen as unusual.

ÚB: Are the media interested in what you do?

HN: This time they were, actually, to some extent. (Nilsson)

There is also, interviewees feel, not much acceptance of terminology work or the need for it.

The problem is that most people, most linguists aren't really very interested in LSP and we don't have LSP or terminology research, it's not known as an academic subject, it's not known, it's something quite dry which all of the dry engineers are doing, which is… So it's not [considered] very fun, you know. So there we have work to do and it's difficult sometimes to get it recognised that everyone who is in a profession has their own language and that they can do something about it. (Hallberg)

HN: ... One of them [the people from a government department], she was here quite recently for something and she had tried many times, she herself and one of the main head lawyers, to convince the management that we need to do this, and still they haven't succeeded. And then a guy in an authority did an amazing work, a cost-benefit analysis and models of what they need and we don't understand why they won't go with it. There's a certain reluctance, if you like. (Hallberg, Nilsson)

ÚB: [Do you think] terminology has the status it should have, for example in the language?

HN: No, I don't think so. I wouldn't say that. It has always been the little sister of general language. (Nilsson)

There was also competition in some areas of TNC's work.

HN: For me it's not enough anymore, because competition is growing and [others] do fiercer campaigns, they do published catalogues and so on and people go with them.

ÚB: Competition in terminology services?

HN: I wouldn't say terminology the way we mean it, but in some areas, definitely. I mean ontology, knowledge management, data models. Terminology as a base support for other kinds of system.

However, we are no longer the only organisation offering terminological services as we used to be fifteen years ago. There are also other terminology consultants "on the market", for example people with a background in informatics, translation and computer science. (Bucher 2007, 46)

HN: …There are others teaching similar things, concept modelling and things

ÚB: In the universities?

HN: No, at a professional [level], they sell courses in advanced concept modelling and UML and things, and some people do that. Sometimes we get the results, we get them [the customers] back because they cannot use what they were taught and they didn't arrive at the stage where they were happy with it. Now at a certain point five years ago when the big clash between concept modelling and terminology work and... And I think it's reconciled and it's seen that you need both in different areas. (Hallberg, Nilsson)

2.8 Dissemination: Publication

How are terms made available?

Term collections are published in paper glossaries, as part of the TNC series.

ÚB: Do you still sell the glossaries as paper glossaries?

HN: Yes, we do.

ÚB: And is there still a market for them?

HN: A smaller one, but I think there still is. (Nilsson)

KH: We get involved in dissemination because normally our own glossaries, it's us who publish them, and they are often in cooperation with the people who are..

ÚB: And who holds the copyright?

KH: It could be shared. Some of them we have our own, some of them the people who asked for it, they have it. It depends on the agreement. If you want to have the TNC number on it, then I think we have some kind of a copyright. (Hallberg)

The main means of distribution is electronic, however; this has been in use for a very long time in some form, although the online Rikstermbanken was only launched in March 2009.

It started already in 1969 using computerised mediums and methods and then we tried it several times over the years... And before the CD-ROM came, we talked about a term bank with modems and so forth to be available and we had a period where we got extra funding... a trial period to see how the result was taken care of by users for four or five months, and then there was lack of funding and technology went on… Then at the end over the 1980s CD-ROM technology came and we thought this is much better and so we were early with that, 1987, and then funding went down and then internet came... (Bucher)

We were very early with the second commercial CD-ROM in this country, which was the term bank from us in 1992. And it sold really well and was a breakthrough for production and construction of terminology with computerised methods. So we've been very at the forefront of computing I would say, here. Now a little less because we don't do automatic extraction and things. But the term bank, again we discussed, we left all the glossaries go in the term bank. (Nilsson)

The Rikstermbanken is now the main means of term distribution.

Rikstermbanken (www.rikstermbanken.se), Sweden's national term bank, was officially inaugurated on the 19th March 2009. At its opening, Rikstermbanken included more than 50,000 term records containing terms in some fifteen languages, e.g. English, French, Finnish – but also Greek!

Terminologicentrum TNC (The Swedish Centre for Terminology, TNC) has designed the term bank and its software, and the Ministry of Industry, Employment and Communications has contributed financially. More than 70 organizations – mostly public bodies but also some associations and private companies – have contributed with their terminology collections. (Nilsson 2009)

The work of the data term group is also published online, but there can be delays with this.

As TNC is responsible for publishing the recommended terms [of the data term group] on our web site, and this work is non-commercial, the publishing phase is really our bottle-neck. (Karlsson email)

It is often suggested that dictionaries and term lists only have limited, indirect influence (that 'real people don't read dictionaries'). Is this recognised, and, if so, what steps are taken to address the issue? Are other means of dissemination used? What are they?

The most obvious other means of dissemination is the new Rikstermbanken, mentioned above.

ÚB: It's often said that people don't really read dictionaries, and dictionaries are not very well known, that nobody actually goes and reads a dictionary from front to back. There must be ways of getting around that by trying to make terminology more available, or more visible. Do you think that's done?

OJ: I think really we are trying to do that. I think this Rikstermbanken is a very good initiative in that direction, and of course the web makes it much easier to make terminology available and I think it will be really. (Josephson)

Although this is more accessible than paper dictionaries, there is still a feeling that its influence is limited and that many target users are not aware of or accepting of the need for terminology (see the section beginning on page 75). It therefore remains important to find other means of dissemination.

To get in to the media perhaps, if we started a blog, it would help because it would generate hits and people would learn that someone actually did an investigation into why this is not [right], and then [they] don't have to. But you would have to be proactive in a certain sense because they should find it when they need it; once the article is written it's too late. We could get starting to comment more, comment web articles, get in there, and I did once for the *Cap* design which is a graphic design monthly magazine, they had a series of articles on writing rules and there was something about the decimal sign and comma and things and so I started a debate which led to a certain debate with the writer of the article. We could do more of that, but it takes, any such matter takes a certain amount of time and effort. (Nilsson)

The most important means of dissemination, however, is that an organisation or department would have a terminology advocate or coordinator, who would take charge of terminology work and promotion.

That's why we think it takes a person on site, a terminology coordinator, at least in the state authorities, at least one person who can be in charge of the capsule terminology work and being our contact, and then creating their network using their terminology, national term bank as a tool so it's all included in an intricate web of terminology - national term bank, terminology coordinator, national centre and.. all tied together. (Nilsson)

Informal means of dissemination are important, according to the literature. What informal means of dissemination, if any, are used by TNC?

One informal way of disseminating information about terminology is through a planned blog discussing particular terms.

> To get in to the media perhaps, if we started a blog, it would help because it would generate hits and people would learn that someone actually did an investigation into why this is not [right], and then we don't have to. But you would have to be proactive in a certain sense because they should find it when they need it; once the article is written it's too late… We could do more of that, but it takes, any such matter takes a certain amount of time and effort. (Nilsson)

Another is to participate in seminars and conferences which are focused on general language questions.

> Another informal means of dissemination is to comment on presentations on seminars and conferences which do NOT have (only) terminology as a theme, but rather general language or plain language. A terminologist's approach to discussions about language policies, text quality, plain language ambitions and strategies etc. is often very different from the approach of a language consultant or a person working with plain language. One example is that we very often question the aim to write for "everybody" in a common language avoiding terms but instead rewriting them in simple words. How is it at all possible to rewrite terms in simple words if you are not an expert of the field? And what is the level of knowledge in a target group consisting of "everybody"? One important point to present is that language consultants, editors, plain language officials etc. have to show respect to *every* LSP and its users, just as much as they themselves respect their own LSP, i.e. linguistics. (Bucher addition)

Information is also disseminated during terminology projects.

> Also, in every terminology project there is a certain dissemination of information about terminology and at the same time an awareness raising part. (Bucher addition)

How have methods of dissemination changed, and why? (And is there any quantitative data for this?)

Some paper dictionaries are still sold, but this is a small part of the dissemination of terminology.

> ÚB: How much of your budget then would come from sales of dictionaries?
>
> A-LB: Very little, I think last year it was about 300,000 crowns [€29,000].
>
> ÚB: So are they sold in order to make a profit, or are they sold to…
>
> A-LB: Many of them are very old. Some were published, elaborated in the 1970s or 80s, but they still sell. And now after the 19th of March they are all available in the Rikstermbanken which is free on the internet. But still some people still buy them.

ÚB: So it's a very small part.

A-LB: Yes. A very small part. (Bucher)

Methods of electronic dissemination have also changed over the years.

A-LB: It started already in 1969 using computerised mediums and methods and then we tried it several times over the years... And before that, before the CD-ROM came, we talked about a term bank with modems and so forth to be available and we had a period where we got extra funding... a trial period to see how the result was taken care of by users for four or five months, and then there was lack of funding and technology went on… Then at the end over the eighties CD-ROM technology came and we thought this is much better and so we were early with that, 1987, and then funding went down and then internet came... (Bucher)

How freely are term collections available?

All TNC's term collections are available in the Rikstermbanken, free on the internet.

From the beginning, it was decided that the service would be free of charge for anyone connected to the Internet. (Nilsson 2009)

There is a distinction to be made, however, between availability and use.

ÚB: Are you the first port of call for journalists, if journalists are dealing with something like that, do they automatically think of you?

A-LB: Not automatically, not everyone. Some do, but not automatically. (Bucher)

ÚB: And do you think people know that you are here if they have a query about terminology, are you the people that they come to. Will they phone TNC, or...

IA: No I don't think so, unfortunately. (Interviewee A, Waldén)

Not all of TNC's work is publicly available; some - such as the work of the query service and the collections of excerpted terms - is kept in an internal termbase. This is only available to those consulting the query service, usually on a paying basis.

PS: For instance we have in this network, in several of the networks we have different categories of recommendations, first the traditional term record type, but also this with questions and answers.

ÚB: So they don't go in as traditional records, then?

PS: No. No, they are also not isolated to one concept so you can't have a term record for them. A term record is just one concept.

ÚB: So they're not processed.

PS: That would be a future [plan], to be able to store that in a good way in the term bank, because they are not published now, so we have separate and will continue to have separate websites for each group. Where all the data is. (Svanberg)

ÚB: When you recommend one out of three terms for example, do you make that change in the term bank, for example, do you say this one is recommended, this one is deprecated, or this one is...

SW: Yes. That's the internal term bank that TNC has.

ÚB: And is that on the public term bank as well?

SW: No, not the... not yet, anyway.

ÚB: Why not?

SW: We used to show them on the website, but I'm not sure if we do any more. We have a list of terms that we have recommended recently, or term questions. Do you know?...

IA: Yes, I think so. And we have some questions and answers.

SW: Yes, that's what I meant. It was made as a list. (Interviewee A, Waldén)

ÚB: Sofie was mentioning yesterday that when you deal with terminology queries and when they make recommendations they go into the internal database but not onto the national term bank. Why?

HN: I don't know, because that seems strange because now they're differing. And that's our next big discussion, how is it supposed to continue? Because we have a national term bank with other contents than our internal one. And that will always be the case because there are things here that we are not allowed to publish, it's just for internal use. For legal reasons we couldn't publish it - we could ask for it of course. That goes for the terminology of certain sources. We use all the excerpts, it's not obvious that we could publish those. And those are meant for us. (Nilsson)

ÚB: But if you do a couple of days' work on some query that you get and you come up with a recommendation and definition and so on, why not put that into the national term bank?

HN: Yes, well we have been. The problem there is that the format of those is not really considered a terminological format. Many concepts might be registered in the same record. There should be splitting up, of those, but we are looking at that because that's actually a huge resource… (Nilsson)

Some terms are not added to the Rikstermbanken because they are not sufficiently elaborated. This happens in the case of responses to *ad hoc* enquiries, where there may not be a comprehensive definition. These preliminary recommendation may be put on the TNC website or in the newsletter.

This is a good and relevant question. We make a distinction between punctual (terminology) research and thematic (terminology) research. In our query service we almost only deal with punctual research solving a problem for one particular customer. This means that we may have looked only into one side of the term-concept relation, e.g. if it was a translation query, we don't end up with a formal and good definition. If the customer has a preliminary definition or rather a description of a concept and asks for a proposal of a Swedish term it is still all too preliminary to be put into Rikstermbanken, although it helped the customer well to solve his problem. However, some of the queries are put on our web site or are presented in our newsletter. That is a way to make a first and a bit a preliminary recommendation known also to others. (Bucher addition)

The Rikstermbanken is actually a database of different term collections. This can cause confusion for users.

HN: ... for once, it's the first time you can see all these things together, you have 'biomass' - 10 definitions, from glossaries, from different state documents, all kinds. Why are they different? It might surprise the user but our idea is... presented and then where do we go from there? (Hallberg, Nilsson)

More than 70 organizations – mostly public bodies but also some associations and private companies – have contributed with their terminology collections. (Nilsson 2009)

In total, there are about 60,000 records.

HN: 57,000 records, 250,000 terms, twenty languages, around. Now if we just add some more we'll have 60,000 quite easily because of a major collection being prepared. Some were offered actually, why don't you use my statistical, mathematic, major collections, thousands, that are being prepared. Medicine and things. (Hallberg, Nilsson)

The number of visits per day is still relatively low, but this may be because the site is still new,

and because of competition from the national Swedish Encyclopaedia, Wikipedia and Google.

It's new since March. Well it's, what is it, between three hundred and two hundred visits per day. Depends on what you compare to. It's not for everyone, it's for a special kind of people who work with this or are very interested in language aspects. But they seem to like it and return. (Svanberg)

Rikstermbanken has the national Swedish Encyclopaedia on the web and Wikipedia – and Google! – as competitors! Still, we have said it already many times, most people are not aware of what the difference is between these sources. And since Rikstermbanken is the newest resource, it will take a while. (Bucher addition)

The Rikstermbanken is considered easy to use.

ÚB: And how easy is it [Rikstermbanken] to use? How user-friendly is it?

PS: Well you must test it yourself, but we tried to make it very simple. The first interface they get is just one string to fill in. A bit like Google. We had some parallel with that. Just one thing, search and then you get a hit list a bit like Google also so you can have an overview and can see, oh, that's probably the one I need. And you click and get all the details about that concept. (Svanberg)

PS: Well I think the national term bank is really, it corresponds to our view of how we work with terminology, how we handle it and so that's the main thing with that I think. All the experience here is put in that.

ÚB: It reflects the theory.

PS: I think so. And on the other hand we are very, we work hard to make it easy to use, at the same time you shouldn't [have to] be a terminologist to understand what is shown, so that is a problem sometimes to make it what you should choose, how many options you should present, or such things. (Svanberg)

ST: I think so, it's a rather new term bank but I think its very good.

ÚB: And is that an improvement in ways of finding terminology and so on?

ST: I should say so, because you can get more. (Testi)

The long-term funding of further developments to the term bank is undecided, however.

ÚB: You're responsible for it long term, you're going to be maintaining it?

HN: Hopefully, but then again it all comes down to funding again and we were funded for developing it but now .. It takes some funding depending on what you want to do with it, if you want to do loads of developments, which we want to do; just adding content is one thing, it could be added to our state funded tasks, and others would be less performed. (Nilsson)

The query service, as mentioned in the section beginning on page 35, is not free of charge; this can be seen as problematic.

ÚB: Are people happy to pay?

SW: Not really. (Interviewee A, Waldén)

IA: It depends. If they have a bigger issue that they really want to think out, they are prepared to pay, but not just for one question. Sometimes, yes. (Interviewee A, Waldén)

ÚB: So if they pay for it, they really want it.

SW: Yeah, I think it's that... (Interviewee A, Waldén)

The paying nature of the query service is in contrast to the free service available for general language. Questions that might come to TNC if it were better known (and free of charge) sometimes go there.

ÚB: So what do they do?

SW: If they don't phone us? I think they call Språkrådet. We get a lot of questions from them, like the one about 'shared space' for instance, that was first sent to them and then they sent it on to us.

ÚB: They have a query service as well, don't they?

SW: Yes. And that's for general language. So as soon as they think that it's specialised language they send it to us instead.

IA: One problem is that they do it for free and we don't. (Interviewee A, Waldén)

How are the needs of particular user bases, such as translation, education and the media, responded to? Are there other specific user groups?

There seems to be a general sense that the media are not aware of terminology in general and

TNC in particular. (This came to light in the discussion about training but also in the discussion

of dissemination.) The lack of a direct connection with a media discussion group is acknowledged.

> ÚB: What are the other obvious places that a journalist would go to?
>
> A-LB: They would go to this network of other media people at first. Like the question about Bombay and Mumbai, they discussed it among the media people and then the representative of the media group brought it in to this language institution's network. Because then they resolved it there. So there are different levels of this work. So I think with the swine flu they would discuss it in the media language group at first.
>
> ÚB: So they have a discussion group.
>
> A-LB: They have a discussion group and maybe they would send a question to us or...
>
> ÚB: And are you observers in the discussion group?
>
> A-LB: In the media language group, we are not observers. We should be. (Bucher)

This gap was seen as unavoidable by an external interviewee.

> ÚB: And what about the media? They seem to be - just an impression that I have, that there's a gap between TNC and terminology provision in general for the media, that maybe there is not much connection there?
>
> OJ: Well of course there is a little gap but I think you can't avoid that because terminology is one thing and media language is another thing. But there are fora where they could meet. I think there always will be, it doesn't help how you organise it, there will always be such a gap. (Josephson)

There seem to be no resources or means of dissemination specifically directed to specific user groups, although it can be said that the Joint Groups (see the section beginning on page 52) play a part in term dissemination.

> ÚB: Do you think the media for example would be aware of...
>
> HN: No, I think they're among the least aware and I think we should do more to respond to try to get articles in the press, debate articles, be part of the debate, because you see so often terminological debates but they don't lead anywhere because they use term sources and sometimes not in a methodological way and there's a lack of awareness. 'Terrorism is defined according to this' - and they use a general dictionary. It's not going to help them but they're not aware of this. (Nilsson)

> For implantation I think that the joint terminology groups, they have an advantage, because in some of them there's a media representative. And I suppose that should guarantee more that what they decide they also use. (Nilsson)

It is felt that, even among translators, TNC is not as well known as it should or could be.

> ÚB: But translators and so on would all know about you.
>
> HN: Most, I would think, now, or at least many more than an average person. (Nilsson)

> ÚB: And do you think it's necessary, if a translator needs Swedish, is it obvious where they should go to find terminology, or do they need to be told?
>
> KH: No, no, it's not obvious.

HN: It's never obvious, they have to be... (Hallberg, Nilsson)

How are users of terminology websites catered for?

In terms of terminology resources, all of TNC's term collections are available online, although the database of collected references and answers to *ad hoc* questions is not. There is also a large collection of terminology from other external sources, which has been provided to TNC for publication online.

There have been technical problems with the website itself, but it is a source of information.

> ÚB: And how about the website? How important is that for the day-to-day, for TNC or how...
>
> PS: Well I don't know actually. It has not been.. well, we have had problems with technical problems. But it is quite used for information about us and for information about courses. (Svanberg)

> Now we have had a project and we'll release a new version of it, technically a more modern version of it. So that's a priority for the moment... And we will also get more information about how it's used and how many users. (Svanberg)

Is there a common exchange format between term banks?

There is a joint Nordic terminology record format, NTRF (mentioned in Nilsson 2004).

2.9 Implantation

The successful implantation of terms, as was seen in the literature, is linked to factors such as the quality of the terms, their dissemination, and the participation of intended users in the terminology process. It is not, however, a process which is controllable by the organisation, and therefore there are no questions that can be asked about how the implantation aspect of terminology management is 'done'.

However, the analysis of the implantation was that TNC's terminology (like TNC itself) has not been very visible.

> ÚB: What about the publication, the availability of terminology, if you are looking for a term for something, can you find it or how easy is it to know where to look?
>
> OJ: [From the general perspective], I don't know if it's a very easy... You have to know TNC to find it and TNC is not very well known in Swedish society. It's known by experts of course but if you are just an ordinary citizen and want to catch some terminology or something, I don't think that if you go out in the street and ask do you know what is TNC, people don't know about it. And if you know it of course, you could visit the website of TNC and there you could get a considerable bit of terminology but it's, in principle it's available but in practice I don't think it is very available in Swedish society. (Josephson)

This might change with the recent advent of the Term Bank, and with other projects, such as the Term-O-stat (discussed in the section beginning on page 75), which would involve the integration of terminology into writing tools.

> HN: Like the difference of pre and post the introduction of the national term bank, how will that affect the use of recommendations, now that they have a new way of being distributed easily. It's easy to find, you can't say 'I didn't know that it existed, I couldn't find that obscure book' or whatever, 'it was only published then and I don't...' - countless reasons why you shouldn't use it and now it's a bit more tricky. (Hallberg, Nilsson)

> But then it doesn't come true for the whole media sector, or even their whole newspaper, everyone won't be using it of course. So that's why the new programme, the Term-O-stat programme, wants to look at the final step of integration, how you integrate what you've done into writing tools, with other types of translation memories, document production systems, that's where it's going to come in. Otherwise it will stay on the shelves. (Nilsson)

In cases where experts consulted include members of the media, terminology seems to have a better chance of general implantation.

> For implantation I think that the joint terminology groups, they have an advantage, because in some of them there's a media representative. And I suppose that should guarantee more that what they decide they also use. (Nilsson)

> With the participation of many companies and organizations, and of different sorts (newspapers, TV companies, computer magazines, IT experts, linguists, publishing houses, etc.), the terminology recommendations [of the data term group] are well rooted and well spread. (Karlsson email)

Generally, though, knowledge of implantation levels is based on anecdotal evidence.

> ÚB: Do you have any idea how well the terminology recommended is accepted, or do you have any notion of what the implantation is like?
>
> HN: That's difficult to answer. I know that the one on the USB stick, they sent out a press release, quite a lot of and it was seen and really discussed a lot, and then was to some extent accepted I think. The web has been accepted with a w-e-b-b spelling, whilst the recommendation to avoid 'home page' failed, I would say, because it is still very often used.
>
> KH: Or to take the old example with the Danes who still have the English word for computer, already in the 1950, they still use the English word whereas in Sweden there was quite a lot of work done to have another word, a more Swedish word like 'dator' and that - I mean nobody today would ever say that is a hundred percent implantation. The timescale is also [important]. (Hallberg, Nilsson)

> But we sometimes can see how term recommendations are being accepted among the experts in the target group of a project. It's even more easy to see how term recommendations are being accepted if the field in question has a broad target group including also laymen. (Bucher email)

> We can only register that this recommendation of ours is used now everywhere – we can see the signs or we can hear in the media, but that is just one here and one there, that is not systematic… We know that sometimes some of our glossaries have been revised two or three times, the glossary of forestry for example and some others, and then we can see that in the first edition we recommended some Swedish term and then ten years later when we revise that glossary we can see from excerpts and from asking the experts that no, that recommendation was not accepted by the users, they still use the English term. (Bucher)

Since a lot of the terminology work is descriptive rather than prescriptive, it is assumed that a lot of the terminology is in use by experts.

> In more narrow fields we see less of how the recommendations are used, but since we almost always take the established usage into consideration as a heavy criterion, we have the experience that the experts seldom are critical towards the recommendations. (Bucher email)

> Our attitude is very pragmatic, we solve communication problems of specific user groups and it is natural to recognize the "social" way as the only feasible way. The needs and demands of doing this come from the roots of specialists' need for an efficient communication. The measure of success, the result, of our work is satisfying their needs, and for that very same reason the result, the terminological outcome, implies agreement and acceptance. Without any normative prescription whatsoever, the agreement comes to serve as the norm for its particular user group. Thus, it is not

because of directives from of above but from a particular client group's own felt needs that their terms become the norm, for them. This norm unifies usage in that network of users. (Bucher 2007, 39-40)

2.10 Evaluation: User feedback

Is research carried out into the use of TNC's website? What have the findings been?

No research has been carried out on the use of TNC's website (Bucher addition).

How interactive is the website? How much user feedback is received?

The Rikstermbanken allows users to comment on particular terms or to send in feedback, but interviewees were disappointed with the response to date.

> From the term bank we would have expected more than we actually get. Sometimes there are petty things like I don't find this or that or this is not available. 'Yes, we know, we are filling it out and thank you for letting us know' etc. And then there are some substantial content matters saying this is wrong and this is not valid any more, which means we are faced with a decision, should you just change it and who is this person suggesting it, it has to go back to the one that delivered it, are you aware of this, and should we change it. (Nilsson)

More could be done, however.

> For the term bank we have followed up more because ..what is happening, and the facility of actually commenting on things gives us the opportunity to see is it used and.. so we have for the first time followed up more than we normally do. We should look more at how the website is used, actually. We have done that but we would like to do it more. (Nilsson)

What is done with feedback about terms or about the way they are made available?

Feedback is recorded and questions are replied to. If necessary, the terminology record is amended or the source organisation is contacted.

> (We do get more questions from the users of Rikstermbanken now, than when you were here). In some, very few cases, a question results in a complementary note to the record in question. But in most cases, we just send an e-mail to the person explaining why it is as it is. (Bucher, addition)

> In other cases, the question is forwarded to the organization having delivered the terminology collection for future revisions. We have tried to set up a typology of questions and comments, where most are of the kind: "I can't find this in the term bank" or "This is wrongly spelt". (Nilsson, addition)

Is the public consulted (through meetings, interviews or surveys)? About what? How (online surveys, focus groups…)?

Some research was done for the development of Rikstermbanken, both internally and with external user groups.

> Yes, we'd a test group, before we launched [Rikstermbanken], from different - we did a test ourselves where we put ourselves in the roles - we got roles, I was a journalist

and she was someone working in an authority and that was a translator, and they tried to sort of picture the needs, and then we had a test group of different people looking at a prototype, to say I like it or I don't like it or this is not good and so on. So we did do that. (Nilsson)

There is also some evaluation of feedback on seminars and other training programmes.

That's been a successful thing we did, breakfast seminars on different subjects, terminological maturity or the role of the terminologist or how do you make a glossary. They're all free and they gather lots of people, different kinds of people. And then we ask them why did you come, where did you know about it, evaluate it, what would you like to see the next time? So those produce lots of leads. (Nilsson)

Another way of consulting the public is through discussion seminars, designed to create debate about terminology responsibility or usage.

We try to have 1–3 seminars per year where we are addressing one aspect of terminology work or terminology usage. In May 2010 for example, we will arrange a seminar where the theme is "Do lawyers (and other officials working with regulations and directives) have any terminological responsibility?" We will show some examples of poor definitions occurring in legislative texts and question if it would do any harm if they lived up to terminological requirements. Would the whole text benefit from that? (Bucher addition)

How frequent is evaluation? Are the results published?

Evaluation of terminology seminars is reported and used in the organisation of subsequent seminars.

Evaluation of these seminars are made immediately. Results are reported in our website and in our newsletter, or used for the next seminar, or in our training, or in our blog. (Bucher addition)

2.11 Evaluation: Implantation

Are the dissemination and implantation of already standardised terms studied? How important is this considered? What are the findings?

Implantation studies are not carried out, except through anecdotal observation, due to lack of resources.

We don't have the resources to do proper follow-up studies in a consistent way. But we sometimes can see how term recommendations are being accepted among the experts in the target group of a project. It's even more easy to see how term recommendations are being accepted if the field in question has a broad target group including also laymen. (Bucher email)

How important is it for TNC to research how and which terms are in use?

Interviewees agreed that it would be good to research term use in a more formal way, if the resources were available.

I think it would be very good, very interesting and could be used for many reasons if it could be done systematically every time. I don't know by what method we could do it, but that could also be useful to find out maybe an evaluation method maybe if we had the resources. We can only register that this recommendation of ours is used now everywhere - we can see the signs or we can hear in the media, but that is just one here and one there, that is not systematic. I think it would be good if we could have the resources or even… that would be something for students to research for a thesis, to see in and around a specific area what happened to our recommendations. We know that sometimes some of our glossaries have been revised two or three times, the glossary of forestry for example and some others, and then we can see that in the first edition we recommended some Swedish term and then ten years later when we revise that glossary we can see from excerpts and from asking the experts that no, that recommendation was not accepted by the users, they still use the English term. So then we have to change. And then we do that for the next edition to have, to make, harmonisation as much as possible, within the established usage. So the whole idea is to continue, you should say that if they haven't done [something] for ten years you have to accept it as a fact. (Bucher)

HN: And we don't - I see you have other questions about implantation, that's a thing that I wish we did more, especially now that there are more tools to do it, more ways of doing it. That's something we recommend to students, we could use thematic networks for computer terms. Which are being used, of the recommendations, because they are very clearly recommendations. (Hallberg, Nilsson)

The resources are not available to sponsor research like this, except through encouragement.

ÚB: And could you for example sponsor a student to do research in that?

KH: No, we don't have means to sponsor a student.

HN: Time-wise, yes, we could give them our time, and we have had two or three of those language technology [students]. One of them did a very good job of automatic extraction of definitions from legal documents, they could be used for that. (Hallberg, Nilsson)

2.12 Evaluation: Methods and products

Are term production mechanisms, such as the number of terms, time spent, and quality of methods used, monitored?

The work of the query service is monitored and discussed by staff at regular intervals.

The information acquired and created in query processing is a valuable asset for future queries and other terminological ventures. All the queries together with response reports and the supplementary information are therefore stored in TNC's query database and the query service archives. Summaries of queries and response reports and the pertinent administrative information are entered into a special query record format. A copy of supplementary material delivered together with a response is stored in paper medium. At intervals of one to two months, the latest queries processed are printed out and circulated to all terminologists at TNC for review and comments. The query material is then revised on the basis of the comments, converted and entered into the query database. (Dobrina 2006, 10)

Evaluation is also carried out in an informal way among the team of terminologists.

> And then I think an important resource is that we are ten terminologists, so you could sit down two or three and discuss this, what would you do?, have you seen this before?, how should we do this? So that is sort of integrated in the work, we do not do sort of separate evaluation... (Bucher)

> IA: We send them [the responses to *ad hoc* queries], just for review to all the... to everyone. And we get feedback on the questions, and that's the way we get – 'ah, you should have looked here as well', or things like that.
> ÚB: So everyone sort of contributes.
> SW Yes. Even though it might be one or two months later, but still it's one way of doing it. (Interviewee A, Waldén)

The international context is important here too, as a reassurance about the methods being used.

> Later on we came also into the ISO and then we met the Canadians, Germans, I think that everything, sometimes it also, what we could see was that the Canadians were doing some terminology work in exactly the same way as we did and that was sort of...nice to see and reassuring, ok it functions, it functions so that we haven't before but we have come to that... (Bucher)

What evaluation is carried out of terminology products and resources, such as dictionaries and databases?

Informally, the term projects are evaluated by participants, who, as subject experts, are also the target term users.

> ÚB: And at the end of a project do you evaluate how it worked or what..
> KH: Well, it depends. How it works, of course we know how many copies we sell…
> ÚB: Or the efficiency of the way you worked, or the way - things that could be improved and that kind of thing
> KH: I mean often it's the user group themselves that really comes with remarks or comments like, this is working well like this or... But of course it is difficult to see. Since it has been offered, a glossary like this going through all the stages, normally during this stage since you have so many experts, it's sent out, it's not like we have five to eight experts involved in a group, they have to send it out for confirmation or agreement with other colleagues or with other people working in the area. So it is already some kind of - the job is done a bit in the beginning so if it's in there, people more or less accept it because it stands in the foreword that these people have been involved, these people have been asked, etc, and they approve of this, so… (Hallberg)

> For the project on electronic identification, we tried to [do] a more thorough evaluation, written and oral where we gathered the group again. Some interesting thoughts came out of the written survey which showed the importance of terminology work and how much they had learnt from participating. As to term banks, please see above. (Nilsson addition)

The databases are also informally evaluated and improved with feedback.

> We haven't had so much time. For the national [Rikstermbanken] we got some feedback and we stored that for future work. And sometimes made corrections if there were errors of course. When it comes to the internal bank, we are also in discussions and sometimes there are changes there also. We decide that also this should be in the record. So you can search that and so... (Svanberg)

No systematic evaluation work has been done, however.

> No, we have not done any systematic evaluation work. (Bucher addition)

ISO 23185 is one mechanism mentioned in the literature for the assessment and benchmarking of term resources: terminological data, data input, data output and data management. Is this used by TNC? Why? Are other mechanisms used?

ISO 23185 is known but not used for assessing external terminological resources.

> We are well acquainted with 23185. However, it cannot be used when we assess external terminological resources for input in Rikstermbanken. That assessment can only rely on TNC's terminological competence (principles, methods, concept analysis etc.) (Bucher addition)

What do terminologists in TNC consider 'good' terminology research (transparency, consistency, appropriateness, linguistic economy, derivability, linguistic correctness, and preference for native language…)?

As mentioned in the section beginning on page 650, new terms are rarely created. New terms,

if needed, are rooted in terminological research – this is considered very important.

> First we will see what is the concept, it sounds like a repetition, but we still have to see what is this thing or function or really go down to the.. And what is it related to, how are they named, maybe there's something that is similar or whatever so that you can see the conceptual strategy, maybe a closely related one has a name in Swedish, so we can see how it's named and so on, so you really go on the concept level to see what's.. And then of course you try to find an analogy, a similar... (Hallberg)

> Yes, and of course our databases, because we can see if there is a history. There could be a history, and some thing that people call new is not new at all, maybe it's similar to something that we have for a long time, or maybe we have a Swedish term for it. So you do some research. Is this concept really new, is it really, and how is it related. So we do quite a lot of research. (Hallberg)

The linguistic context is important too.

> But also of course we have to look into the linguistic - would it fit in, is it similar, is the right prefix used for that, of course there are some. We can help the expert and say maybe this would be better, or... (Hallberg)

> HN: I would say every case is different, of course usage is a heavy indicator and then, on top of that, linguistic matters, pronunciation, spelling, and then does it resemble anything else, is the concept clear-cut with a list of criteria, some criteria to try to.. Is it short enough, could it be shorter, but then again is it clear enough? (Hallberg, Nilsson)

Sometimes the English term which is in popular use is accepted.

HN: Sometimes we have things in another language, the English word headset, it's the one used, and we won't be able to change it.

KH: So we just try to concentrate on how you should inflect it and so on. (Hallberg, Nilsson)

2.13 Evaluation: Organisational and general

Is the organisation as a whole evaluated, and if so, by whom and how?

No methods of evaluating the organisation as a whole were discussed.

ÚB: Do you use any standards like that or maybe ISO 9000 or any of those standards to kind of evaluate the work of the organisation as a whole?

A-LB: A spontaneous comment is that it sounds very good. It sounds very good, its sounds a bit technical, but I doubt very much that you really could get reliable data out of such, it's hard... I know too little about this data to say anything about the method. (Bucher)

However, due to its company status, TNC has to report to the board of directors on an annual basis, but also at every board meeting (four times annually). It also has to report to the Ministry of Enterprise, Energy and Communications annually about what the grant received was spent on.

It is felt that the long life and success of TNC is a vote of confidence in itself.

We do not really measure, we don't have the resources, the funding for that. But TNC has existed for soon seventy years and that in itself is sort of agreement that ... we still have grants and we still have customers from different fields and not any more only from the technical fields or the scientific fields but also from others, for example we have a lot of tasks from the healthcare sector, in the last ten years. So and also from other fields. (Bucher)

What is done with the results of these evaluations? Are they published?

TNC's report is published on the website and is also available from the Companies Registration Office.

Actually, the report to the Ministry of how the grant for 2009 was used is published on our web site

http://www.tnc.se/images/stories/pdf/Medelsredovisning2009.pdf

We have not published it that way before, but from it you can read that the state gets quite a lot for approx. 4 million SEK. Value for money☺. The state has never complained about how the grant was used.

The annual report can be downloaded from the Swedish Companies Registration Office. (Bucher addition)

What else is evaluated by TNC, and how?

Training programmes and courses are evaluated, and the responses are usually positive.

That's been a successful thing we did, breakfast seminars on different subjects, terminological maturity, or the role of the terminologist, or how do you make a glossary. They're all free and they gather lots of people, different kinds of people. And then we ask them why did you come, where did you know about it, evaluate it, what would you like to see the next time? So those produce lots of leads. (Nilsson)

HN: And we do evaluate basically all of our courses. We ask them afterwards and see what they think. Did they like it or didn't they. It's interesting. It might be…

KH: Kind of an evaluation. Often it's quite positive, I don't think we have that much…

HN: We have positive evaluations in general

KH: So that's stimulating… (Hallberg, Nilsson)

2.14 Modernisation/maintenance

Are new research technologies and methods, and work practices, used as they are developed? [Could you give me an example of some recent innovations?]

While there was extensive discussion of new ideas and innovations for marketing and training work, there was relatively little discussion of new research technologies and methods. The need for it is recognised, though.

> Terminologists have to keep up with new developments and be aware of new demands. Good knowledge of the principles of terminology and mastery of the working methods help the terminologist to work in a constantly changing environment. (Bucher 2007, 47)

> Terminology work is always directed to the future. Its objective is to improve domain specific communication and to lay the foundation for efficient communication for purposes of knowledge sharing, knowledge transfer and high-quality translation. This work is always "modern" and stands on two legs: continuity and development. (Bucher 2007, 47)

One major change, which was being discussed at the time of the research visit, is the Term-O-stat programme, discussed in the section beginning on page 75, which would mean a new emphasis on term extraction techniques (without losing the emphasis on terminological skill).

> ÚB: How will that [new law] affect you?
>
> A-LB: We hope - this is very new - we hope that this will force some public agencies and also raise the terminological awareness in agencies. We are prepared, we know very well what we could do to realise this paragraph, what are the concrete decisions, what are the concrete actions that should be made in order to live up to this.
>
> ÚB: So you imagine that they will come to you and outsource the work to you?
>
> A-LB: We have a couple of strategies right now. We are doing one big marketing effort together with the University of Linköping because they have a sort of automatic extraction programme that could be a start, just to find out the terms, and then we could continue from then… (Bucher)

> Good knowledge of the principles of terminology and mastery of the working methods is still the most fundamental "technology" and method. To distinguish between term and concept is fundamental for the analysis of a terminological problem. Automatic term extraction is something we will test within the Term-O-stat cooperation (as mentioned above) and it is interesting because in Term-O-stat we want to use big text corpora. For specific projects we have always used manual term extraction from special and well selected texts. The advantage with it is that you already at the source can look for relevant conceptual information and extract that at the same time. It is a special qualification of a terminologist to know how to extract terminological information and it is not so easily replaced by automatic methods! (Bucher addition)

How are terminology resources kept up to date?

There is an awareness of the need to keep up to date with changes in society.

Society's transition from an industrial to a knowledge-based society raises new demands and it has an impact also on terminology work. Now activities concerned with quality assurance, semantic interoperability, knowledge organisation and knowledge handling, the structuring of information in the development of ICT-systems (content management), automatic handling of large quantities of information, and re-use of information, e.g. in health care records, have put terminological needs in another light. This is very much the case in the health care sector where an unambiguous and clear terminology is desired in connection with statistics and follow up-methods, the electronically storing of information, routines concerning patients' security etc.

As in many other countries, the Swedish public administration is facing a great challenge – transforming into the modern so-called e-government, i.e. using new technology and finding new electronic ways of filing and communicating with citizens etc. This development will entail the need for precise terminology, and different authorities need to start making inventories of existing terminology, harmonizing and coordinating their terminology work. This has been further emphasized by several public investigations, as has also the need for appointing specific people responsible for terminology work. Some Swedish public agencies have already established their own in-house terminology organisation, one example is the National Board for Health and Welfare. (Bucher 2007, 45-46)

Because of the fact that Rikstermbanken contains term resources from many different agencies, it is particularly difficult to keep it up to date.

ÚB: How will you modernise that, how will you keep it up to date? Every organisation is going to be developing new terms every year, how are you going to keep up?

HN: Now at present it'd only be through reminders and hoping that they will say, which already happened, now we have changed so please change this and that, and if they don't, we...

ÚB: There's a danger that they'll go off in totally different directions.

HN: Yes. So again we're looking at a semantic web thing of getting them to include the term bank on their website with a personalised search interface, rather than having the web page they have today, which is poor in quality because we did - in I think all the cases - we raised the quality through what might be considered teeny adjustments but they were important. (Hallberg, Nilsson)

A solution to this is to turn the term bank into a management system for those organisations, if this work is funded.

ÚB: And would you consider for example creating separate login interfaces for each organisation so they could log in and work on their terminology directly and publish directly?

HN: That was the idea to turn it into a management system allowing them to have a portion of the database and then letting them publish also what they thought is ready for publishing, and then it [would end] up in a waiting room where we could look at it and send it back or forward it into the term bank.

KH: But we don't have this.

HN: No, not yet. But we've prepared it to become like that.

ÚB: And when are you going to do that?

HN: [laughter] Well...

KH: Right now we don't know about the financials. (Hallberg, Nilsson)

There is an awareness of all the work which needs to be carried out in keeping resources up to date.

> Work on the national term bank has but started, and at TNC we now face more challenges:
>
> New material needs to be included and evaluated, new and already imported material consolidated, and the quality criteria for the material need to be developed further
>
> Further technological development (e.g. related to availability issues) of Rikstermbanken is needed, e.g. personalized interfaces for various user groups and contributors, Web 2.0 and semantic web-adaptions etc.
>
> Implementing Rikstermbanken as a complete terminology management system (TMS) with possibilities of storing and using it as a working tool for external parties. This usage raises new questions: Should organizations already maintaining a term bank (few today) continue this or should they hand it over to Rikstermbanken? Should those without a term bank still invest in a proper TMS? etc.
>
> International co-operation: interest for the software and the work done by TNC has generated an interest from neighbouring countries about creating a similar term bank.
>
> Further financing need to be found, which in itself will call upon several argument types, and through [sic]
>
> The consequences of the new language law for the term bank in particular, and for Swedish terminology work in general, need to be further investigated. (Nilsson 2009)

How is modernisation of the organisation carried out?

New developments, such as the inclusion of sign language terms or additional support to public agencies, are carried out at the behest of the funding agencies.

> Since you were here we, in December 2009, got new funding for Rikstermbanken, one part from the Ministry (as before) and one part from the Swedish Academy.
>
> In the funding target agreements from the Ministry it was pointed out that we should realize some of the technological development mentioned in 2.1.4.2 [page 102]. We have already (March 2010) made it possible to show illustrations, that is a new development. The ministry also stresses that we should add terms in sign language, with whatever technology that we find best fulfils the requirements from those who use sign language. We have already started a discussion with them.
>
> The ministry also pointed out that part of this new funding should be used to support public agencies in their internal terminology work. In order to fulfil this, we have started to contact some agencies, some are invited to Term-O-stat-seminars, others are contacted because they have delivered material to Rikstermbanken and we offer our services in updating their material, and so on.
>
> To sum up: Right now we are working both on the technology and on the contents. (Bucher addition)

There are plans for future modernisation, such as of the term banks.

> But there are thoughts that perhaps in the future if this national term bank and the software works and works well, maybe we'll have some kind of internal version of that also for the internal work. But that's not yet. (Svanberg)

What changes have been made within TNC in recent years, as a result of evaluation?

Changes have been made in recent years in order to keep up with new uses of terminology resources.

> As said above, activities concerned with quality assurance, semantic interoperability, knowledge organisation and knowledge handling, the structuring of information in the development of ICT-systems (content management), automatic handling of large quantities of information, and re-use of information, e.g. in health care records, have put terminological needs in another light.

> This means that we have to be open minded and aware that terminologists are needed in other projects than before. Maybe a project has the aim of making different ICT-system to cooperate and exchange information in an unambiguous way, then we now know that at a certain level you have to decide what to call things and make clear cut definitions of the concept behind these terms. Everybody involved in that project has to fully accept this term-concept agreement in the continuous work.

> The role of the terminologist has changed in these kind of projects. (Bucher addition)

How are research standards maintained (manual, training of new staff, etc)?

The training of staff is discussed in the section beginning on page 115. There is also a terminology manual, *Guide to Terminology* (Suonuuti 2001), which was adapted to Swedish by TNC.

2.15 Training

Are university courses in terminology available for Swedish terminologists? Are they appropriate and up to date?

There is very little terminology instruction in the universities themselves, because there is no school or chair of terminology.

> In Sweden, courses on terminology started off later than in some other Nordic countries. Training in terminology at universities began on a relatively large scale in Denmark and Finland in the early 70's (in business economics) while in Sweden training was confined to learning on the job (at TNC), not in degree or diploma programmes. Sweden's centre for terminology is the oldest in the Northern region but interestingly enough we have been late in establishing training at our universities. (Bucher 2007, 44-45)

> HN: In universities there's very little, obviously for linguistics or translation or all language related programmes, not very many other types of programmes provide terminology training.... Not that we know of. We've tried to investigate legal terminology but we haven't been able to pinpoint anyone doing - in some parts of nursing there are courses. For linguistics there are often courses named LSP but when you ask about them it's reading LSP texts, it's not terminology science, as the subject. So it doesn't mean anything that it's called LSP, and it's not [terminology]. So we teach all of those groups. (Hallberg, Nilsson)

> Terminology training was, and still is largely lacking from many higher-education level programmes Sweden. Most of the current training is given by the TNC in both academic and non-academic contexts, either as separate lectures as part of longer curriculums (translators, interpreters, etc.) or as tailor-made courses for other groups (companies, trade associations, technical committees etc.). (Nilsson 2010, 75)

This means that it is very hard for employers to find trained terminologists.

> There is a current interest in employing terminologists, and in all the new areas where terminology work becomes important – quality assurance, content management, knowledge processing, etc. – there is a clear need for competent people who know the basics of terminology work. The problem, however, is that they are few and far between. (Nilsson 2010, 75)

> ÚB: So if you hire a new terminologist you have to train them...
>
> ST: Yes. If they haven't worked some other place before. We have one person who worked at Scania who do courses where they have terminology. (Testi)

The majority of university terminology training, or perhaps all of it, is actually taught by TNC for the universities, either as part of a course or as an extra training session.

A-LB: We are invited to give lectures or courses within translation training programmes, within some medicine informatics programmes, and also in some linguistic programmes.

ÚB: So that kind of fills the gap.

A-LB: Yes. Two ECTS or up to five ECTS, depending on... And we do that. (Bucher)

TNC has two stated aims for terminology training.

When it comes to training, we have the following vision for the future at TNC:

- to elaborate and develop more web-based courses, both on a national and on a Nordic level

- to argument for terminology modules in *all* university programmes, not only in translation and linguistic programmes, and this at an early stage of the training. We are convinced that terminological awareness is an important and valuable tool in the acquisition of knowledge. (Bucher 2007, 45)

TNC has run a course in terminology which is open to students to enrol in separately, accredited by the University of Stockholm.

From 2005 [for] four years, the first year I think was 2004 or 2005, we gave in cooperation with Stockholm University a fifteen ECTS basic course in terminology, and about twenty to twenty-five persons took part in this. So now there are a hundred persons around Sweden who have had these fifteen ECTS courses. But they were mostly all of them already professionals, standardisers, translators, interpreters or technical writers. So they wanted to sort of improve their competence. (Bucher)

But now there's been a separate course named terminology, 15 points, ECTS, for the first time, so that's the one we've offered twice as an internet based course and twice as a traditional night-time course. (Hallberg, Nilsson)

ÚB: So that's something that students from any programme can enrol on that and use that towards their degree, is that right?

KH: Yes.

HN: It was an optional course and we didn't limit it to only linguistic students, although most of them were translator students or active translators. So there was other editors, standardisers.. (Hallberg, Nilsson)

Another way of providing terminology training is through Nordic cooperation and a joint masters programme.

HN: And [the Nordterm meeting on training is where] the idea of having a joint degree came from.

KH: Yes, that's where it all started.

HN: Because we could not have a degree only in Sweden, nor in Norway or in Denmark, but together we could have one. (Hallberg, Nilsson)

HN: We are preparing a Nordic joint master degree in terminology, and it starts this autumn with a pilot one course of the programme… The whole master programme is going to be one year, spread out over two years. So it's in Denmark, Norway, Finland and Iceland and also Sweden.

ÚB: Who is that aimed at?

HN: The first one we will give is for anyone with a certain level of academic degree… any discipline will do. (Hallberg, Nilsson)

Interviewees felt that the training offered is of a good standard, but that there is not enough of it, and that students generally feel the same. Students even pay extra for the training courses not offered by the university.

I wouldn't consider our training inferior, in many ways, but we can't officially give them any grades, we can't - it doesn't mean anything to them academically. (Hallberg, Nilsson)

HN: I think we have good implantation, we've penetrated most of them – there's one training I think we've never been to but the others continuously we come back and we give at least one or several lectures which every student thinks is too little. Every evaluation we do is the same, we need more. (Hallberg, Nilsson)

HN: At Gothenburg University last time the students paid themselves.

ÚB: That's pretty good, for students.

HN: They spent their party money. (Hallberg, Nilsson)

The areas covered and the method of teaching vary from course to course. Not all courses cover only terminology; there are other courses in subjects like science journalism.

HN: Basically everything we teach we do put in a degree of terminology, basic terminology, although being also part of Swedish language planning, we give and we offer other types of courses, writing rules, we have one programme for text design, where we have totally different aspects. But we also have a grain of terminology even there. Science journalism, it's a course that we've been teaching for years. (Hallberg, Nilsson)

ÚB: If it was a typical training course, say for people in Sweden, if you go to the university and give a three hour lecture on terminology, what do you cover - terminology theory, or what a term is, or do you cover the resources available for Swedish, or do you cover TNC's work, or how to use the term bank - what do you...

KH: We always, which I think is important, we always state the difference between LSP and LGP and really mean that terminology is only about LSP, and the borderline is sometimes [blurred] and you can talk about terms in LGP but we can't do terminology except based on LSP. And the difference is not always clear-cut in many areas. I think that's what more we start with and then we go into all of that, but it's really what is the difference between a word and a term, what's a word and what's a term, and

what's the difference. And then you go into the concepts, so it's basically into the theory by providing examples all the time. (Hallberg, Nilsson)

HN: Somehow it's looked upon as modular, that is how we structured our presentation slides, we have a classification system of modules, and then we choose and pick and put together the combination that suits the group best; if they're translators we have another section, a portion that is much more elaborate than we would for any other group. And we develop new exercises, for this group, okay, science journalism, we need another, totally different. (Hallberg, Nilsson)

Some classes are taught via the internet.

ÚB: So you go to them and you teach them?

HN: Traditionally; now the latest thing was the internet-based course that we've done twice where we met the students only two times and instead we used those films, that is, PowerPoints with sound. (Hallberg, Nilsson)

HN: I'm trying some interactive things now, to have a terminology discussion live, as a chat-based exam or discussion. Just throwing out questions, like 'what's the difference between term and concept?' and having people answer in their own way. And I realise that also again we are going back to this Nordic cooperation, most have done, we have done web training, it's a matter of providing literature and then exercises and... Our approach of these films was not something the others had done. They might have streamed a filmed lecture, but these were different. And it worked, according to the students they were very happy. They could listen several times and they did, they saw everything two to three times on average. Because of active listening to sort of take notes and.. So it was a good way of teaching without being there. (Hallberg, Nilsson)

Ideally, though, interviewees said that a terminology course should form part of the basic training for students.

And [what would be the best for Sweden's purposes] would also be to have courses in all training programmes, no matter what subject. Technology, science, linguistics. To have one module of terminology so that everyone that comes out from university has a higher level of terminological awareness to start with. …If everyone has that then you can be more suspicious that here is a communication problem and most probably relates to some unclear terminology or that you're using the same term but we mean different, that we refer to different concepts. And that would also mean that if you know that you don't have to live with a terminological communication problem related to terminology you would also know that there are methods to help you to solve it in a particular field. And that would mean that more initiatives would be taken to sort out terminological problems in the one field, to enhance the communications. I think you have to start with the students and I think that would result in much more terminology work. And all the time TNC would still have a central role to give this information, to be a little bit ahead, to have an overview, to support, to take part in the national standardisation. You can't expect that from every single subject field. They have enough to do to deal with their own problems. We should be the one knowing a lot about everything. (Bucher)

HN: In many universities there's a common ground when you start at university, you have to take those common ground courses which cut across - any language students have to do the same basic linguistics course, basic grammar for all languages. And terminology would be such a course. You start in university, you do a basic terminology course that will help you in any subject you take. It'll help you structure a text, make a concept system or whatever. So that's been our aim.

ÚB: And has it happened?

HN: No. [laughter] (Hallberg, Nilsson)

Are terminology users given training and educational resources? (For example, journalists, teachers?)

The short and direct answer to your question is that journalists and teachers (in comprehensive upper secondary schools) are target groups that we have on our list, groups that we would like to train and to inform about terminology work. (Bucher addition)

TNC is very involved in terminology training courses, which are delivered in a number of formats and to different groups, in the public and private sector, as well as the university courses described in the section beginning on page 106. This is a major part of TNC's work.

As a matter of fact, training activities have expanded more than the other of the TNC's activities during the last decade. The raised terminological awareness that we see as a result of the current information and knowledge society leads to this demand; many people need to understand more of terminology theory and the principles and methods for terminology work. (Bucher 2007, 45)

More terminologists are needed to bridge gaps in the contemporary information society! Training in terminology is therefore important. Training also allows certification and therefore quality control of terminological work. Without proper and recognized training programmes anyone can claim to use "terminologist" as a title. (Bucher 2007, 47)

EU translators are among the groups trained.

Das TNC hat angeboten, zwei Grundkurse 2007 abzuhalten. Der erste Kurs fand für übersetzer der EU-Kommission in Brüssel statt, vor allem für schwedische übersetzer, die ins Schwedische übersetzen, jedoch auch für einige Personen, die aus dem Schwedischen übersetzen. Der zweite Kurs fand beim Europäischen Parlament in Luxemburg statt. Insgesamt haben an beiden Kursen ca. 100 Personen teilgenommen.. Im Frühjahr 2008 wurde diese Weiterbildung in sechs verschiedenen Seminaren für übersetzer in *allen* 23 EU-Sprachen weitergeführt. Teilgenommen haben insgesamt etwa 300 Personen.[5] (Bucher 2008)

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[5] 'The TNC offered to run two basic courses in 2007. The first course was held for translators of the EU Commission in Brussels, especially for Swedish translators who translate into Swedish, but also for some people who translate from Swedish. The second course was held at the European Parliament in Luxembourg. About one hundred people in total attended the two courses.. In the spring of 2008 this

HN: One of the breakthroughs I think was last year when first we went to teach Swedish translators at the [European] Union, and at the Parliament, so we went twice, Brussels and Luxembourg, and then the others started hearing about that so we presented last year again six courses in one week, which was mad but we did it, three in Brussels and three in Luxembourg, for all the other languages.

ÚB: On terminology, in general?

KH: Yes. (Nilsson, Hallberg)

There is also sometimes training work for private companies, or for expert groups, for which those companies pay.

HN: We've been asked into one of the companies here in the area, and they do, what do they do...

KH: They did optical, infrared cameras, it was quite technical but it was the marketing department of them that realised because they were using different terminology in the marketing section and in the invention and engineers used another terminology so there was a clash between them, so then there is a need, we have some communication problem.

ÚB: So they came to you and asked you for training.

KH: And asked me to come, because he knew, he had been one of the main, one of the terminologists there, he asked us to come and talk to them to see how terminology works...

HN: So that happens on occasion and we do go out and with a certain level - they are tailor made to a certain extent, sometimes we are asked to use their texts as examples, to show them their materials.

ÚB: And the companies pay you to do that.

KH: Yes. (Nilsson, Hallberg)

ÚB: What kind of professionals do you mean?

KH: We mean, I would say, the user groups who need the terminology, and they will mostly will be, I mean the glossary of geology or whatever, they need, geologists need some kind of training in terminology, some kind of tailor-made courses for them..

ÚB: And do you provide those?

KH: Of course we do. (Nilsson, Hallberg)

Courses are given to governmental organisations who subscribe to TNC's services. Examples include the Health Service and the standardisation body, SIS. This is also covered in the new Term-O-stat programme (mentioned in the section beginning on page 75).

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training was continued in six various seminars for translators in *all* twenty-three EU languages. Approximately three hundred people took part.'

If we have a group that are going to work with a terminology area, or a sub area of this field, they [TNC] could give a course, maybe half a day, one day, for the groups so everyone knows how we are working. (Testi)

HN: We… have quite a few visits… from the standardisation body. Twice a year they organise for their newly employed a visit here where we often have to tell them what *they* have in-house. Because we know that better than they do. So they learn things here - 'oh I didn't know that we had that'. 'Well it's somewhere in your glossaries but I can't access it for you'. So that's quite interesting that they let their newly employed come here to learn about..

ÚB: To learn about terminology?

HN: In the light of standardisation. So that's quite specialised to their needs because they are leading groups. At the same time it's a part of our marketing in some way because they have ten major shares, shares in our service, that's how you pre-buy time – as subscribers. And they are the biggest subscriber. So part of their time is used for these visits, and also these newly employed can turn to us and we sit with them in the translation of a standard title, or they need a training session for their committee because they're starting a new standardisation committee. All kinds of things and they have to come, we want them to come back to us. At least we can show them one time and then they can do it themselves. (Nilsson, Hallberg)

There are also open courses, such as breakfast seminars, for which anyone can sign up.

HN: We also have a series of free breakfast seminars, and normally they attract lots of people. Because then they have an hour and a half, two hours, and you speak about terminological awareness or terminological maturity or cost-benefit of terminology work, things you don't have to develop into whole courses, you just try it. (Nilsson, Hallberg)

ÚB: And what kind of people come and do those courses?

KH: All kinds, now we have a course next Friday and we have three working translators, and there's one language consultant at the government offices, and we have one standardiser, working in the standardisation office... (Nilsson, Hallberg)

Another type of training is that given to participants in terminology projects.

HN: In the initial phases of a project you could start on your glossary project, or you could participate in a technical committee.. We suggest and sometimes also realise a course for those participating. At least for our own glossary projects, we sit down and start with a basic course. We all agree on what do we mean by concept and term definition… And they might be any profession depending on the subject area. (Nilsson, Hallberg)

There is, despite the selection of courses offered, a question about the participation of particular groups, such as the media, in training programmes.

HN: ...In 1984 there was a conference about terminological awareness here and they said that the most unaware group is journalists

KH: Which is probably still true.

ÚB: So do you target journalists?

HN: I think we should… I would like to look at the terminological responsibility of journalists, because you see so many bad examples. Very few contact us. We have a network for the media, television and radio, they sometimes contact us, they are part of other groups... But we've never taught anything at a journalists' school... we've never been to the business college, the business university.

ÚB: Surely they're one of the most important - the media

HN: Yes.

KH: I don't know, I think because they don't think language is important, or they don't think they - I don't know, it's some kind of a general conception about 'we don't need to'.

HN: Or 'we can do it ourselves'.

KH: We can do it ourselves, We know this best. [laughter]

HN: Or it's just that we've not met the right person.

KH: That's true. (Nilsson, Hallberg)

It is difficult to approach members of such groups and convince them to participate, both because this might be perceived as a slight, and perhaps because the courses are not free of charge.

ÚB: So if you're thinking of teaching, say, lawyers or journalists or whatever, do you go to them and say look, you really need to know about terminology, let us help you, or do they come to you?

KH: Well if you come with that first approach I don't think that they will - they will not. [laughter] 'You need some training' - no. That's the thing, it's a difficult thing, it's part of how do you get people to do terminology work when you see there is a need and... (Nilsson, Hallberg)

The training work offered by TNC was seen as being of a good standard by one outside commentator.

ÚB: You say that they come here sometimes to do training. How does that, does that work well?

ST: Yes I think it is very... people like it.

ÚB: I get the impression that they are very good.

ST: Yes, they are good performances. (Testi)

There is, however, the question about charging for terminology training.

Sometimes we feel that, we wish we were less commercial, and then times, why should I or why should language services be free, in one sense? Why should I be teaching for free when others do poorer things and they charge lots and lots. Because that's also a way of respecting status for the profession and if you never charge anything there will never be a... (Nilsson)

The Term Bank is a new opportunity for disseminating information and giving informal training about terminology work to contributors and to users.

> Another important factor has been the communication between the TNC and the various contributors concerning their material; quite often a number of questions were raised when the material was prepared for import – questions which often had to be discussed with the experts or the contributors. Such contacts between terminologists and subject field experts are precious opportunities of again discussing terminological issues and raising an awareness and an understanding of how definitions are written and, more generally, what terminology work is all about. (Nilsson 2009)

It is unclear, however, how much training material is available on the website of the term bank itself.

> ÚB: The term bank, is there training material available on the website for people who want to use it on how to do searches, how to...
>
> KH: There are some, I mean what Claudia did is a manual...
>
> ÚB: Or if you get five results, what should you do, or what are..
>
> HN: It's not exactly, I'm also thinking of making such a film instead - not instead, also. (Nilsson, Hallberg)

As for training materials about terminology in Swedish, there is one translated Nordterm publication (*Guide to Terminology*), and a textbook being developed.

> KH: I'm just thinking of this guide to terminology, we were actually, a couple of years ago we didn't have even a small material in Swedish presenting in theory and practice terminology work, so this [Guide to Terminology] is a translation of.. We did the translation of it, and we adapted it quite a lot.
>
> ÚB: And that's your textbook for your courses.
>
> KH: Yes, this is kind of the introduction to terminology work in theory and practice. (Hallberg, Nilsson)

> HN: Finally, a Swedish handbook is coming out from Vaasa University.
>
> KH: A handbook on terminology in Swedish.
>
> ÚB: And you contributed to that?
>
> KH: No, that's written, it's by two - we have not contributed. We read the script.
>
> ÚB: So there's discussion of your work in that, presumably.
>
> HN: Oh yes. But it would be a major book for anyone studying terminology. (Hallberg, Nilsson)

There is also a large corpus of training material amassed by TNC itself.

> KH: What we're discussing now is how do we get better, and how do we classify our material, having in this kind of section in boxes.
>
> ÚB: So, documentation?
>
> HN: Yes, it grows on us, someone makes new slides and this is new... Because I use exercises that you [Katja] don't use, and you have other stuff that I have never used and I do lots of new exercises all the time, and I try them out and see if they work or not. Some of them work and I try to...
>
> ÚB: There must be a big corpus of training material.

HN: Yes. It could be - it's not chaotic at all but it could be even better organised. Some kind of in-house training for trainers. We do this for each other at times, two at a time, because... we did have one such seminar, how do you do this and why do you do this.. (Hallberg, Nilsson)

The term bank is of course one of the subjects covered in the training programme.

HN: Well, since we've introduced it, we always mention the national term bank, finally it exists, we used to talk about it when it didn't exist. It's better now that it does exist. So we try to show it and that's always - I like it and I find it a bit tricky because the minute you start talking about it it's already too old or.. but every time we have to go through it again and it seems that all of them, they always want more, 'tell me where to find this and how can I use Google better and why can't I find this glossary I need etc.' And no matter how much you put into this they always want more. (Nilsson, Hallberg)

What kind of on-the-job training is provided to new and old staff?

The training of new staff is informal and hands-on, done through a combination of the training modules used for student and other training, and learning by doing.

ÚB: If you get a new member of staff, how do you turn them into a terminologist?

HN: They are like larvae, turning into a butterfly. [laughter] It's a process, it just happens, and suddenly you're advanced, you're assisting terminologists and then you arrive at 'terminologist', and when they start there's this short programme like you now, you go round, you visit different people, because even though there's lots of multitasking you also have some specialities. …The query service is a good starting point because you get to know the library, the tools you have and the way of thinking, and it's a quick confirmation of 'is this person, do they have what it takes of being able to find the answer, find experts, to the right questions and then create a condensed answer and draw some conclusions?' So that's normally what you start doing and then as quick as there is some kind of training that we give, we bring them along, if it's a course we're giving ourselves or an external one, we bring them along so they get to see different people teaching and now we also have, since we did the web-based internet course we have a selection of films or basically filmed PowerPoints, so we make them watch them. There are about 15 films on diverse subjects. Three films on concepts, one on definitions, one on... Then we may have exercises that go with that. But it's not like I learned from Canada that they have a 2 year in-house training course. (Hallberg, Nilsson)

ÚB: So it's much more of an apprenticeship really, you're learning by doing things.

HN: Yes, here. It's not that we have this long-term training programme. Short-term when they arrive, we do. But then it's more about bringing them along and sitting beside you and getting feedback and so on. (Hallberg, Nilsson)

For ongoing training for staff, there is an occasional study circle.

KH: …and also we have had some kind of a study circle.

HN: We do a theoretical one... where we can go in-depth on theory, we started with the concept of 'concept' and it took a whole six months. One colleague prepared a selection of readings and we discussed it. We have talked about doing that again. (Hallberg, Nilsson)

That, as well as attending conferences, is a way of keeping up to date with theory.

> ÚB: I'm just wondering how you keep up to date with current theory.
>
> KH: Yes, we read a lot and also by this biannual meeting of the Nordic terminologists, the Nordterm, and also...
>
> HN: And I was part of the European Association for Terminology and travelled a lot and met lots of people. It comes down to a certain extent to your own interests. I think the level of reading varies a lot. I read a lot because I want to keep up to date, and when you teach, you need to, for finding quotes, or applying the theory or giving students ideas for things we can't research ourselves. (Hallberg, Nilsson)

It is recognised that finding training opportunities for terminologists is difficult.

> KH: That's the problem, because we train others, but sometimes we don't get training ourselves.
>
> HN: Well, someone went once to [the Terminology Summer School in] Cologne, I think we should send more people there. (Hallberg, Nilsson)

> HN: We contribute the Nordterm report, and we have two of us who have done a piece for Nordterm, it's being published at Benjamins, a terminology publication. We should be writing more.
>
> KH: Yes, I think so.
>
> HN: We have assumed the status of being practice-oriented. (Hallberg, Nilsson)

Finding suitably qualified staff is also problematic.

> ÚB: Training new staff, is that a problem? Is it a problem for terminologists to get regular terminology training as opposed to language or computing or whatever?
>
> A-LB: Yes, it is. Since there is no one, as I said before, terminology is included only in some training programmes, some that we meet or some who apply for jobs here have had us in one or two lectures.
>
> ÚB: So you don't get people with degrees in terminology.
>
> A-LB: No, no Swedes. That is a little bit not true any more because from 2005 for four years, the first year I think was 2004 or 2005, we gave, in cooperation with Stockholm University, a fifteen ECTS basic course in terminology, and about twenty to twenty-five persons took part in this. So now there are a hundred persons around Sweden who have had these fifteen ECTS courses. But they were mostly all of them already professionals, standardisers, translators, interpreters or technical writers. So they wanted to sort of improve their competence. (Bucher)

> HN: As a general starting point, it is part of our mission to raise terminological awareness and one of the ways of doing that is of course through teaching. Also for our own survival, basically, because we need to, with time, get more terminologists, and where are they supposed to come from? On the other hand those working here now didn't get any formal training because there wasn't any until now. (Hallberg, Nilsson)

3   Evaluation: general reflections

These are already mentioned above in the relevant places.

3.1   What are TNC's main strengths?

Many of TNC's strengths seem to lie in the staff, their competencies and the way they cooperate.

> I think that one good thing is that we are very open and here at TNC, it is said that we are very good at cooperating with each other... in different constellations, Henrik and I or... I think that that is very important...and that we are sort of open to use each other's competencies and that is also very basic competence in the terminologies that you have to be aware of that your knowledge is limited and that you have to collect knowledge from experts, from other terminologists and so on and share all the time... so it is not 'just close the door and just do my thing'. (Bucher)

There is a perception of flexibility in the organisation, because of the staff but also because of the company structure.

> Actually I think we have a very flexible model now; we are doing terminology work, [but] then TNC really means a lot of different things. (Bucher)

> But I think, yeah, [because of the company structure] we are odd, but you can also look at it that we are a very flexible organisation. (Bucher)

> ÚB: I suppose not being part of the state structure means that you can be more dynamic in ways...
>
> A-LB: Yes, yes and more independent, and there is a smaller message [that] we are flexible and we can reprioritise and many here have lots of skills that one can teach another one, so with actually only ten terminologists you can do a lot of things. (Bucher)

The diversity of backgrounds is also viewed positively, both from a managerial perspective and by the terminologists themselves.

> For another terminology centre in another country I think what you can learn from that is to think of these qualifications or qualities in a person when you employ a terminologist or a terminologist-to-be, that should be a person who is socially competent, open to deal with others, to... (Bucher)
>
> ÚB: It not just to do with linguistics....
>
> A-LB: No, no, 'I want to do this, and I prefer to do it on my own', I feel that is a basic, that's our experience, and it is also good when you meet experts, whom you have not met before that you... It's easy to deal with them. (Bucher)

> Clarification: This is not very clear. What I wanted to say is that at TNC we have experienced that good terminological skills can be found in any person, no matter the

educational background. At TNC we have always had people employed with different backgrounds. However, in a team there must be at least one or a couple of persons with a linguistic background. Important is also that some are analytical and logical. And everyone must be a bit of a generalist, curious, with broad interests, open minded and socially competent. The last qualifications are especially important when you work in expert groups. (Bucher addition)

ÚB: The fact that your background is in mathematics, how useful is that, or how important? As a terminologist do you think it's a good thing to have a different background, not just linguistics or translation or whatever?

SW: I think it's good because I'm interested in what I'm working on, I'm interested in science and technology, for instance I read three or four magazines, there's a technical newspaper that comes out every week and I read and I think it's really interesting because I'm interested in the…

ÚB: So you're not just interested in the language, you're interested in the area as well.

SW: Yes, I read it and I see the new concepts, and I see how they're trying to make good terms. I don't know if I'm explaining it, but for instance many of my friends are mathematicians or engineers and if I go to a dinner party they always ask me if I'm studying interesting questions. They think it's really interesting to hear about. I suppose it's the same with a small language or a dialect because they're interested if somebody's working on their language, the one that I use, that the big institute is not working on because it's too small.

ÚB: So it's good to have, it's good for you personally to have a subject area that you're interested in. It probably means that your work, that you have more specialised knowledge, that you understand concepts and you understand what's going on.

SW: When I call somebody and ask a question, I can usually understand the answer. So it's an advantage, I think. (Waldén)

TNC seems to benefit from a good reputation, built up over many years, as a reliable, serious, trustworthy institution.

But we still have a good reputation, and a long tradition, and a certain power in everything that we say. (Nilsson)

Also I think at a theoretical level we have arrived at a certain stage, but with academics I'm not sure what our position would be, would [we] be considered as a high level academic institution or not. (Nilsson)

I think we do have a certain recognition and we have a power of speech which is difficult to obtain but which we could perhaps use more. This is the national centre, go with us, why use someone else? (Nilsson)

First they are really professional terminologists, they really know what they do. (Josephson)

Related to this is a solid international network of relationships and a good understanding of the international research situation.

> KH: I think we have a good overview, it strikes me again and again, a good overview of things happening here and internationally…
>
> ÚB: That is, that you're aware of what's going on.
>
> KH: We're aware, like the work we've done for some years preparing this national data term bank, it has forced us to see who is doing terminology… all the studies that we've done, surveys of terminological resources, make us quite competent.
>
> HN: Now we have, especially now, loads of contacts with all these people, and different [approaches], and their problems, what they do and how they organise terminology work… (Hallberg, Nilsson)

From a computing and research point of view, interviewees felt that TNC was well advanced.

> A-LB: And I think that is also good that we are not dependent on external consultants for the building of a software for the term bank since there are very few commercial softwares that would be enough for a huge term bank like this.
>
> ÚB: It's nice that you can develop them in-house.
>
> A-LB: Yes, because you have to know something about terminology as well. (Bucher)

> We were very early with the second commercial CD-ROM in this country in 1987. And it sold really well and was a breakthrough for production and construction of terminology with computerised methods. So we've been very at the forefront of computing I would say, here. Now a little less because we don't do automatic extraction and things. But the term bank, again we discussed, we left all the glossaries go in the term bank. (Nilsson)

> It's new since March. Well it's, what is it, between three hundred and two hundred visits per day. Depends on what you compare to. It's not for everyone, it's for a special kind of people who work with this or are very interested in language aspects. But they seem to like it and return. (Svanberg)

> I think the national term bank is really, it corresponds to our view of how we work with terminology, how we handle it and so that's the main thing with that I think. All the experience here is put in that. (Svanberg)

> SW: I think we are good at finding good sources for the concepts... And I think we are - sometimes I think we spend a lot of time trying to find all the sources, which is not always meaningful, but it's, I think we're good at finding the right sources anyway. I don't think we miss many times any possible terms or something like that. If you find a couple of suggested terms then they are often the ones that are used. .. But they are the major one. (Interviewee A, Waldén)

The TNC library is also viewed as a very good reference source.

> ST: A good thing is their library, it's quite unique in this area...
>
> ÚB: And do you use their library?
>
> ST: Not, we use TNC, we are inside the subscription, we can ask them term questions, and they use it, we don't go there and use it...
>
> ÚB: But they have all this knowledge that can be accessed...
>
> ST: Yes. (Testi)

In the choice of research projects, the fact that TNC's work is always done on demand (and payment) from other bodies means that it is accepted and used.

> And another thing that I think is very important. It's the basic idea that they do not, TNC do not invent domains and areas and subjects where they will do terminology. They only do terminology when they are asked for it, when they are paid for it, so that it will get used. Of course that is also a bit of a weak point. (Josephson)

> ÚB: I suppose they're financially dependent on getting work and getting contracts.
>
> OJ: Yes. And sometimes there are good times and sometimes there are bad times. So that's on the one hand problematic. On the other hand that's the strong side of their activity because when people pay for it they really want it and they use it. (Josephson)

Despite this, the fifty per cent public support that is received is seen as essential.

> TNC's and TSK's experiences clearly show how important public support is to the existence of terminology centres. To our knowledge there is, in fact, no terminology centre in Europe organized as a profit centre... Public support is of relevance not only for the survival of a terminology centre, but also for the quality of its work. (Bucher 2000, 6)

The work of the joint groups (such as the data term group) is viewed positively, for several reasons: because it leads to successful term implantation among the media, and because it is financially viable.

> If you really want the media to use standardized terminology, and the media companies themselves are urging for terminology help, the best approach is to start terminology projects where media companies are represented… With the participation of many companies and organizations, and of different sorts (newspapers, TV companies, computer magazines, IT experts, linguists, publishing houses, etc.), the terminology recommendations are well rooted and well spread. (Karlsson email)

> And with a project model where each member contributes through free working hours, we have solved the financial problem. (Karlsson email)

Finally, the marketing work is seen as thorough.

> ÚB: The only other thing is how effective do you think that TNC's marketing work is or what is good or what could be improved about it?
>
> HN: I think it's always very thought through. (Nilsson)

3.2 What are TNC's weaknesses?

In terms of TNC's place in Swedish society, a few weaknesses were pointed out. They are to do with the overall structure for terminology in Sweden – specifically, the lack of research work in the universities. Thus, although there is potential for research work which would lead to improvements in TNC's work (such as implantation studies) there is no-one to carry out this work.

> ÚB: Are you linked to academic research in the universities, are there connections there?
>
> A-LB: No. Actually first it is important to say that there is not very much research at Swedish universities in LSP and there is no professor or anything in any university in terminology. There have been studies in LSP… but very very little. And because of that there is no, there is very much respect from academia towards what TNC is doing, but there is no strong cooperation from many universities, since there is no professor in terminology, since LSP is not very strong. And a funny thing to say but although Uppsala University has had for several years, twenty years or so a group of PhD students in the field of LSP, they have not ever been in contact with us. So the academia look at [things] historically, look at texts but are not so very much interested in practical current work in terminology.
>
> ÚB: Is that something that could be improved?
>
> A-LB: I think it should be improved. I think they should use our experience, use our raw material or use our different working documents, see the stages of original material that we use, our excerpts for example, back to the final glossary… I think that is very interesting and I think it is a pity it isn't asked for or looked into. I would say so. But I would say we still have a good cooperation with several universities in Sweden since about 10 years, because we are always invited to give [training]… since there is no competence or not much competence (I won't say no competence, but not much) or interest in terminology. (Bucher)

> OJ: But TNC is not a research institute, that's important to note. They are doing the real job, of terminological work.
>
> ÚB: In a way that could be seen as a gap that there is no research work [...], that they don't have time to do research work and that's somewhere where academia could come in maybe and...
>
> OJ: Yes, that is a bit problematic maybe. There is no - you can't be sure that terminological research, really, is done in Sweden because that is not in the framework of what TNC should do, and the universities aren't forced to do it either. So it depends on initiatives of diverse academics. (Josephson)

> HN: We suggested many times that there should be an institution and particular professors for this type of subject in terminology. I would suggest this has been because in many universities there's a common ground when you start at university - you have to take those common ground courses which cut across - any language students have to do the same basic linguistics course, basic grammar for all languages. And terminology would be such a course. You start in university, you do a basic

terminology course that will help you in any subject you take. It'll help you structure a text, make a concept system or whatever. So that's been our aim.

ÚB: And has it happened?

HN: No. [laughter] (Hallberg, Nilsson)

Related to this lack of research is a lack of appreciation of the specific training and role of the professional terminologist.

In principle I do not think that there were may pitfalls, but, one thing which we were late in being aware of was the specific knowledge and competence that a terminologist has, and I think that might be European or maybe international since, the profession of a terminologist, it is fairly unknown still, much better know than twenty years ago, but it is still a very few group of people working in it… we were late, even though it is an old organisation, in realising, in having a respect for our own knowledge, in seeing that we have a very specialised and very qualified experience actually. It was sort of a sign that knowledge had grown and grown and that we sort of learnt by doing and sometimes you couldn't compare your knowledge to the knowledge of other linguists or translators, you couldn't see, but we have much more experience now and we also have one good way of realising your own competence, that is to give courses, lectures, training. (Bucher)

One pitfall, it sort of didn't come like this, but over the years, when I look back, that is that we did not recognise our own professional role enough. We did that very late actually, so I think that if you start a terminology centre or if you open a department for terminology in a public agency or an organisation, those who take the step should know that this is a very important task and a very specific skill set. (Bucher)

Another weakness is the lack of interest in and engagement with terminology on the part of the media (apart from the work of the data term groups). Almost all interviewees recognised this problem. Part of the problem may be a lack of contact between TNC and the media – compared, for example, to the connection between media representatives and networks created by the language institute.

A-LB: [In case of a terminological question] they would go to this network of other media people at first. Like the question about 'Bombay' and 'Mumbai', they discussed it among the media people and then the representative of the media group brought it in to this language institution's network. Because then they resolved it there. So there are different levels of this work. So I think with the 'swine flu' they would discuss it in the media language group at first.

ÚB: So they have a discussion group.

A-LB: They have a discussion group and maybe they would send a question to us or…

ÚB: And are you observers in the discussion group?

A-LB: In the media language group, we are not observers. We should be. (Bucher)

HN: …In 1984 there was a conference about terminological awareness here and they said that the most unaware group is journalists

KH: Which is probably still true.

ÚB: So do you target journalists?

HN: I think we should. I think that's my next, having done the translator and the lawyer, I would like to look at the terminological responsibility of journalists, because you see so many bad examples. Very few contact us. We have a network for the media, television and radio, they sometimes contact us, they are part of other groups... But we've never taught anything at a journalists' school, .. we've never been to the business college, the business university.

ÚB: Surely they're one of the most important - the media.

HN: Yes. And in Denmark, terminology training has always been based at the business university. And here there's never been.

ÚB: And why not? Why are the media not...

KH: I don't know, I think because they don't think language is important, or they don't think they - I don't know, it's some kind of a general conception about 'we don't need to'.

HN: Or 'we can do it ourselves'.

KH: We can do it ourselves, We know this best. [laughter]

HN: Or it's just that we've not met the right person.

KH: No, that's true. (Hallberg, Nilsson)

ÚB: And what about the media? They seem to be - just an impression that I have, that there's a gap between TNC and terminology provision in general for the media, that maybe there is not much connection there?

OJ: Well of course there is a little gap but I think you can't avoid that because terminology is one thing and media language is another thing. But there are fora where they could meet. I think there always will be, it doesn't help how you organise it, there will always be such a gap. (Josephson)

The impression is, though, that this might be outside the scope of TNC's work.

ÚB: How about the needs of particular user groups such as translators or educators or the media, how are their particular needs responded to, or do you think their needs are addressed by TNC, or by anyone else for terminology?

OJ: The needs of Swedish society...

ÚB: Yes, of particular sectors such as for example in education or translation work, for example, or the media. Do you think their particular needs are addressed?

OJ: Addressed by whom?

ÚB: I suppose by TNC.

OJ: That's a bit to ask too much of TNC, I think. It's a small institution. It's hard to give a general answer to that question, really. I - there are many particular needs which are not answered really, but some are. (Josephson)

There are other groups with which TNC does not have as close a working relationship as it might wish, such as the Swedish standards institute.

We do deal with them [standards], we would like to deal with it much more, because sometimes, or rather very often to be honest it is not very well done, you can see that

it is not done by good methodology. But it is there and it is sort of heavy definitions for that particular document. Sometimes we are involved, all the way through, sometimes we are involved in that we give a course for these group of experts who are going to elaborate the standard. And sometimes, and that is most often the case, sometimes we are, we get the draft of the standard and they ask for comments. But that's a very late stage. (Bucher)

ÚB: And then they [the standardisation body] go off and do their own terminology work.

HN: Yes, and sometimes we get to see the results, too late very often, and we see that it was not professionally done and the translation was poorly done by somebody in the committee. (Hallberg, Nilsson)

ÚB: And then they [the standardisation body] go off and do their own terminology work.

HN: Yes, and sometimes we get to see the results, too late very often, and we see that it was not professionally done and the translation was poorly done by somebody in the committee.

KH: And they don't even know how the translation process is done in the standardisation body..

HN: And there's no connection between the terminology section of the standard and the actual text. Very often we do try to answer as many as we can, [with] official, standard reference, but then it's often too late, they don't want to work on this because..

KH: We try to get invited a little bit earlier. (Hallberg, Nilsson)

Visibility, in general, is perceived as an issue for TNC, despite – or, perhaps, because of – the emphasis on marketing. Interviewees did not have the impression that the organisation, terminology theory, or the term resources it provides are well known in Swedish society, even among translators.

ÚB: And do you think that TNC would be well known?

ST: In some areas but maybe not generally. In this area of course...

ÚB: Of course...

ST: But generally not so but I think it comes more and more. (Testi)

ÚB: What do you think people think of TNC, what do you think they associate with you?

HN: Those that know it, I think still think it's not known enough. Which is partly our blame, of course, but then again the whole thing of being the little sister of any language matters.

ÚB: Do you think the person on the street would know about it?

HN: No, very few. (Nilsson)

ÚB: But translators and so on would all know about you.

HN: Most, I would think, now, or at least many more than an average person. It would perhaps still be thought of as geeky, somehow, or by some I think archaic, but in other circles modern. Versatile - I hope they think it's a versatile organisation. And I think when they do meet us and they do listen to us they do... (Nilsson)

ÚB: And would you say that, and this is a very general question, whether people are sort of aware of terminology, aware of the need for terminology and aware of where to go to find it?

ST: I think that they are aware of the need but maybe they don't know quite what it actually is. The method, I mean, we work with the same method as TNC, but em, maybe they know the word terminology and they know that yes it is important to define our concepts but what is it, how does it differ from an explanation, rules... maybe that is not so well known. (Testi)

ST: I think the strengths are the method which is the same, and whatever subject field they train or work in they use the method for terminology and that is a strength. But I think the knowledge of terminology from outside should improve.

ÚB: Other people's knowledge?

ST: Yes, other people's. But how to do that - well, we have to do it to get people to get to know our side of things and our term bank. (Testi)

It is acknowledged that the dissemination of terminology resources may be problematic. Although TNC has been involved in computerised term resources for many years, an online term bank was only made available in 2009.

I think you are right, that for us the marketing of the idea in order to raise awareness, that is very important and that the governmental grant that we get, it says something in the funding target agreements that we get from the government that that's what we should use the money for. So I think that is very important. That doesn't say that we should not put efforts in also marketing [of] the results, the glossary and over the years - maybe that is one pitfall - maybe we have put too little resources into that part. Work for a glossary project usually lasts from two up to ten years, the glossary of geology took ten years, and when it was published, finished, then sort of, we started another project. Actually we should have had then some other resources taking care of the marketing. And part of that work is the work of the experts who were involved, of course, because they are out where this is needed but if we had had more resources it would definitely have been a good idea. (Bucher)

ÚB: The term bank was published this year, but it seems odd to me because you were so, in ways, technologically advanced and so advanced with the publication of things, that it was so late.

A-LB: Yeah, it has been… actually it started already in 1969 using computerised mediums and methods and then we tried it several times over the years... and before

that, before the CD-ROM came, we talked about a term bank with modems and so forth to be available and we had a period where we got extra funding... a trial period to see how the result was taken care of by users for four or five months and then there was lack of funding and technology went on and so actually it could have been done earlier in the old technological way if the funding had been in sensible figures, but then at the end over the eighties CD-ROM technology came and we thought this is much better and so we were early with that, 1987, and then funding went down and then internet came... but you are right: one could very well have expected but if you know that we actually have been on the way to it since 1969. (Bucher)

There was some criticism of the organisation's technical solutions, particularly the disparity between the internal research database and the public term bank. Although the same questions are repeatedly asked of the query service, the answer is not available in the term bank. This could be because of structural differences that have arisen between the two systems as they evolved.

SW: I think [the query service] is good. I think collecting the emails and using them to follow up should be systematic. I think it would be good if we had at least some of the questions in the Rikstermbanken, that are interesting to a wide audience, because now they're collected in our internal database. (Interviewee A, Waldén)

So this diversification and we're not really - we should sit down and see should we have the internal database continuing the same way compared to the national term bank or should we have an internal version of the national term bank instead. Because we went through all our own glossaries and made changes, corrected any faulty things that might have been, and those were quite a lot. So we're looking now at the internal database, it's not the same. And there is lots of material here. (Nilsson)

As TNC is responsible for publishing the recommended terms [of the data term group] on our web site, and this work is non-commercial, the publishing phase is really our bottle-neck. (Karlsson email)

A major weakness of the policy of only doing terminology work on demand is that there are many areas in which no terminology work has been done.

ÚB: So people come to you with projects. Presumably there are areas that haven't been dealt with.

A-LB: Yes. Most areas haven't been dealt with terminologically. They have terms and they use terms but terminology is a little bit like cleaning up in a chaos or in a mess. It works, terms are used but it is not that clear-cut and not as precise as you could wish. (Bucher)

ÚB: So there are a few areas - for Swedish terminology there must be areas that aren't covered at all.

A-LB: Yes, of course. We have also during TNC's 70 years, we have worked mostly with the scientific and technical areas. (Bucher)

ÚB: Do you think there are areas of term planning that aren't covered by TNC that are not covered by others either. Are there gaps?

OJ: Not principally but practically, there are. I think the problem is what has been developing very well in Sweden is the terminology of public authorities and government and so on. …There is too little terminological work done in private enterprises, in industry and so on. Of course there are exceptions. There are enterprises, ministries and so on that are very concerned with terminology, but there are many sectors where a lot more should be done, when it comes to economy and... A lot more sectors should be done. But they don't ask for it. And when they don't ask for it TNC doesn't do it. And that's a very wise principle of TNC. They only do things they are paid for. When a customer asks for it, because you can be sure that the terminology that they produce will be used. (Josephson)

There are some areas in Swedish society where the terminology is very weak; I think economy is such one. And since no one asks for it nothing is done, and that's a bit problematic. And it can be problematic also for TNC as an institution. It was very big in the middle of the '90s when Sweden entered the EU and a lot of terminological work had to be done, and it expanded a lot. But then when that was finished they were too big really and they had a financial crisis and went bankrupt. Perhaps you know that. And had to reorganise in 2000, 2001. And that is the weak side of this form of organisation. (Josephson)

I don't intend to criticise TNC, its work is very important and useful, but having an income based corporation as an official terminology body means that non-commercial terminology needs will suffer. I am myself exposed to this problem: I want to initiate a terminology project dealing with official Swedish geographical names (mainly the names of foreign nations), and I need TNC to participate in order to secure the terminological quality. This is of national interest, but TNC needs money for their participation. Money we don't have. (Karlsson email)

Similarly, although it had been hoped that TNC would do a lot of work for the private sector (in part because of its company status), this did not transpire.

TNC today, the big projects are financed by the public authorities, I hope you understood that when you were there. And one argument for not [having] TNC as part of a public authority, was that private enterprises wouldn't ask for service from a department of a public authority. But the problem is that private enterprises do not ask for services now anyway. So that's a bit problematic. I don't know really how to solve this problem, but that is a problem. (Josephson)

ÚB: Do you think there are areas of term planning that aren't covered by TNC that are not covered by others either. Are there gaps?

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are many sectors where a lot more should be done, when it comes to economy and...
A lot more sectors should be done. But they don't ask for it. And when they don't ask
for it TNC doesn't do it. And that's a very wise principle of TNC. They only do things
they are paid for. When a customer asks for it, because you can be sure that the
terminology that they produce will be used. (Josephson)

The company status of TNC seems to be the cause of several weaknesses as well as the above
inability to take on unfunded '*pro bono*' terminology projects. One is the dependence on
fluctuating external funding.

ÚB: I suppose they're financially dependent on getting work and getting contracts.

OJ: Yes. And sometimes there are good times and sometimes there are bad times. So
that's on the one hand problematic. On the other hand that's the strong side of their
activity because when people pay for it they really want it and they use it. (Josephson)

[TNC] was very big in the middle of the nineties when Sweden entered the EU and a lot
of terminological work had to be done, and it expanded a lot. But then when that was
finished they were too big really and they had a financial crisis and went bankrupt.
Perhaps you know that. And had to reorganise in 2000, 2001. And that is the weak side
of this form of organisation. (Josephson)

Another is a question of perception – TNC seems to have to constantly explain its status, and
some procedures – such as applying for EU funding – become more difficult.

A-LB: It is different when we are in the academia, at universities, when we talk to
universities, when we meet people from different academic disciplines and they are,
'did they say private company', private company, some are really disturbed by this, so
they 'aha' and they ask about profits and 'what do you do this for' and then we have to
stress the governmental support that we have, that is fifty per cent so we're 'ok, so
that's fine', and when we are meeting the industry, when we are having courses for
companies and when we talk to companies or have projects with companies, they
might at some times at the start feel that we are a very academic institution talking
about having a theory, a general theory relating to our work or so, that usually changes
after a while, so we are always odd wherever we are in one way or another but for
different reasons…

ÚB: I suppose placing the emphasis on your government funding sometimes, or
emphasising the company status...

A-LB: That we are a consultant company, we can emphasise that when we are in the
marketing, so and I think we have talked about this and we have talked to our board
about this and that is something to think of when we meet, when we encounter
different groups and we all must be aware of it. But I think, yeah, we are odd, but you
can also look at it that we are a very flexible organisation. (Bucher)

So the thing is that the general notion of the image is still more non-commercial, and
in that sense, it makes it slightly difficult to be commercial. If everyone thinks you are
an authority and non-commercial and you come and you present it as a commercial
thing... (Nilsson)

ÚB: It's an interesting model for a terminology service to have a private company, isn't it?

HN: It is. It's mixed and it's difficult. For a European project it gets more difficult. It was easier before when we were this association. And now it's trickier.

Other, minor criticisms focused on financial and time restrictions, division of responsibilities, and the lack of training opportunities for terminologists.

IA: And of course always time, the best thing is always to phone many experts, it takes so much time. First you have to explain where you're calling from and why, and what I'm doing and then trying to... (Interviewee A, Waldén)

HN: I think we could perhaps try more with external actors [marketing consultants] and see what they could do; then again we have tried that and it didn't always turn out very good because…

ÚB: So what, they would do..

HN: How would they present this tricky, a vaguely tricky product, or how could it be used or what could they do. This is a financial matter now, we don't have the means to

ÚB: To get a consultant

HN: No. And we do have some competency in-house, but not enough time to do it properly. I could devote so much more time to it if I had the time, but we do with the means that we have, we try as best we can, that is how I would put it. Although as always it could be more prioritised. (Nilsson)

We'd like to have bigger LSP corpora, but that's private and often costs a lot but it should be nice to have more access to that and work with that. (Hallberg)

KH: That's the problem, because we train others, but sometimes we don't get training ourselves.

HN: Well, someone went once to Cologne, I think we should send more people there. (Hallberg, Nilsson)

HN: It could be since it's such a flat organisation, it could be clearer on responsibilities and how far they stretch. It's more of an organisational thing. .. And I think we should be more, since it's such a major part of our business now, more of us should be training. (Hallberg, Nilsson)

3.3   What are the opportunities?

At the time the case study research was carried out (August 2009), several unique opportunities were arising for TNC, for two reasons: the recent launch of the Rikstermbanken

term bank (in March 2009), and the new language law (July 2009 – see the section beginning on page 15).

Interviewees felt that the new term bank means new opportunities for marketing, and also, perhaps, to study implantation.

> I think we should do more with the website, much more, and try out some new technologies and new ways of getting to people. (Nilsson)

> KH: We also have to get people involved in giving their material to the Rikstermbanken, to provide us with materials, and also in how to teach people that, especially now at different ministries and different state organisations and local organisations, regional bodes and so on. We would like to go and train them so they could...
> ÚB: So the material you get would be better.
> KH: Would be better and so on, and more people would be aware. So there we need another, we have to be more, going and.. (Hallberg, Nilsson)

> HN: But I always, I would like to do more on implantation or diachronic studies. (Hallberg, Nilsson)

> We're hoping that the contacts in themselves will pay off, and the raising of awareness, I think it [the term bank] has raised awareness definitely. Because we do get letters, we're not in the term bank, could we participate, how should we do it and what could we do and how do we deliver? (Nilsson)

The new language law (mentioned in the section beginning on page 15) seems to mean a new opportunity to work with government departments and organisations, using the planned Term-O-stat programme.

> ÚB: How will that [new law] affect you?
> A-LB: We hope - this is very new - we hope that this will force some public agencies and also raise the terminological awareness in agencies. We are prepared, we know very well what we could do to realise this paragraph, what are the concrete decisions, what are the concrete actions that should be made in order to live up to this.
> ÚB: So you imagine that they will come to you and outsource the work to you?
> A-LB: We have a couple of strategies right now. We are doing one big marketing effort together with the University of Linköping because they have a sort of automatic extraction programme that could be a start, just to find out the terms, and then we could continue from then. So that is one thing. Then we are taking part now this autumn in some conferences where we will talk about the paragraph, and we have also some information about the paragraph on our website, and we say that if you

want more information about how this could be dealt with in concrete terms, come to us and we will tell you. (Bucher)

In general training work, the opportunity was seen to reach out to new groups.

> More terminologists are needed to bridge gaps in the contemporary information society! Training in terminology is therefore important. Training also allows certification and therefore quality control of terminological work. Without proper and recognized training programmes anyone can claim to use "terminologist" as a title. (Bucher 2007, 47)

> ÚB: You have a broad range of courses available depending on who your target group are, and you've trained private companies and public groups and students and the only area that seems to be maybe slightly less is journalists and the media but that's because they're not as interested...
>
> HN: And we didn't quite frankly try very hard to target them.
>
> KH: But they don't come by themselves
>
> HN: But we could try them, both in the business university and... it's just a matter of finding.. I have tried for legal students, law student, but I haven't succeeded yet. I have tried. ... (Hallberg, Nilsson)

> ÚB: The training department of TNC, how effective do you think it is, or how good is it - what's good and what could be improved?
>
> KH: Well we have a discussion right now, how do you attract more people, of course, and so it's a constant discussion, how can we improve, because we're not trained trainers, we're not that much trained trainers. (Hallberg, Nilsson)

In an ideal world, interviewees felt, there would be much more terminology training and work in Sweden, and TNC would act as the coordinators.

> And [what would be the best for Sweden's purposes] would also be to have courses in all training programmes, no matter what subject. Technology, science, linguistics. To have one module of terminology so that everyone that comes out from university has a higher level of terminological awareness to start with… I think you have to start with the students and I think that would result in much more terminology work. And all the time TNC would still have a central role to give this information, to be a little bit ahead, to have an overview, to support, to take part in the national standardisation. You can't expect that from every single subject field. They have enough to do to deal with their own problems. We should be the one knowing a lot about everything. (Bucher)

> ÚB: So what should TNC's role be in that ideal situation? What the work here be?

A-LB: It would…I think it would be more or less the same as now but to greater amounts, more of everything, more teaching, training, more projects that we are involved in, more drafting of reports. (Bucher)

There are also research opportunities for students, using TNC's work and material.

I think it would be very good, very interesting and could be used for many reasons if [implantation studies] could be done systematically every time. I don't know by what method we could do it, but that could also be useful to find out maybe an evaluation method maybe if we had the resources… I think it would be good if we could have the resources or even… that would be something for students to research a project for a thesis to see in and around a specific area what happened to our recommendations. (Bucher)

A-LB: I think [academic interest in practical current work in terminology] should be improved. I think they [PhD students in the field of LSP] should use our experience, use our raw material or use our different working documents, see the stages of original material that we use, our excerpts for example, back to the final glossary.

ÚB: There's certainly room for research there.

A-LB: Yes. And why did we do this, change the definition from this to that, I think that is very interesting and I think it is a pity it isn't asked for or looked into. I would say so. (Bucher)

The methods here, I think we could learn more about exceptions, extraction, automatic extraction, term extraction of course would be great to work a bit more and I think to get their assistance, a couple of years ago there weren't many systems that were really working well because they were not maybe based on terminological principle and they were just extracting whatever... it was just too much work. And of course if we could get access to more corpora and LSP corpora. (Hallberg)

In general, it was felt that there is an opportunity for more visibility for terminology work.

We, all of us terminologists, must strive constantly to make visible how our work benefits society, we must spread the word, provide training and market ourselves, at the very same time as we sort out concepts, write definitions and recommend terms. (Bucher 2007, 47)

ÚB: And what about the TNC website, how important is that as a marketing tool?

HN: More and more, I think. And I think we could use much more of it than we do, and it's not that modern, in a way, it's in a way decisively archaic, but for a reason - to be very clear and nothing fuzzy. But we could of course be using more of the latest technology, more of semantic web, but we're thinking now more of doing that with the national term bank, how could we adapt, creating interfaces with people at their

> websites instead of focusing on your own. Getting your website on other people's. (Nilsson)

> ÚB: And how high is that in your list of priorities, how high is that in TNC's - getting out there and getting in the media and getting the terms used.

> HN: It hasn't been but it will more and more because we try more and more, but it's not on the top because since we are too few to have a marketing department. But then again you have to do it - if you don't do it, nothing will [happen]. There used to be a tendency of 'we will get things, people will contact us' and I think that's changing. We have to come to them now. (Nilsson)

One external commentator suggested that more cooperation and more funding would be a good thing.

> My solution? More public funding for terminology projects, and more cooperation between terminology initiating parties: TNC with its terminological skills, language policy bodies like Språkrådet [the Language Council], and trade organizations who see the needs of terminological infrastructure. (Karlsson email)

3.4   What are the threats?

One of the threats to TNC, it seems, is a lack of understanding of or interest in terminology among the 'target groups'.

> I do think that we have strength and we have a lot of things that could be useful for linguists or researchers in terminology but the problem is that most people, most linguists aren't really very interested in LSP; and we don't have LSP or terminology research - it's not known as an academic subject, it's not known, it's something quite dry which all of the dry engineers are doing, which is... so it's not [considered] very fun, you know. So there we have work to do and it's difficult sometimes to get it recognised that everyone who is in a profession has their own language and that they can do something about it, not anyone else has the right to do it, but it's up to them. I think that putting the main responsibility on the language user and even if you are an engineer you can do something about your language, get them to learn that this is important, like scientists are, they should not let the linguists touch their language; they should have their own and they decide what they want to use for terms. (Hallberg)

There is also a growing competition in similar areas which, coupled with the economic downturn, means that TNC has to actively look for work.

> ÚB: The impression I got in speaking to people was that - and I don't know if it's right - that you're here and if people need you they'll find you and they'll come to you, and if they need glossaries they'll come to you.

> HN: For me it's not enough anymore, because competition is growing and [others] do fiercer campaigns, they do published catalogues and so on and people go with them. (Nilsson)

ÚB: A lot of your terminology work and a lot of your training work seems to be on the basis of demand, so it seems to be that people come to you and ask for things rather than you going out and offering things.

KH: That's true, it's been so, we've managed to gain a living from that, but I think that we should and we do discuss how should we approach new areas and how can we.. We need to do that.

HN: We have to change.

ÚB: Is it that you have plenty to do and you don't need to go out…

KH: Well now we need to go. There has been a bit of a change in the last 6 months. (Hallberg, Nilsson)

We're turning into the company that we are now, not only the state-funded organisation but the company, and we need to sell courses. (Nilsson)

Field Procedures

Data collection

The information needed was initially sought in the literature published by and about TNC. Data was generated in discussion with interviewees.

As well as TNC staff (nominated by TNC), interviews were sought with external commentators who work with TNC or TNC's products, on advice from TNC staff and other correspondents.

Interview methodology

A list of interviews can be found on page 138. A short description of the thesis project and an outline of the items for discussion was sent to each interviewee about a week before the interview.

The purpose of the interview and the research aims were explained to interviewees, and they were asked to sign a consent form.

The interviews themselves were semi-structured, based on the list of questions. At the end of the interviews, participants were asked if they had anything else to add, and whether any important details had been omitted. The questions for external interviewees (O. Josephson, S. Testi, O. Karlsson) focused on evaluation. Because a meeting with O. Karlsson could not be arranged, he answered a list of questions by email instead.

All interviews were recorded using a small handheld Dictaphone and saved in MP3 format. All interviews were transcribed and a copy of the full transcript kept securely.

3.5   Processing of material – coding and analysis

The interviews were transcribed using F4 software and checked. They were then coded according to the questions using Nvivo software.

The finished report was sent to external interviewees in December 2009 and they were invited to make corrections. None were received. The report was then sent to TNC in January 2010, with a list of additional questions.

The questions were answered, and TNC reviewed the case report. The revised report was received in April 2010, with some changes made and comments added. Material (from the answers to the list of questions) was added, and all TNC's changes were accepted.

A final version of the case report was sent to TNC on 15 June 2010.

Schedule of data collection activities

Date	Type	Location	Participant(s)	Length (min)	Language	Record kept	Consent form	Key topics
29.05.08	Email		Anna Lena Bucher		English	Saved		Term acceptance
25.08.09	Interview	TNC offices	Anna Lena Bucher, Katja Hallberg (first 10 minutes)	50	English	Recorded and transcribed	Full	Example of concept work, planning, organisational structure, national networks, international networks.
25.08.10	Interview	TNC offices	Katja Hallberg, Henrik Nilsson	104	English	Recorded and transcribed	Full	Training activities, termbank editing decisions.
26.08.09	Interview	Stockholm University, Dept of Nordic Languages	Olle Josephson	22	English	Recorded and transcribed	Full	Different authorities working with Swedish, gaps in the system, TNC's structure (as private company), the media.
26.08.09	Interview	TNC offices	Sofie Waldén, Interviewee A	38	English	Recorded and transcribed	Full (Sofie), limited (Interviewee A)[6]	Query service, subscription system, stages of term research
27.08.09	Interview	TNC offices	Henrik Nilsson	59	English	Recorded and transcribed	Full	Marketing of TNC, marketing of terminology, target groups
27.08.09	Interview	TNC offices	Peter Svanberg	20	English	Recorded and transcribed	limited to PhD	Technical systems, Rikstermbanken
27.08.0	Intervie	TNC	Katja	52	English	Recorded and	Full	Research methods,

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[6] 'I do not wish my name to be used or cited, or my identity otherwise disclosed, in the PhD research or in future publication.'

Date	Type	Location	Participant(s)	Length (min)	Language	Record kept	Consent form	Key topics
9	w	offices	Hallberg			transcribed		Nordterm, ISO
28.08.09	Interview	TNC offices	Anna-Lena Bucher	30	English	Recorded and transcribed	Full	Strengths and weaknesses of TNC model, differences from other organisations, evaluation and modernisation
21.12.09	Email		Ola Karlsson		English	Saved		Terminology and the media

Interviewees

Each of the interviewees was asked to give his or her name and a description of his or her position.

My name is **Anna-Lena Bucher** and I'm managing director of TNC and I have been so since 2000, but I have worked as a terminologist before that since 1973, here at TNC. And now I am mostly doing managing, marketing, administrative work, but I give presentations on terminology and I try to do as much terminology work as I can fit in, to keep up; I think it is important also because I want to hear about and understand the current problems that our customers have. Of course I also read a lot what is written about terminology in other parts of the world.

My name is **Sofie Waldén** and I'm a terminologist, like everybody else.

And I'm **Interviewee A** and I'm an assistant terminologist. [Anna-Lena: This means that she had only been employed for less than two years.]

My name is **Katja Hallberg**, and I've worked here since 1992, seventeen years, and I am a trained translator, well, I haven't worked much as a translator but I am responsible more or less for the translation queries and the translation problems that arise in relation to terminology and I am especially involved in the training of translators in the subject of terminology. I was also head of the project that TNC had for a couple of years, over five years, for the completion of the European Term bank (Eurodicautom); I was project manager in four out of five of those projects. I work with almost everything that comes into hand.

Henrik Nilsson, born in 1970, works as a terminologist at the Swedish Centre for Terminology (Terminologicentrum TNC) since 1997. As such he has worked with Eurodicautom and he has administered and participated in various terminology-related MLIS projects (Nordterm-Net and WebIT/EFCOT). He has presented papers at several occasions, e.g. the EAFT and TKE conferences and summits. He participated in one of the working groups during the development of the IATE database of the European Commission, a software he later evaluated within the national project preparing a national terminology infrastructure in Sweden (named TISS). Within TNC, he takes part in various terminology projects and he directs the joint group for terminology of the planning and building sector. Currently he is one of the content managers for the national term bank, Rikstermbanken. He is also responsible for marketing activities, the web editor of TNC's website, and one of those at TNC teaching terminology to various groups (students at universities, employees at various private companies and public

authorities). On a national level, he is the secretary of two joint groups for terminology: In 1999, the Joint Group for Swedish Life Sciences Terminology (Svenska biotermgruppen) and the Joint Group for Swedish Terminology of Built Environment (Svensk termgruppen för byggd miljö). He was part of the board of the EAFT for six years and he has visited a large number of European terminology institutions. He holds a diploma in communication science, English and French and is also a trained teacher of English.

My name is **Olle Josephson** and since the first of January 2009 I am associate professor at the Department of Scandinavian Language at the University of Stockholm. But I think that in this particular context it's more interesting to mention that I was the director of the Swedish Language Council from the year 2000 until the end of 2008 and in that position I collaborated a lot with TNC, the terminological institution of Sweden; I was also a member of the board of TNC from I think the beginning of 2001 until 2007. I was a member of that board as a sort of linguistic expert. Other members of that board were experts in running enterprises.

My name is **Stefano Testi** and I am a terminologist at the Swedish National Board of Health and Welfare; and ten years ago I worked one year at TNC and then from 2001 I work here at the national board and we have a close collaboration with TNC, we use their method specialists, they help us if we have problems, they can do some kind of the terminology work if we are not... if there are not enough people here.

I'm **Peter Svanberg**, I have been working earlier at the Royal Institute of Technology in Stockholm with computers, computer error station and problem-solving and helpdesk kind of things, but on the back side. And also quite a lot with information about how to use the systems and so on. But also always having an interest in language aspects and I was involved in one of these network groups, I suppose the first, the Datatermgruppen. I was asked to join that group in '96. And that was very exciting, very interesting for me, so then I learned more and more about terminology and find it very interesting. And then three years ago I got the opportunity to start working here instead. And I work with the technical side and have been much involved in this Rikstermbanken. But also other projects with computing aspects.

Ola Karlsson works on language accuracy issues and IT-related language planning. He is editor of the Language Council's website and also of the website Språkteknologi.se, which informs the wider public about language technology: language controls, machine translation, speech synthesis, etc. He has particularly devoted himself to computer terms and to evaluating language controls. He is also an IT manager at the Language Council. Ola is the editor of the

"Swedish writing rules" and sometimes lectures on writing rules and language accuracy. He is a language consultant. He began working for the Swedish Language Council in 1996 and transferred to the new Language Council in 2006. (source: http://www.sprakradet.se/2373, 29.12.09)

Organisational chart

Note from AL Bucher: TNC is a flat organisation. The persons working with information and documentation are also part-time terminologists. One of them has a technical background, the other one, the librarian, has a background in arts, social sciences and technology. The managing director, who has a background in linguistics and arts, is also working as a part-time terminologist.
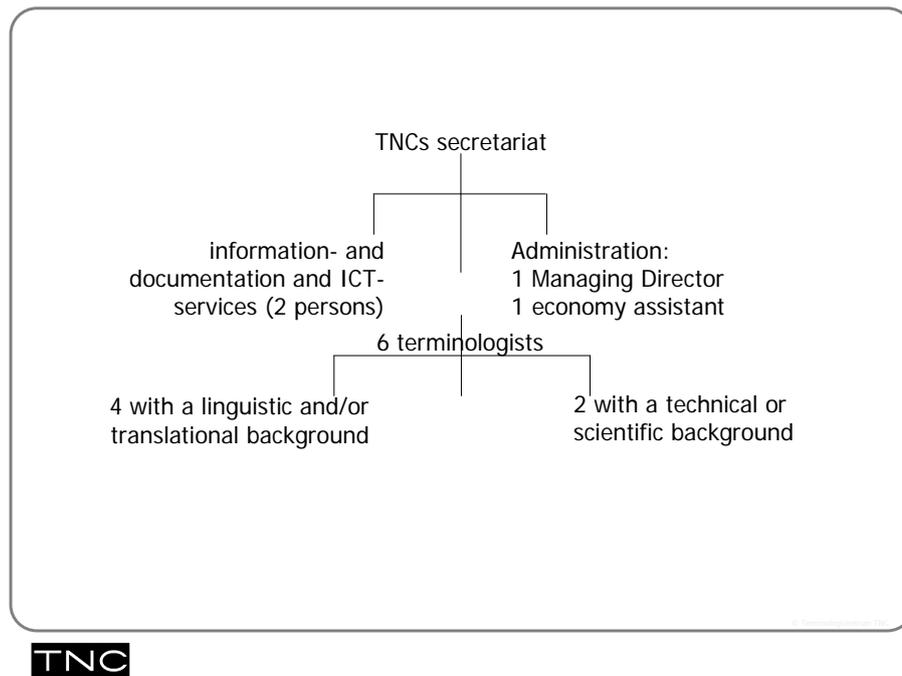
Figure 1: Organisational Chart for TNC (Source: A-L Bucher)

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[7] A-L Bucher: I gave a presentation in Lithuania in 2004, but wrote an article in their journal Terminolodžija in 2007, based on my presentation. I have changed the reference above accordingly.