



White Paper: Manage Your Critical Knowledge!

Executive Summary

Most companies are failing to take advantage of over **\$100 billion** in idle assets in the form of un-leveraged knowledge, and that the losses due to uncaptured knowledge from a departing employee can approach a **full year's salary**.

AEBIS Inc contributes to superior **organizational performance** by leveraging **crucial knowledge** held tacitly by too few, thereby improving team productivity, cutting avoidable losses, and mitigating **key-person dependency risks**.

Introduction:

Why Manage Knowledge?

According to Cognisco, a UK-based consulting firm, misunderstandings and miscommunication among workers are costing companies **\$37 billion (US\$) a year**.

It has been estimated that US companies are failing to take advantage of over **\$100 billion** in idle assets in the form of un-leveraged knowledge, and that the losses due to uncaptured knowledge from a departing employee can approach a **full year's salary**.¹

What is Knowledge Management?

The field of **Knowledge Management** is not about automation: it is first and foremost **Management, Human** Management, with a clear-cut separation from Information Technologies:

- There is no free access to knowledge:
 - Knowledge is “in the mind” of human beings, usually experts or professionals:
 - They don't (or can't) explain “How they reason”;
 - They don't always want to reveal their data:
 - “Information is power”;
- Knowledge is imbedded in Natural Language of human actors:
 - Our approach of Knowledge Management is based on **controlling** the professional Natural Language dedicated to their business.

The problem is that experts and professionals take shortcuts and other liberties with language:

- They use expressions that are not formally correct to simplify the exposition:
 - In the best case, this does not introduce errors or cause confusion for another expert;
 - but often even the experts are not aware of their differences in interpretation!
- All this are usually barriers for newcomers

Heavyweight reporting, processes modeling, or rule-based management are not suitable solutions for managing “language assets”: **Experts don't follow rules!**

Experts make implicit **Distinctions** and base their reasoning on them:

- Distinction-Making is an ongoing and natural process, which reveals what is valuable in any living activity.
- We identify & leverage Distinctions as critical Knowledge **unit**, thus separating the “wheat from the chaff”, in any business area.

Therefore, a question arises: How to model an expert's Distinction-Making and Reasoning?

¹ Source: *The Business Case for Knowledge Management*, Eugene F. Yelden, Synrad, Inc., James A. Albers, Pacific Lutheran University. <http://www.tlinc.com/articl69.htm>

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Our innovation in Knowledge Management:

For modeling Distinction-Making, we reuse the idea of distinction theorized by **George Spencer Brown** in its mathematic theory, “Laws of Form” – **LoF**:

- We have created **@L-is** - *@rtificial Living information systems*, a patented knowledge modeling method & tools.

@L-is is the result of 10+ years R&D in Europe and North America with the aim of **engineering the meaning** of Natural Language **words**.

What is Meaning Engineering?

Meaning Engineering with @L-is consists of:

1. Stating definitions, based on clear-cut distinctions, of a limited number of specialized words;
2. Assigning formal properties to symbols and specialized words expressing these definitions;
3. Inserting these symbols and keywords into language writings to strengthen their meaning.

Meaning Engineering results in deriving synthetic meanings from natural meanings:

- Specialized words and symbols are formally defined in formal glossaries that are computable by a machine, constituting a Semantic System of Intelligent Glossaries (SSIG).

@L-is enables us to manage **formal glossaries** for verifying consistency and completeness of a business terminology:

- @L-is **is a** truly cognitive technology for enabling human beings to enhance understanding of natural language by reducing inherent ambiguity;
- @L-is is **not** a machine-based simulation of human understanding, nor a “machine learning” system.

The models, algorithms and computer implemented methods from our innovation are the subject of US patents (7,945,527 & 8,229,878 (Continuing Application), and 9,043,265).

Where to use @L-is?

@L-is address management problems such as:

- **Key-person dependency** risks;
- **Misunderstandings** & miscommunications between professionals;
- **Performance loss** due to key executive transition (line managers, product managers, sales managers, etc.);
- **Financial liabilities** stemming from knowledge & skills loss in banking, insurance & finance;
- Failure to achieve or maintain peak performance, due to **incompletely shared** knowledge transfer among team members.

@L-is services enable in-depth understanding of basic business concepts by new comers, **in any business domain**, in order to:

1. Very quickly identify tacit **business-critical knowledge** held solely within the minds of a small number of experts (who are often not the highest-placed in the organization);
2. Model this knowledge;
3. Present it back in an easily assimilable form which can then be transferred to other team members.

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How do we operate?

A standardized process

With @L-is services, we are able to help transfer critical knowledge & skills within our customer's operational teams, namely:

- Facilitate in-depth understanding of a person's knowledge;
- Federate communities of experts via a transactional web app;
- Leverage glossaries and "distinctions reasoning" methods.

This is a **step-by-step process** throughout the entire Knowledge Management cycle that clarifies critical knowledge to be transferred:



Main business situations concerned:

We help companies retain & maintain, capitalize, leverage & develop their personnel's skills during key transitions, such as:

- Personnel turnover, promotion, internal mobility, retirement;
- Training of new recruits;
- Merged & acquired teams;
- Reorganization;
- Outsourcing & subcontracting;
- Process re-engineering;
- Automation projects;
- Change management.

Our solution's benefits with respect to **complementary** approaches:

- **Continuing Education:**
 - We identify the critical skills that are necessary to appropriately apply the business-critical knowledge.
- **Transition management:**
 - We help manage departures, replacements & new arrivals.
- **Learning Organizations & Talent Management:**
 - We identify the most critical knowledge that needs to be shared and acquired (grown), with the tools and techniques to facilitate this transfer.
- **Instructional Design:**

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- We identify the most critical knowledge that needs to be transferred, thus creating compelling content transferred via the most effective and efficient transfer techniques.
- **Performance management:**
 - We facilitate clear and effective task assignments;
 - We optimize communication, interaction and collaboration.
- **“Deep Smarts”:**
 - We uncover the hidden business-critical knowledge, model them in an easily-assimilable and transferable form, and help organize the transfer.

Our Differentiation:

We focus on individual knowledge transferred from person to person, or between very small groups of people with a great deal of tacit knowledge, where the creation of a large-scale training program is not a cost-effective option:

- Situations where investments in job analysis, competency mapping, curriculum development, training content and format development, are too expensive and long relative to the size of the team and relatively low frequency of use.
- Within this small-team or one-on-one transfer, we focus on tacit knowledge based on **years of internal hyper-specific expertise** which is not available via outside third-party training programs or via existing internal training programs targeting large-scale or generic staff.

We bring methods & tools for in-depth understanding of business concepts to **improve the whole performance** of complex Human-Machine Systems, by enhancing human capacity and promoting the human side of cognitive technologies, instead of simply replacing humans by machines.

Who are we?

BFD SAS, the parent company of Aebis Inc, is a French company founded by **Philippe Michelin** (CEO), specialized in:

- Advanced Business Information Systems ;
- Systems Architecture ;
- Process Improvement;
- Knowledge Management.

Since 1988, IT departments at banks, insurers and other financial institutions have trusted our team of 30+ staff, to help achieve and maintain peak performance through better modeling of information, process, and knowledge.

Some of our customers in France:

