

# Leveraging Knowledge Understanding in Documents

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**Abstract:** In the past years Knowledge Management has dealt with various aspects of knowledge retention, knowledge sharing and knowledge development. It is agreed that knowledge documentation is essential for all these purposes, in order to enable their re-use. Many books and articles have been written on accessibility of documents, revealing an understanding that knowledge that cannot be accessed cannot be re-used. Most effort has been invested in providing the focused list of relevant documents to the user, while less research has been conducted on how to write the documentation so as to ease its reading, understanding and use. This issue seems to be critical as we notice that existing organizational knowledge is far from being fully utilized: for example, regulations and procedures, including the organization's wisdom, are written; however, recurring faults do occur. People tend not to re-read entire or partial documents, even when the knowledge therein is needed. This paper describes a framework for the document's internal design. The research hypothesis claims that internal design, using the proposed enabling technique, eases understanding and usage of documents. It therefore reduces the knowledge loss. The research methodology implemented was a qualitative method; the strategy chosen was instrumental: multiple case study (Stake, 1995). The research sample included both organizations (public sector) and the public (KM readers), the research instruments consisting of documentation, archival records, interviews, direct-observations, participant-observation and physical artifacts. The findings suggest that internal documentation design eases reading, eases understanding and probably eases use. It therefore leverages knowledge understanding in documents, and reduces knowledge loss. The proposed framework may be useful for a large range of organizational documentation needs, from procedures of work, through SOW's, Engineering Specs, white papers and professional doctrines including organizational knowledge. The framework was designed for organizational Knowledge Management needs, but serves for external rich knowledge documentation as well. It has been used since 2007, in more than fifty cases in five different organizations in Israel.

**Keywords:** knowledge management, documentation, accessibility, regulations, procedures of work.

## 1. Introduction- the need for accessibility

A wise man once said: in the same way that the starvation that concerned the world at the beginning of the 20<sup>th</sup> century has shifted to a concern about obesity, the lack of information and data that occupied us in the sixties has been replaced with a concern about information overflow.

Dalkir in "Knowledge Management in theory and practice" (Dalkir, 2005) speaks about how Knowledge Management started out dealing with the information overload challenge: "The early adopters of KM, large consulting companies that realized that their primary product was knowledge and that they needed to inventory their knowledge stock more effectively, exemplified this step. A great many intranets and internal knowledge management systems were implemented through the first KM generation." (Dalkir, 2005). Dalkir emphasizes the need to enable access to what he calls "information buried in the organization." However, as Dalkir states, these KM systems turned into "information junkyards." Enabling accessibility to knowledge and information is not as simple as one would assume.

Information overload is a known challenge, mentioned in many articles, new and old. Davis, Subramhmanian & Westerberg define the information overload as one of the significant issues connected with explicit knowledge: "Information overload is a constant refrain" (Davis, Subramhmanian & Westerberg, 2005). Already in 1982, the first analysts forecast the coming trend: "The information explosion is about to swamp association executives with more data than they can read and digest, but many are overcoming the problem by setting priorities and establishing systems for handling information" (Vickery, 1982).

*The amount of time spent reworking or re-creating information because it has not been found or worse, going ahead and making decisions based on incomplete information is increasing at an alarming rate. The IDC study estimates that an organization with 1,000 knowledge workers loses a minimum of \$6 million per year in time spent just searching for information. The cost of reworking information because it has not been found cost that organization a further \$12 million a year (Dalkir, 2005).*

Information overload is almost as challenging as missing information. If the information and knowledge are not reached and used, their existence is useless. Accessibility is required in order to enable focused information usage.

## **2. How can accessibility be achieved?**

There are two levels of obtaining eased access to information and knowledge:

- External information design.
- Internal information design.

External information design deals with obtaining access to the document unit, finding the right document and retrieving it. Internal information design deals with finding and retrieving the relevant information and knowledge within the document. The importance of external information design is well understood. The internal information design, however, has not been investigated thoroughly and its importance is just recently starting to be understood. Below are two examples that emphasize the challenge:

- Because of a failure in one of the advanced machines of a medium sized company in Israel, with six factories, the supplier was invited from Europe to check and fix the problem. When he arrived and checked the problem, he was surprised that the engineers in this factory were unaware that the same problem occurred five months before in another of the same company's factories, and that his visit to Israel could have been prevented, saving money and time for all. It turned out that the engineer did check the file system and even found the document in which the problem was described. The document was so lengthy and the engineer so busy that he did not reach the location inside the document that would have enabled him to understand that it dealt with the same problem, and to fix it by himself.
- In a large high-tech industry company in Israel several recurring faults were caused by people who were not working according to correct work procedures. People there, as in many other organizations, did not return to check specific issues in the daily routine, since procedures of work were written in a lengthy and not user-friendly manner.

External information design can be handled by several methods, combining in most cases one or more of the following:

- Repository in which the documents are gathered, categorized by attributes and correspondence values.
- Intranet, portal, site or community of practice including documents and other knowledge items.
- Search engine.
- Navigational tree directing the reader to the relevant information.

Dalkir lists the major KM techniques, tools and technologies. Among the knowledge sharing and dissemination phase he includes "Discussion forums, Groupware, Wikis, Workflow management, Intranets, Extranets, Web servers, browsers, Knowledge repositories and Portals" (Dalkir, 2005). All of these are connected to external information design; none with internal information design. Dalkir does include within his artificial intelligence technologies one relevant technique of internal information design: text analysis- summarization.

Three of the well-known, classic books concentrating on knowledge management implementation include: *If only we knew what we know*, by Carla O'Dell and C. Jackson Grayson, Jr.; *Learning to Fly: Practical Knowledge Management from Leading and Learning Organizations* by Chris Collison and Geoff Parcell; and *Working Knowledge: How Organizations Manage what they Know* by Thomas H. Davenport and Laurence Prusak.

These three books, when dealing with documents, refer to solutions based on external information design. O'Dell and Jackson discuss Knowledge-Enabled Intranets, Lotus Notes and structured document repositories, bringing examples from National Semiconductor, Buckman Laboratories, Sequent Computer Systems, Texas Instruments and The World Bank (O'Dell & Grayson, 1998).

Collison & Parcell discuss Networking and Communities of Practice, bringing examples from British Petroleum (BP). When discussing knowledge capture, they do not refer to the internal information design of the knowledge assets built (Collison & Parcell, 2001).

Davenport and Prusak do discuss the need for knowledge codification, whether as part of an artificial intelligence system (which failed since the knowledge was found to be too subtle and complex to be written into the computer), or as part of a database including structured data. Technologies for Knowledge Management include Web-based systems, Lotus Notes and Broad Knowledge repositories including examples from Hewlett-Packard, British Petroleum, Ernst & Young, Anderson Consulting, Price Waterhouse and Coopers & Lybrand (Davenport & Prusak, 1998).

Davenport & Prusak nonetheless emphasize the need for internal information design:

*Codifying knowledge is an essential step in leveraging its value in the organization. Codification gives permanence to knowledge that may otherwise exist only inside an individual's mind. It represents or embeds knowledge in forms that can be shared, stored, combined, and manipulated in a variety of ways. The challenge is to codify knowledge and still leave its distinctive attributes intact, putting in place codification and structures that can change as rapidly and flexibly as the knowledge itself (Davenport & Prusak, 1998).*

Liew, Foo & Chennupati, in their article "A proposed information environment for enhanced integrated access and value adding to electronic documents" offer a basic framework based on document organization and structuring, including four workspaces: an organizer, a viewer, a structured view, and an explorer (enabling tasks). Their model though is limited to very specific needs and specific technology.

### **3. A framework for internal information design**

This paper describes a framework of organizing the document, preventing the knowledge loss described and enabling the leverage of knowledge understanding. This enabling technique is designed to serve every document written with the basic technology of a word processor, eliminating the need for any high level unique technology.

### **4. Target**

The framework aims for higher utilization of existing information and knowledge in an organization by easing reading understanding and use of knowledge in documents, which represent a major part of the organizational assets.

### **5. Research methodology**

The research method chosen in this research was qualitative. The qualitative method was chosen, two-fold:

- "Qualitative research is a means for exploring and understanding the meanings individuals or groups ascribe to a social or human problem" (Creswell, 2009). Knowledge understanding in documents falls in the category of human phenomena.
- The proposed framework for internal documentation design is innovative. Qualitative research enables the understanding of the phenomena, while further researches may take different forms, analyzing and comparing specific aspects of the understanding described in this pioneer research.

The strategy chosen in this research is Case Study. Case Study strategy, as defined by Stake (Stake, 1994), and quoted in Yossefon (Yossefon, 2001) as dealing with observation on the human activities in a specific place and time. Yossefon also quotes Jarry & Jarry (Jarry & Jarry, 1991) as they claimed that the Case Study enables generalization of the specific case. They define Case Study as research of one example of a phenomenon to be investigated, or as a pattern or sample explaining a more broadened phenomenon, which may be used as examination to a broadened argument. Yin is described as the one who has a major contribution in promoting the Case Study as a logical method and preferred strategy, when conditions and research problems enable using it. Yin defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 2009). The distinctive use of Case Study

arises in this research, out of the desire to understand a complex social phenomenon. Specifically, it is a multiple case study research.

Yin defines, for case studies, five components of a research design are especially important:

- A study's questions.
- Its propositions.
- Its unit(s) of analysis.
- The logic linking the data to the propositions; and
- The criteria for interpreting the findings.

(Yin, 2009).

- The research question: Organizations invest in Knowledge sharing and knowledge databases; yet knowledge usage is lower than expected. How can a group or organization leverage the individual's knowledge understanding and existing knowledge usage? How can the knowledge be better utilized?
- The research proposition: A well-defined framework, including structural guidelines for organization of a document, will ease reading and understanding of a document and will lead to better knowledge utilization.
- The research unit of analysis: The unit in research is a group; group of interest, representing document readers. The research focused on four organizations, representing various social services professional groups in Israel (all in the public sector of civil services) and one inter-organizational: Internet readers, interested in Knowledge Management issues. This sample represents different people in different contexts, having differentiated skills and habits of documents reading.
- + 5. The logic linking data to propositions and the criteria for interpreting the findings: Yin (Yin, 2009) defines six sources of evidence the ones most commonly used doing case study researches: "documentation, archival records, interviews, direct-observations, participant-observation and physical artifacts" (Yin, 2009). All instruments, but archive records, which are not relevant to the case, have been used: documentation, interviews (after people have been exposed to the new format of documents), direct-observations, participant-observation and physical artifacts. The analytic technique used to link the data is explanation building (Yin, 2009).

The research process included three main phases, in each of the case studies: teaching the people writing the documents the enabling-technique; accompanying the process of renewed document writing; and observing the feedback of the users, reading the renewed documents. Observations took place during the phases, and interviews and data collecting (electronic documentation and artifacts-printed books) after.

Even though the groups of interest were not identical (inner organization, professional connected organizations, open public); and even though the type of usage varied (procedures of work, professional white papers and professional documents, marketing professional book reviews), the findings were identical:

- None of the readers sensed the need for explanation before reading using the new format;
- All readers questioned, found the new format easy to read and understand;
- In the four first cases organization based, related managers expected further similar documents to be written using the same framework.

## **6. Enabling technique concepts**

An enabling technique was developed and used to implement the suggested framework and test the research hypothesis. It was designed according to the following guiding concepts:

- Full & Focused: The internal information design must enable eased and complete reading of the document and, at the same time, eased focused reading (for the person who only wants to check an unclear issue in a section inside the document).

- Short: The internal design should impart the impression that the user is reading short nuggets of organized knowledge, rather than a lengthy document.
- Structured: In order to understand content, the main idea has to be structured.
- Visual: Visualization, executed moderately, eases understanding.
- Use of basic components, enabling the framework to be implemented via MS word, Adobe PDF writer, or any other word processor.

The concepts were chosen based on the need of enabling first reading and further reading (concept a); on the assumption that people live and work under a perception of no-time and therefore they have to sense the focused information (concepts a, b); on the understanding that there are four styles of learning (Kolb, 1984) while structuring and visualization are part of abstract conceptualization of ideas (concepts c, d); and on the willing to design a solution which requires no particular specified piece of software (concept e).

## 7. Limitations

The framework described below suits various needs, all concerning important documents that are to be read and re-read by more than one person. It is aimed at solving challenges particularly present in lengthy documents. For documents that do not exceed one or two pages, it may be useless, as people may find the relevant content without using the framework described below.

## 8. The internal design enabling technique's components

The internal design technique includes two main parts: the document map and information nuggets.

### The document map:

The main concept, implemented in the new documents, is a concept of internal information design. Special focus is dedicated to the first page of the document, named "the document map." The document map has three objectives:

- Assisting the reader in deciding whether s/he has reached the right document.
- Easing the understanding of the document's contents and structure.
- Easing the navigation inside the document, enabling the user to navigate directly to a specific topic discussed in a specific paragraph.

When viewing a group of similar organizational documents, the document map will be built in a uniform structure for each group, using an identical template.

There are two examples of templates See figure 1 with different structures of document maps (each for a specific type of information to be included within):

A document map designed for procedures in a large government ministry in Israel:

Explanations:

- The diagram, demonstrated in the process section, is constructed according to a gallery of shapes, which have the same meaning for all documents of the type. In the diagram above, for example, the red triangle stands for "exceptions" in all relevant procedures.
- Each hyperlink points to an information nugget, described later on in the article.

Document maps can be structured in a variety of ways, depending on the objective of the document group, the target audience and the reading skills of this audience.

A different document map style better suits a project of book summaries, in this case a learning project of a consulting company. For this need, the document map was designed to include three components: a preface describing the book, its author and why the readers should be interested in it; a diagram explaining the structure of the book and its essence; and a concluding paragraph, encouraging the readers to read the full book.

Below is a partial example of the document map of the book *Wisdom of the Crowds*:

"The book *Wisdoms of the Crowds* has turned to be one of the basic and important books in the world of WEB2.0, and for good reason. The book, written in 2004 by James Surowiecki, deals with a revolutionary idea: In certain situations, the wisdom of the crowd is greater than the wisdom of the expert. Surowiecki, a New-York financial journalist, describes the idea and the circumstances, and presents examples from various content worlds - economy, contracts, politics, transportation, contests and lotteries, urbane life and many others. Nowadays, it is easier to swallow such a revolutionary idea - Wikipedia demonstrates how an encyclopedia written by the crowds can on average be more up to date, richer and in some ways with higher standards.

One of the things I enjoyed most while reading the book was the concept of examples that contradicted the idea, and the recognition of circumstances and situations in which the theory does apply. Few people would not ignore these while describing their ideas and theories.

It was interesting to see how Surowiecki learns from this theory about the way in which the scientific world works and, not less interesting, about the way organizations behave.

<b>Procedure number</b>	<b>Date</b>
<b>Topic: XX</b> <b>Sub-topic: XX</b>	
<b>Objective:</b> (up to three rows)	
<u>Introduction</u> ( <i>hyperlink</i> )	
<b>Definitions:</b> <ul style="list-style-type: none"> <li>• <u>Term a</u></li> <li>• <u>Term b</u></li> <li>• <u>Term c</u></li> </ul> (each term is a <i>hyperlink</i> )	
<b>Process</b> ( <i>Diagram</i> ) <div style="text-align: center; margin: 10px 0;"> </div>	
<u>Possible consequences</u> ( <i>hyperlink</i> )	<u>Important to know</u> ( <i>hyperlink</i> )
<u>Responsibility</u> ( <i>hyperlink</i> )	
<b>Appendixes:</b> <ul style="list-style-type: none"> <li>• <u>Appendix a</u></li> <li>• <u>Appendix b</u></li> <li>• <u>Appendix c</u></li> </ul> (each appendix is a <i>hyperlink</i> )	

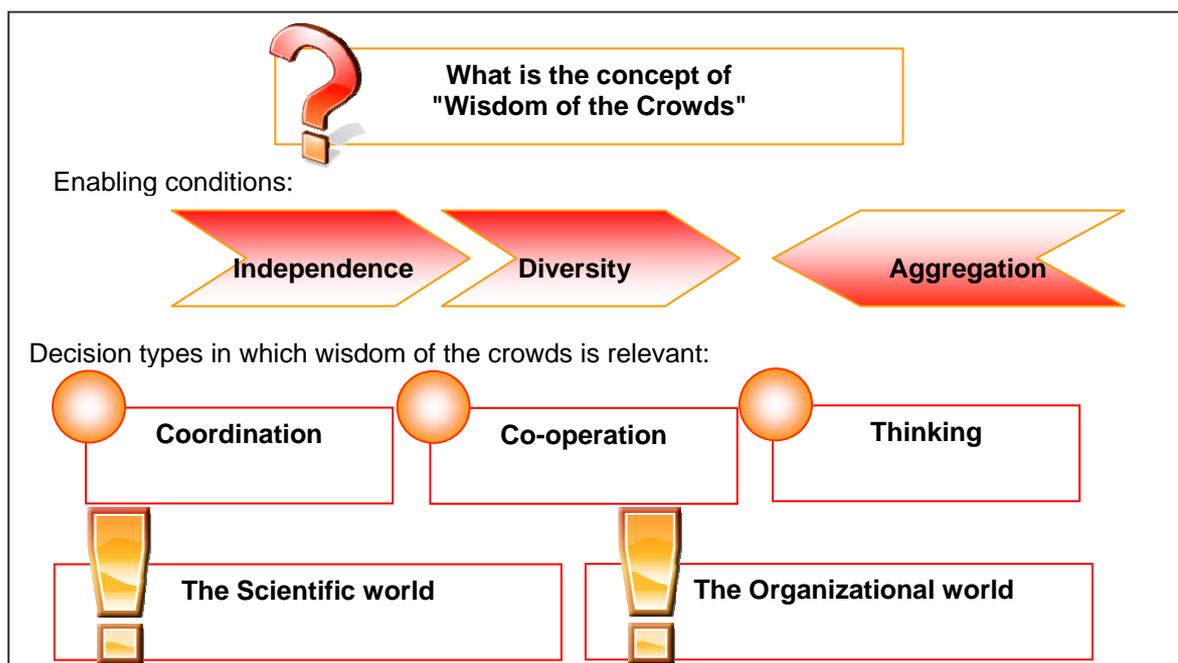
Figure 1: Two examples of templates

The following diagram Figure 2 summarizes the concepts described in the book:

In both examples, designed for different needs, we find the map, including text and a visualized diagram, serving the three defined targets:

- Assisting the reader decide whether s/he has reached the right document.
- Easing the understanding of the document's contents and structure.

- Easing the navigation inside the document, enabling the user to navigate directly to a specific topic discussed in a specific paragraph to come.



**Figure 2:** A summary of the concepts described in the book

Assisting the reader to decide whether s/he has reached the right document is achieved by providing a twofold clear, short and simple definition of content: A literal explanation limited to half a page, in some cases structured and in others not at all; and, a diagram, including all document contents, organized by components, and handed out visually. Kolb (Kolb, 1984), discusses four styles of learning held by each of us on different levels. One of them is abstract conceptualization, which is achieved through the simplified diagram. One glance at its components (generally not exceeding a dozen, but in rare cases, reaching twenty components), and the reader is able to understand whether this is the right document. A Kolb states (Kolb, 1984) that people are different and learn differently. For this reason, both a diagram and a textual literal paragraph are required, enabling each reader to feel comfortable, with the relevant portion. These overlap partly, yet are complementary.

Easing the understanding of the document is obtained by the same rationale: understanding what is included in the document and understanding the scope of the document are achieved by the same content and structure. Furthermore, the relationships between the objects in the diagram assist in better understanding the underlying concepts of the content.

The third target - easing the navigation inside the document - is obtained, as each component of the diagram is a hyperlink navigating the user to a relevant information nugget. Therefore, one can decide to read the full document, and read it continuously, page after page, or one can chose to focus on a specific issue, and navigate to it using the diagram, drilling down (and if requested, drilling back up). The diagram may seem to resemble a table of contents, but the way it is presented, as a visual simplified diagram, increases understanding and navigation capabilities. The diagram is richer in its capabilities of illustration compared to a flat table of contents. The user will find in most cases that it is easier to understand to where specifically, s/he should navigate.

The concept of the document map is simple, yet very powerful. It is easy (from the readers' perspective) to understand when first accessing the document, and it is very to re-read when one is searching for specific information inside the document and requires focused reading and navigation.

#### Information nuggets:

Information nuggets are paragraphs of text. They are the major part of the document, as they cover most of the document (everything but the first page, serving as the map).

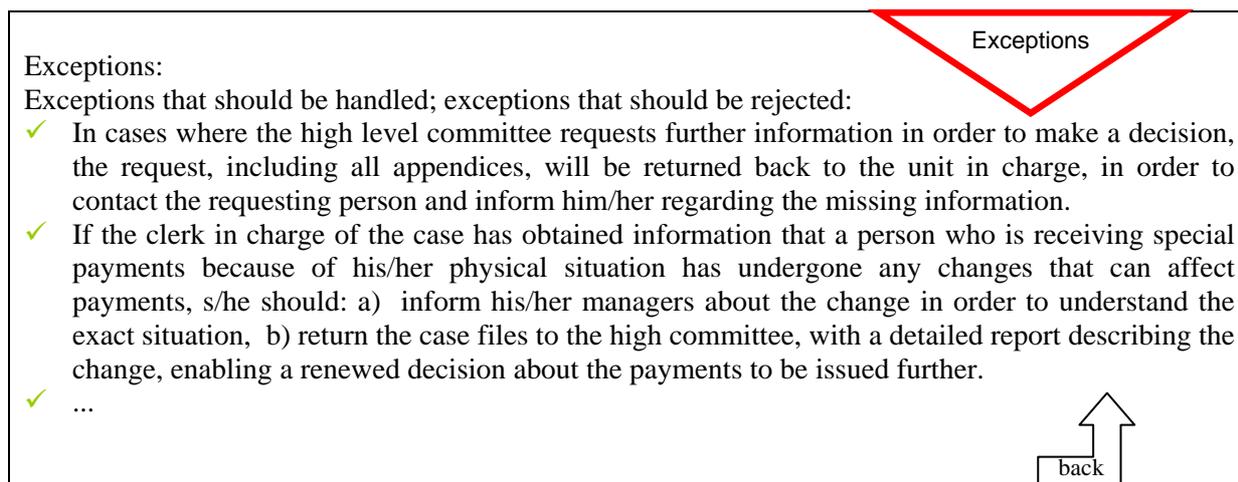
Concepts:

- The information nuggets will represent the diagram's components - one nugget for each component.
- Each information nugget will be limited in size, preferably to a maximum of one page each.
- Each information nugget will be framed (using the word processor capabilities) and will include at its head an icon resembling the icon of the related component in the diagram.
- Each information nugget will be connected via a hyperlink to the diagram. By clicking on any component in the diagram, the word processor will navigate to the related information nugget (this hyperlink capability is a basic capability that exists in all word processors, basic and advanced).
- At the end of each information nugget, a "back" link may be added, enabling quick return to the main diagram.

Winston Churchill, and some say Mark Twain, once wrote a letter apologizing that he was busy, and therefore writing a lengthy letter. It is more difficult to write in a short and simple way, but this way of writing is a necessity when writing a document that has to be read and its information and knowledge used by others.

The information nuggets therefore are brief, and it is recommended that they be written simply enough to be understood best by the reader. If the writer wants to ease understanding and usage s/he must keep the readers in mind.

Below is an example of an information nugget, illustrating the concepts described above:



**Figure 3:** An example of an information nugget

In this example, one partial information nugget was emphasized. This information nugget related to an example of a diagram map, demonstrated in figure 1. The concepts described above are demonstrated via this example:

- The information nugget represents one component - the "exceptions" component.
- The information nugget is limited at size. The example did not include the full content, but the full length of the nugget was less than a page. This information nugget was part of a rewritten procedure of work, and the source content (before rewriting it according to this new technique) was more than double the length.
- The information nugget is framed (using the word processor capabilities). In this case, the technique used included writing the contents of each information nugget in a table with one row and one column. The information nugget includes, at its top, an icon of a reversed red triangle, exactly the same icon of the related component in the diagram. The title of the information nugget is the same as the title of the icon in the diagram map.
- The information nugget is connected via a hyperlink to the diagram. By clicking on the component in the diagram map, the word processor navigates to this related information nugget.

- At the end of the information nugget, the "back" link was added, enabling quick return to the main diagram. In this case, it was embedded within an arrow, giving the reader, in addition to the text, a visual hint of the possible operation.

It is further important to state that when guiding the organization members in writing an information nugget, special attention should be dedicated to simplicity of writing. It has been found that people often tend to write in a lengthy manner, using too high a level of taxonomy and grammar. There are cases where this style of writing is justified. Yet for most organizational needs, simplicity will serve better. This includes, among other rules:

- Using positive rather than negative ones.
- Minimizing the use of passive verbs.
- Using words that have only one meaning (non-ambiguous).
- Using taxonomy that is well known and understood to all potential readers of the document; in case of documents used while dealing with customers, the taxonomy should be clear to them as well.
- Using short sentences.

These two main components - dedicating the first page of the document to a document map, with the heart of the document diagram, and building the resulting pages as information nuggets, together comprise a new enabling technique implementing the suggested framework.

## **9. Framework implementation and research findings**

The framework and its enabling technique were implemented in several organizations (four) and in one use, for public published documents. Interviewed people stated that the enabling technique is simple, yet found to be, powerful in easing reading and understanding. It has been found to be very inexpensive to implement for new documents, after a relative short period of training and minimal assistance (thus, this finding differs from organization to organization); assistance is required mainly after initial training for building the diagram map, representing the abstract conceptualization of the contents. In one case, where the framework was used for procedures of work, the issue of re-writing existing procedures using the new technique has risen. The recommendation was to decide depending mainly on level of estimated contribution (if re-written) compared to estimated cost. For procedures of work, for example, the rule-of-thumb demands re-writing procedures of work that were found to be ignored, resulting in more faults, more accidents, or higher losses of money.

In organizations where the framework was implemented, no training or assimilation activity aimed towards the readers of the documents took place. Of course this is true, also for usage in public. The techniques used, were simple and intuitive enough, for the average 21<sup>st</sup> century reader. This finding includes the diagram map, which resembles any other diagram used in all conventional documents. The decision to always include the diagram map, as part of the first page, is aimed to the writer, not the reader. The same is true for the document map components as whole. The reader, therefore, requires no training on how the document is to be built or what it will include. S/he have only to understand the content based on the guidelines of the enabling technique it was built on.

Framing the rest of the document may seemed less popular in other documents of the case sample organizations, yet was found very easy to follow and understand. The sizing of each information nugget was again, the writer's rather than the reader's concern.

In one of the cases where the framework was used, the document was printed in two hundred copies and send out as hard copies (in addition to enabling direct access from a website). This fact did not negate any of the advantages of working with the proposed framework. Even as a booklet it was easy to comprehend since the connections between the map on the first page to the icons in the continuation of the document answered the needs of the reader. Indeed, it was very easy to understand the document's contents and to attain a better understanding of its main components.

Most surprisingly, however, the navigation was improved as well. Of course, no electronic navigation exists on the hard copy, but the reader was able to easily connect between the icons on the diagram map, and the icons on the top of each continuing page. Thumbing through the booklet, navigation was achieved rather quickly.

Implementing such a framework in organizations resembled a snowball. At the first stages units were suspicious, and do not usually volunteer to join in. The writing of the first few documents, or their re-writing, took effort, energy and attention. However, once these were published, the picture totally changed: the volunteering units requested more, as they received positive feedback on their documents (while the feedback did not always distinguish between content and structure, all is highly appreciated); other units requested to be the next in line.

The challenges, in these cases, were two-fold:

- To prioritize the units and documents in which the technique expert will invest efforts. The first documents are written by the expert, and the training and assimilation usually follow as step two and three.
- To move inside the units from step one, where they get full assistance, to the next steps, where the unit itself has to become active in the writing process and the technique expert can phase out.

When documents were re-written, based on existing documents, it turned out, in most cases, that the re-written documents were shorter than the corresponding source. This can be explained due to:

- Limiting the number of heading paragraphs (represented by information nuggets) to the number of components in the diagram (and guiding the writers to understandable diagram maps).
- Limiting the size of each information nugget to one page (and in extreme situations to two pages).

In organizations in which the framework was implemented, it was found that short and simple writing, according to the structure defined, is surely a learnable skill; after experiencing the method, it even eases the writer's job. However, no statistics exist yet on the time invested (after first learning of the technique) to write regular documents compared to writing documents using this new framework.

The research hypothesis was verified: The suggested framework implemented via the defined enabling technique eased reading, eased understanding and probably eased use. It therefore leverages knowledge understanding in documents, and reduces knowledge loss.

## **10. Conclusion**

A framework for internal design of a document has been introduced above. This framework is to be used in addition to conventional frameworks of external design, such as using navigational trees and adding categorization (attributes) to documents. The enabling technique described includes two main components: a document map and information nuggets. The framework increases the document's visual effect (the map's diagram and the information nuggets borders and top icons). The use of the diagram provides better understanding both because of its conceptualization and because of this visual effect; the use of information nuggets enables understanding and ease of use, both because it is framed content and structure, and because it is focused. The enabling technique is implemented using a word processor only, needing no advanced technology. It has benefits when used electronically (navigating through the hyperlinks of the diagram), but also serves for paper printed documents, easing their understanding and use.

The document map has three main advantages:

- Assisting the reader to decide whether s/he has reached the right document.
- Easing the understanding of the document's contents and structure.
- Easing the navigation inside the document, enabling the user to navigate directly to a specific topic discussed in a specific paragraph to come.

The information nugget has also three main advantages:

- It is written simply.
- It is limited in size (having a psychologically positive effect on the reader, who can see the size, due to the framing).
- It is accessed easily. This is important especially for focus re-reading of the document.

In organizations where the framework was used, people indicated that these documents were found to be more user-friendly to read, re-read and understand. We believe that the framework can be improved and refined in the future; yet it already imparts, in its current offering, a significant leverage point to documents' understanding and knowledge re-use.

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