Terminological procedures

Topic	**Terminological procedures**
Purpose of the data sheet	Present the terminological procedures proposed in the Praxeme open method
Key words	intentional aspect, terminology, definition, vocabulary, dictionary, Praxeme, method, procedure

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[1] See http://www.conix.fr/.

Methodological reminders

In the context of the Praxeme method, a *procedure* is "a way of doing something, an operating mode for executing a task"[2]. It is therefore a stipulation on an individual level, in contrast to a *process*, which is a methodological response on a collective level.

The procedure sheets do not refer to possible processes in which these procedures may play a role, in order to facilitate their reuse in several contexts.

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		Joanne TOWARD	Translation
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[2] Cf. Thesaurus section on the *Praxeme Institute* website: http://wiki.praxeme.org/index.php?n=Thesaurus.Procedure.

[3] See the philosophy and license detail at: http://creativecommons.org/.

1. Presentation of the terminological procedures

1.1 Objective

Language is an essential tool in all social activity, both in business life and in our dealings with general and local government. There are, however, some flaws in this tool:

- Natural language, whatever the language, suffers from various limitations: ambiguities, unexpected connotations, lack of terms to refer to certain concepts[4], etc.
- Professional life is forever twisting language to bend it to its use. The result of which is jargon and other perversions of language, fueled by autocentric tropism[5].

These flaws lead to harmful effects, increased communication costs, even dramatic failures.

In most investments, when producing something new (a new organization, an operative range, an IT solution, a new product, etc.), managers seek to reduce the risks linked to poor understanding or inappropriate communication. Glossaries that try to create a base for mutual understanding can be found in enterprises.

The terminological procedures that Praxeme proposes systemize these efforts. They take advantage of terminology as a science and are an effort to professionalize practices linked to gathering, defining and presenting enterprise terminology.

1.2 Positioning in the method

The Praxeme method places terminology in the intentional aspect, of which one of the four facets is "Vocabulary"[6]. This position may surprise, given that this framework also identifies a "semantic" aspect and that, in everyday use, vocabulary is spontaneously associated with semantics. However, in Praxeme, the term "semantic" is used to refer to this enterprise aspect that isolates its essential knowledge, the "business fundamentals", ignoring organizational and technical circumstances. *Concepts* therefore make up the substance of the semantic aspect. On the contrary, enterprise terminology is made up of *terms*. The nuance is important and its consequences can be seen in practice. In particular, terminology finds a place for all the terms in use, even imprecise or deviant ones when compared with natural language, whereas a semantic model will seek economy and genericity and will not be able to show such tolerance.

In addition to these details on substance, a decisive argument calls for placing terminology in the intentional aspect of the representation framework: that of how the "enterprise description repository"[7] is structured and functions. This repository contains everything that is said about the enterprise. The Enterprise System Topology is the representation framework that imposes a first-level of structure to this mass of information and decisions.

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[4] This is something regularly experienced by semantic modelers: a concept is a necessary part of their model, occupying a specific node in a concept network; they turn to language and find it powerless to name this concept. This is how we see unlikely expressions appear in models, such as "instance of life" (a moment for a human) or "instance of training unit" (intermediary between the actual session delivered and the training session described in the training model).

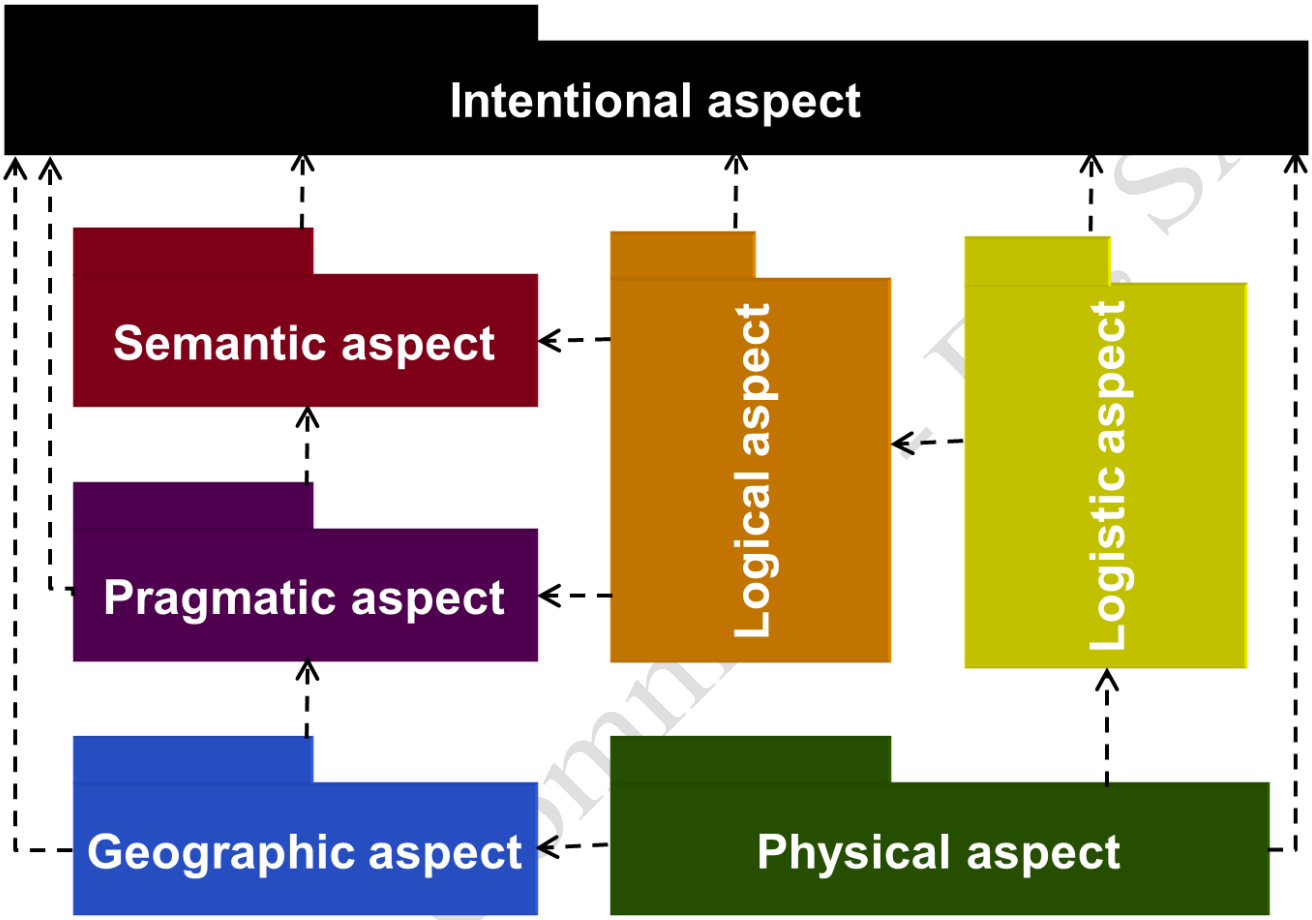
[5] Practically no profession escapes this trend for naming things, not for what they are, but for how they are perceived by the enterprise. Notably, in administrative activities (not just in the public sector), the notion of "file" tends to obliterate the "real" objects. If the administrator says the word "claim", he or she is not thinking of what this word means to the insured person (even less so to the connotations the latter perceives), but to a set of documents and conditions that punctuate its procedure. Another frequently observed phenomenon confuses the object qualifiers: unsuitable adjectives or expressions are applied to objects. For example, "authorized time period" will be used as a state to qualify the applicant and not the application itself. Worse still, we may say "eliminate person"… forgetting that this may be a criminal act.

[6] See the General guide, ref. "PxMDS-01" (Praxeme version 2). The terms "facet" and "aspect" have a precise usage in the context of the methodology. Their canonic definition is given in the Praxeme Thesaurus (http://wiki.praxeme.org/index.php?n=Thesaurus.Thesaurus). The intentional aspect is the subject of the methodological guide, PxPRD-10, "Intentional aspect approach".

[7] The notion is introduced in the general guide (op. cit.). It is a modeling base used to capitalize on the specific enterprise knowledge, in all its aspects.

This initial structuring effort continues right down to the final level of detail provided by the metamodel. Work on the architecture will still have to be carried out, in each enterprise, to complete this theoretical effort. The whole complies with architectural requirements that are justified by the desire to master the mass of information. Thus, the Enterprise System Topology reserves a single aspect towards which all other aspects are authorized to refer to, as the figure below shows.

Figure 14_1. The Enterprise System Topology (as a package diagram)



This common focus is the intentional aspect. The reason is as follows: any element of intent is likely to justify a modeling element placed in any one of the other aspects. The mechanism is obvious with regard to terms. The terms in a dictionary can be reused and formalized as a semantic class (a concept), or as a role, or even a technical measure; in short: by any kind of modeling element belonging to any one of the aspects. It may so happen that the same term radiates over several aspects. For example, the term "process" is naturally adopted by the pragmatic aspect, defined in the representation framework, but it can also refer to a design process of the semantic aspect. We can even imagine its reification (its representation by a class). There are also certain specialized meanings of the term in the technical aspects (logistics and physical). As a consequence, the terms must be presented in the only aspect that authorizes references from all the others. It can only be the intentional aspect[8].

1.3 Seven procedures

The method proposes modes of operating, called "procedure sheets" that can be applied to relatively basic actions. The idea is, that with one or two hours of reading, a practitioner can assimilate the best practices before starting a particular task. To give you a rough idea, the duration of a task is several days. At least that is what

[8] The reader will please forgive this purely methodological discussion. It was deemed necessary in order to dispel a frequent source of confusion, born of the hasty use of the term "semantic". The full explanation of the Enterprise System Topology can be found in the guide PxPRD-01.

the authors of the method have in mind when they identify the procedures. When tasks are allocated, a manager will match the procedure sheet to the description of the task. The employee will spend one or two hours reading this sheet before beginning the task. As far as possible, procedures leverage advances in the scientific field and make them available to enterprises, with care taken about their applicability.

The method proposes seven terminological procedures. They are summarized in the table below.

Figure 14_2. List of terminological procedures

Index	Title	Objective	Cardinality
PxPCD-14	Terminological procedures	Present the terminological procedures proposed in the Praxeme open method	
PxPCD-14a	Define a term or expression	Produce a definition of a given term, in as concise, clear and efficient a manner as possible, to make communication and learning easier	1
PxPCD-14b	Terminology harvesting	Build up all the terms covering a domain of knowledge or practices	*
PxPCD-14c	Analyze terminological usages	Know the usages of a term and link them to situations	1
PxPCD-14d	Build a reference dictionary	Constitute a coherent set of definitions	*
PxPCD-14e	Project a term into the enterprise models	Give a formal expression to the notions referred to by the terms	1
PxPCD-14f	Build a thesaurus	Link the terms and publish the thesaurus	*
PxPCD-14g	Turn to modeling to clarify the terminology	Use modeling techniques to better define the terms	1

The "Cardinality" column indicates the reach of the procedure:

- '1' means that the procedure applies to a single term;
- '*' indicates that the procedure applies to a set of terms.

The main procedures, those that are required in most missions, are, without doubt:

1. "Define a term or expression", the art of the definition not being as intuitive as one might think;
2. "Build a thesaurus", an action that produces a valuable deliverable from both a practical and a communication point of view, with minimum effort.

The other procedures in the list complete the set of measures and apply in specific circumstances.

"Terminology harvesting[9]" prepares the groundwork for the systematic job of collecting terminology from a domain. It applies to missions whose central objective concerns terminology.

"Analyze terminological usages" adds an approach of observing the language in real life. This procedure can be considered as a preliminary to the following ones.

"Build a reference dictionary" is based on the definition procedure and benefits from both the "terminology harvesting" and "analyze…" procedures. It slots the definitions into an overall view and adopts a resolute design posture. Its value can be particularly appreciated when convergence is at stake within a federation of organizations.

"Project a term…" is the operation that consists in linking the term to a modeling element that formally expresses it. This element belongs to one of the aspects of the Enterprise System Topology, other than the intentional aspect.

[9] This is the term used by terminologists.

"Build a thesaurus" produces the deliverable that can be published. The thesaurus is more than a dictionary and requires additional work to link the terms to each other and to represent the networks of terms.

"Turn to modeling to clarify the terminology" comes into play selectively, in addition to the definition procedure, in difficult cases.

2. Terminological procedures: circumstances of use

2.1 Situations

Due to the omnipresence of language in human activities, the need to clarify terms is more or less necessary everywhere, in all professions and at any time. The need is all the more pressing when circumstances connect people from different cognitive universes. The case arises in most projects, when we need to understand practices in order to tool or to improve them. All the more so, transformation actions raise difficulties in mastering language and design. In such situations, experience has demonstrated the usefulness of allocating part of the budget to elucidate the notions and dispel confusion. Even if this effort does not result in products that were initially requested, it will always produce recognized value and will protect any subsequent work from nasty surprises. Mastering the vocabulary is always a precondition to controlling projects.

The method recommends systematically planning for this terminological clarification work. Since the beginning of the 20th century, we have been accustomed to this requirement through ISO-type technical normalization. Praxeme encourages us to deliver the results of this effort in the form of a thesaurus. This measure fits into the enterprise description repository and will benefit from its life cycle, in the long term.

The content of the thesaurus is then exploited through the modeling of the Enterprise System.

The table below indicates some specific situations in which the terminological procedures find a use.

Tableau 14_3. Some situations of use in which the terminological approach applies

Situation	Description	Comment
Exploring a business domain	Identification of the concepts characteristic of a domain and definitions	Essential prior to any transformation or significant intervention
Establishing a "common language"	Reconciliation work between partially rival vocabularies	To make the representations of several organizational entities converge
Innovation	Concept analysis with a view to identifying new interpretations and innovation opportunities. Harmonizing concepts (reducing two concepts to a single close concept…).	We have to return to the source of our concepts, to bring out the main points by separating determinations[10].
Developing training	Knowledge capture	The pedagogic concern leads us to draw up minimal definitions, both exact and easy to understand. Essential / non-essential character[11].
Application to instrumental vocabulary	Definition of the metalanguage used in a discipline	This is what we do when we set concepts such as process or service. This is then methodology work.

[10] For example, the notion of client and its neighboring notions (prospect…) are worth analyzing. We may be able to deduce new behaviors, even new sales approaches, from new definitions of these fundamental notions.

[11] The essential characteristics help determine a definition's minimal determiners.

2.2 Posture

Praxeme distinguishes between the posture of analysis and that of design, which apply to all aspects of the enterprise[12].

The terminological procedures come into play in both cases:

1. In an analysis posture, contrary to the design posture, the terminologist does not modify the semantic content in any way, focusing instead primarily on the concepts – sometimes latent or implicit – that are revealed by linguistic usages[13].
2. When adopting the design posture, the terminologist, on the contrary, proposes definitions, either to help with the convergence or to simplify and make the definition more generic and natural. In this case, the terminologist takes the position of the term into account in a wider network. This role is allocated to him/her when new vocabulary has to be built, for example through a "common language" or a reference dictionary.

The terminologist adopts one posture or another at different times. In any case, it is done in full knowledge of the facts, and this choice must be clear for all those participating in the action. Indeed, the consequences and attitudes greatly depend on the intention that presides over the choice of posture.

The analysis posture is characterized by a great deal of tolerance and the valorization of the glossaries that will have been collected. The key success factor lies in the quality of the readiness to listen.

In design, the situation is different: terminologists can move away from common uses, in order to improve the definition and increase the consistency of the overall terminology. This effort risks leading them to propose radical changes, in which case it is important that they measure the receptiveness of their audience. They should seek legitimacy by basing themselves on indisputable sources, typically standardized vocabularies.

To summarize, the prerequisite for implementing this procedure is the gathering of the available definitions for the term, in the field of activity. If the definition is part of a terminological design effort, then we have to verify that there is indeed a mandate, or at least an expectation, for a renewed vocabulary.

3. Specialized vocabulary used in terminological procedures

This chapter introduces the vocabulary that is used in the procedure sheets of this group. The objective here is to provide practitioners with the minimum knowledge required to enable them to better untangle the vocabulary. For a more in-depth look, please see the bibliography listed in the annexes or the many works available on the subject.

3.1 Term, expression, lexeme, denomination, denotation

a. Term as a sign

Term: "Unit formed from a linguistic sign (called "designation") which refers to a concept."[14]

Like any sign[15], the term links two sides:

- one physical, the word, the linguistic unit that is the support for the meaning;
- the other conceptual, the content of the meaning.

Denotation is the fact that the word (in general, the sign) refers directly to the concept or object. It *designates* it. Denotation contrasts with connotation (see below regarding the uses). Even if denotation provides the main method of analysis that terminologists base themselves on, this distinction remains essential in all terminology work. How one "defines a term" takes this into account.

[12] See the White paper, ref. "SLB-02" and the Praxeme Thesaurus.

[13] In linguistic meaning, semantic content is specific to a given language. It can, nevertheless, be deviated, altered, specialized… in a given professional context. This phenomenon is known as jargon.

[14] [DEPECKER] p. 182. See the bibliography p. 15.

[15] [ECO].

b. Term in terminology

Term: "Name corresponding to a notion within a structured set (a terminology)"[16]

This definition from the *Grand Robert* dictionary has the advantage of linking the notion of term to the wider approach of terminological development. The term appears as an elementary unit of a construct: the system of terms, glossary, dictionary and thesaurus.

Lexeme: "basic unit of meaning belonging to the lexicon".

The lexeme, the entry to terminology, can therefore either be one word or a set of words, that is to say a term or an expression. However, not all words are called upon to be part of the terminology, at least in the meaning of the product of "enterprise terminology" or "reference dictionary". For example, the expression "framework of reference" is a lexeme and will be an entry in the methodological dictionary because it designates a very specific concept. "Framework" and "reference" are equally lexemes that we need to study. On the other hand, "of", although a word, is not considered as a lexeme. Indeed, from a professional terminology point of view, it does not carry any meaning, outside of its linking function in expressions. In the same way, in "procedures and methods", "and" is not considered as a lexeme, in contrast to the other two words and to the expression itself.

Moreover, the terminological effort always comes up against a limit: "irreducible" terms are considered as basic data that do not need to be defined in the enterprise dictionary and should be taken as in common use (example: "action", "object", "intention"…).

c. Groups of terms

Expression: assembly of terms, considered as a unique sign, formed to designate a concept.

A group of terms can, in turn, become a term.

More often than not, the expression is created when there is no simple term to designate the concept. This happens when a new concept emerges.

Expressions specific to a domain of study can absolutely enter into the terminology of that domain.

There is no shortage of examples: "IT city planning", "enterprise architecture", "non-compete clause"…

d. In practice

Please note that, not all words, nor all kinds of words, are given to us to be dealt with in our approach to vocabulary. It is mainly those that designate real-world objects, abstract objects (for example, "contract", "invoice", "campaign") or operative concepts (for example, "process", "signature"). These terms fall within the category of "**denominations**", which excludes elements such as articles, prepositions, verbs, adverbs…

It is good, sometimes, to include certain verbs and adjectives that accompany these denominations in the enterprise terminology. The perception of reality in terms of action is such that terminology would not know how to remove verbs. They name the activities, processes, objectives, responsibilities, etc. At a finer level of detail, many modeling elements are designated by verbs, like, for example, the operations performed on semantic classes or software. We therefore have to provide definitions of these verbs.

[16] [ROBERT]

Figure 14_4. Examples of French terms and expressions that qualify states

Comment on the diagram: This diagram gathers the expressions that are encountered during the analysis of a registration process for a course (academic management domain)[17]. They all designate states. In current usage, and under the influence of the software used, these states are related to the applicant. However, taking a closer look, we can see that the expressions qualify different objects. One obvious example is the application for advanced standing (asking for/applying for recognition of one's qualifications). By appearing in the semantic model, the notion of study contract will help sort out these collected states. Yet, this notion of study contract is never named in current practices. It illustrates the effect of terminological design. In this example, without being named, the concept exists even so and is present in the business actors' minds. This explains their receptiveness when presented with this new expression.

3.2 Seme, lexical semantics, componential analysis

Seme: unit of meaning.

We also speak of a **semantic feature**[18] or element of meaning.

One term can carry – and often does – several units of meaning.

Semic analysis or componential analysis: analysis of the meaning of a sign, which consists in identifying and enumerating all the semes that it is composed of[19].

To qualify the semes, we distinguish between:

- denotative (that which the seme designates) / connotative (that which it may evoke);
- generic (that which belongs to one type of thing, to the superior concept) / specific (that which characterizes the concept).

Semantic field: "set of meanings of a term or an expression".

3.3 Usage, connotation

Each term lends itself to multiple usages, is the focus of interests and submits to being manipulated in different ways. These phenomena end up modifying the semantic content of the term, giving more emphasis to one or other of the semes carried by the term, sometimes even reversing the meaning[20].

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[17] Illustration taken from a piece of work led by the *Haute École Pédagogique Vaud*.

[18] [DUCROT-TODOROV] p. 339.

[19] A very good example of componential analysis is given, for example, in [SCHOTT] p. 19 et seq.

[20] A recent example of such a reversal can be found in the French usage of the English term "people" to designate celebrities. Whereas the term "people" means, in its normal usage, human beings in general (from the Latin "*populus*"

In the context of enterprise terminology, we take an interest in the usages that can be made of a single term in different communities. Identifying connotations, connotative semes, is one way of reconciling concurrent definitions that come from different usages.

3.4 Terminology

Terminology = 1° "Set of terms belonging to an activity or knowledge domain and that corresponds to a system of notions"[21]; 2° "discipline that deals with scientific or technical vocabularies"[22].

Enterprise terminology: "Terminology (in meaning 1 above) used in an enterprise".

It is difficult to separate the definition work from the rest of the terminological work. Indeed, to define also consists – and principally consists – of positioning the term in a set of terms with which it has conceptual relations. This is what leads us to the use of tools to represent the relations between terms, without which the art of the definition would miss its goal. The following definitions thus complete the terminology used in the procedure "Define a term or expression".

Semantic network: "set of linked terms and the relations they maintain".

Terminological field: "set of terms whose concepts are closely related."[23]

The sheet PxPCD-14a contains the definitions of "define" and "describe".

4. Terminology skills

Terminology is a discipline in its own right, part of the linguistics domain and taught at university. Its specialists – terminologists – are, of course, best placed to guide or to carry out terminological clarification work in the enterprise. Note that, in addition to terminology proper, other questions related to language arise for enterprises: in particular, the "linguistic policy of the enterprise".

Nevertheless, terminology work is not always isolated and allocated to terminologists. Practitioners from different disciplines take responsibility for part of it. More often than not, the effort is an isolated one, in response to a need within the context of a project. In this case, the practitioner may come from any one discipline – analysis, organization, business architecture, IT… The procedure sheets are written with him/her in mind.

It is always better to include this effort in a broader perspective, with a "system" reach. Instead of delivering what is bound to be a glossary limited to the scope of the project, the solution consists in adding one's content to the common enterprise description repository. In this way, the agreed investment benefits from better visibility. The enterprise terminology is built project after project. Of course, this virtuous movement requires a minimum of coordination. The business architect takes on this role.

Business architecture is also responsible for structuring the intentional aspect. Usually – and under the influence of existing modeling tools –, terminology is a separate section, next to objectives, requirements and other elements of intent. This postulate can be questioned. In the same way, we need to think about the internal structure of the enterprise terminology. These questions pertain to business architecture.

5. Results produced

The method recommends fixing the enterprise terminology in the form of a thesaurus, which links the terms among themselves and provides the definitions. The document PxPCD-14f details how this is done.

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which gave us "populace"), the celebrity press (or *la presse "people"* in French) is primarily interested in the stars, which has led to the latter now being named by this term. In French, "people" now has an accepted meaning that is the exact opposite of its original one.

[21] [ROBERT], second of three entries listed under "terminology".

[22] Taken from the article "*Terminologie*" from the French *Encyclopaedia Universalis* (2004).

[23] [DEPECKER] p. 181.

To a certain extent, the intentional aspect and, more specifically, the vocabulary, create the "security airlock" towards the models. It gathers the intuitive and natural perception of the enterprise and shapes it for future use. Thus, in the long term, many contributors ask themselves how a given subject is dealt with in the Enterprise System and where in the description repository they can find the answer. They look for the entry in the thesaurus. If the work has been done well, the lexeme has been related to the modeling element that formally recreates the notion.

This mechanism offers the only way of controlling, in the long term, the mass of information and decisions represented by the enterprise description repository (EDR).

In conclusion, the thesaurus is not only the form in which we can gather and publish the enterprise terminology; it is also one of the essential means of exploiting the EDR and maintaining the coherence of the transformation program.

6. Tooling the terminology

The question of tooling is covered in the procedures from this group. In general, the requirements that we seek to satisfy include:

- keeping the terms and their documentation (distinguishing between several sections: definition, discussion, description, sources…);
- structuring the terminology (several dictionaries, their relations, the possibility of building sets which mix terms with other the elements of intent);
- functionalities (sorting terms into alphabetical order, detecting duplications, tracking versions…);
- graphic representation of lexical networks (that is to say terminological diagrams attached to terms or sets of terms, with the standard terminological relations);
- connecting the terms and elements of the models (in the other aspects)[24], acting as a "security airlock";
- publication (as documents or html pages; navigation of diagrams…);
- assimilating the corpus (from the available documentation, feeding text elements into the tool).

[24] These elements of intent (values, objectives, indicators, rules, and requirements) must, themselves, be able to refer to the terms. This is how we specify the formulations of intent, by basing them on well-formed definitions.

7. Development of the topic

7.1 Correspondence between other frames of reference

See the norms from the ISO 704 (2000) series: “Terminological work”.

7.2 Practical bibliography

Figure 14_5. Recommended readings

Code used in this document	Title, publication	Author	Comment
[DEPECKER]	*Entre signe et concept – Éléments de terminologie* générale, Presses Sorbonne Nouvelle, 2003	Loïc DEPECKER	
	L’invention de la langue – Le choix des mots nouveaux, Armand Colin - Larousse 2001	Loïc DEPECKER	Fundamental work to know all there is to know about the work of terminologists and terminology commissions
[DUCROT-TODOROV]	*Dictionnaire encyclopédique des sciences du langage* Points Seuil	Oswald DUCROT, Tzvetan TODOROV	
[ECO]	*Le signe* Éditions Labor	Umberto ECO	
[LEMOIGNE]	*La théorie du système général – Théorie de la modélisation*, Puf, 1977, 2ème éd. 1984	Jean-Louis LE MOIGNE	The foundations of our foundations!
[REY]	*Préface du Grand Robert de la langue française, deuxième édition*, 2001	Alain REY	Explaining the work of the lexicographer
[ROBERT]	The *Grand Robert* French dictionary		
[SCHOTT]	*Approches de la linguistique*, Nathan 1994	Véronique SCHOTT-BOURGET	Highly accessible and effective introduction to the domain of linguistics – more wide-ranging than what is covered here
[HOT]	*Handbook of terminology* John Benjamins Publishing Company	Hendrik KOCKAERT, Frieda STEURS et al.	Collective work that takes stock of the discipline
ISO 704	*« Terminology work — Principles and methods » (Third edition, 2009)*	ISO	The reference work for terminologists. It clarifies the notions of object, concept, designation, relations, etc.

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