

FROM HAVING TO USING INFORMATION LOGISTICS EXPERIENCE CENTER IS BORN



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Information Logistics Experience Centre is born

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Abstract

The essence of this article is focused on the use and dispatching of information and the methods and practices of logistics able to support those processes. For instance email has an important impact on the daily performance of the knowledge worker.

It is the aim of Information Logistics to deliver the right information 'product', in the right format, at the right place at the right time for the right people and all this customer demand driven. Well-known analyses like Bottleneck and time spent can support detecting the causes of insufficient quality and quantity of information demand and supply.

Keywords

Information Logistics; Information Product; Information Element; Knowledge Worker;

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1. Introduction

This article is being inspired by experiences gained during the professional career and the lecture ‘Information Logistics: From Having to Using’ presented by Jan Willems at the ‘CIO Strategies Event’ in Nice, September 10 and 11, 2007. [1]

The essence of this article is focused on the use and dispatching of information and the methods and practices of logistics able to support those processes. Who are using information? People do, they need information for their tasks to perform. Because of the dramatic changes in the information landscape during the last 15 years, this phenomenon is becoming more and more time consuming. Hardware and software driven improvements are apparently not sufficient anymore.

IT servicing companies like Atos, Capgemini, IBM, Ricoh etc. are looking for new Information Technology Enabled Services (ITES). They should be able to provide solutions that will have direct impact on the daily performance of knowledge workers. [2], [3], [4]

Above mentioned companies are currently occupied designing these Information Logistics (IL) driven solutions, creating benefits like:

1. Direct focus on “people driven improvements” with an impact on business processes.
2. Productivity increase of knowledge workers (valuable people); capacity, processing time and revenues.
3. Transparency of information flows.
4. Rapid implementation, being a basis for structural and continuous improvements and innovation.

2. How e-mail can create chaos?

In order to get an understanding how working with information can burden the productivity of knowledge workers, the following e-mail example will make this perfectly clear. Having no clear IL structure and order in place, knowledge workers seem to be messing about the decision making. Especially e-mail has a strong contribution in these fuzziness and directionless communication processes.

The following example (fig.1) shows a 'real life' e-mail debate. Two people discussing face to face a problem over a cup of coffee. They decided they need to invite another colleague for a meeting to discuss the idea more in detail, sending him an e-mail. So far this seems perfectly straight forward and to the point. In stead of having the proposed meeting, the e-mail is forwarded and copied to several other people. An e-mail storm emerges.

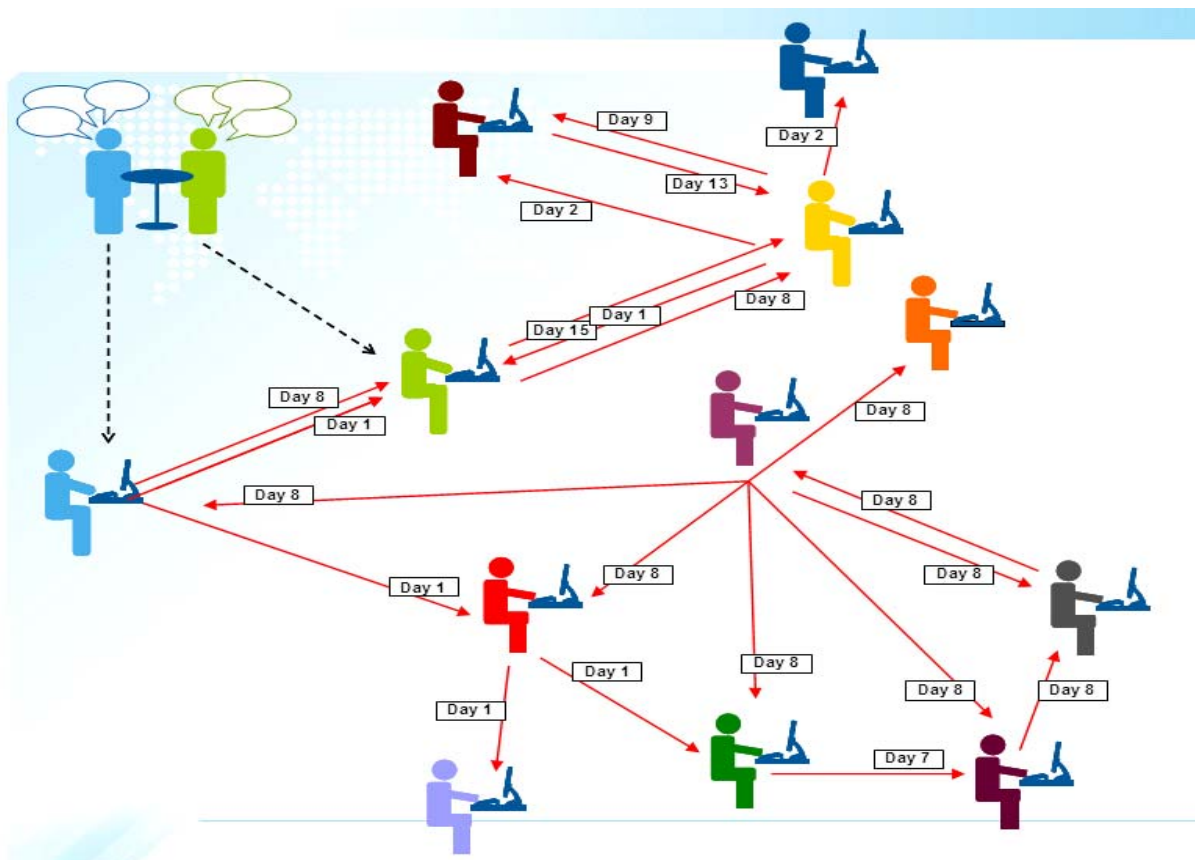


Figure 1: The e-mail debate

The result was that after the start with one idea ‘face to face’, 21 e-mails (virtual communication) were created, with zero substantial answers. Three experts were involved who didn’t communicate and four managers were involved without adding any value. From a logistics point of view, the throughput time took two weeks without any planned action or decision being taken, with time & energy wasted and lots of confusion.

What happened?

The idea and the e-mail action itself looked good but the context and boundaries were not shared and explained well enough to the other colleague. After that, nobody felt it was necessary to organize a face to face conversation in order to understand the details and to come with a good definition and structure for solving the arisen problem.

Would it happen in a manufacturing plant or a warehouse, no production, or distribution activity would be possible, but the problem would be visible to all people involved and action would be taken. In the present offices though, these processes are not visible and transparent, therefore no actions were taken to solve this in a proper way.

Plotting this example into the logistics world of physical products (fig.2) will show the following. Only two people are in a process of creating. The rest was involved and busy with pushing the information output from one location to another, just taking time and capacity.

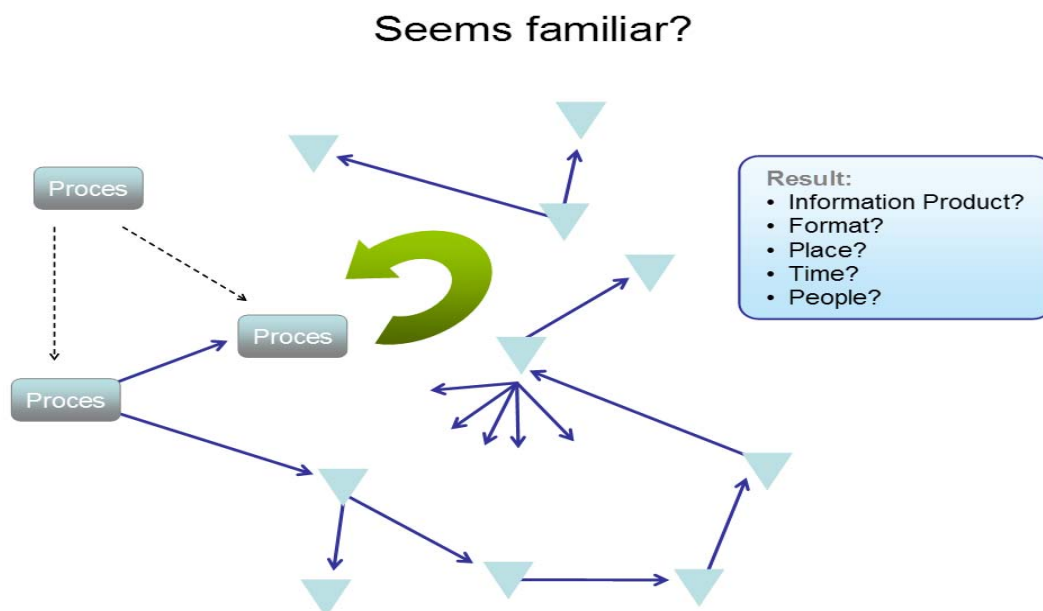


Figure 2: The e-mail logistics

Storage locations/warehouses are the bottleneck in the physical logistics world because of the fact that the use of space and distance is expensive. In the eighties and nineties the supply chain of physical goods has been optimized, resulting in one or two warehouses in a region like Europe! In the logistics of information products many storage locations in a building or at an office floor are available for use!

Laptops/desktops seem to have infinite capacity and are no bottleneck. People seem to become the bottleneck. They are continuously busy storing enormous amounts of information in their desktops, laptops, hard disks and networks. This information is available but hard to retrieve, to judge and to reuse. This situation is getting out of hand. It is just too much: an information overload is being created and it's getting worse!

3. Why did this situation arise?

Specialisations of people intra companies and inter companies, itself, lead to a growing distribution of knowledge in and across companies.

This immediately results in:

- An increasing spread of information sources that have to be taken into account for a reliable answering questions and making decisions.
- A big and still growing percentage of relevant information is stuck in documents containing unstructured information (e.g. natural language text like reports etc.) that have to be retrieved and judged intellectually.
- Above mentioned situation becomes worse while relevant documents grow in number and decrease in quality – in sources that are open to the public as well as in corporate information systems or private document collections – thereby boosting the efforts of retrieving and judging further.
- Since the nineties, organisational restructuring has led to an extensive reduction of indirect staff. They formerly did the tedious jobs of collecting, filtering, assembling and digesting information. That has led to an overflow of information to the remaining staff which cannot be digested without having an effect on the efficiency of the operation.
- Mergers and acquisitions lead not only to an exponential growth of communication but they also disrupted well tuned networks of information supply and communication.

The US department of labor estimates (fig.3) that 40% of our time every workday is spent on processing information. About 80% of that information is in the form of emails, presentations, texts, videos, web pages, illustrations, drawings, photos, images etc. This is called unstructured information. It is information that does not fit neatly in the rows and columns of a database and can hardly be managed in spreadsheets, ERP, CRM or like systems. But unstructured information is what largely drives time to market and sales and it is hard to find the right information

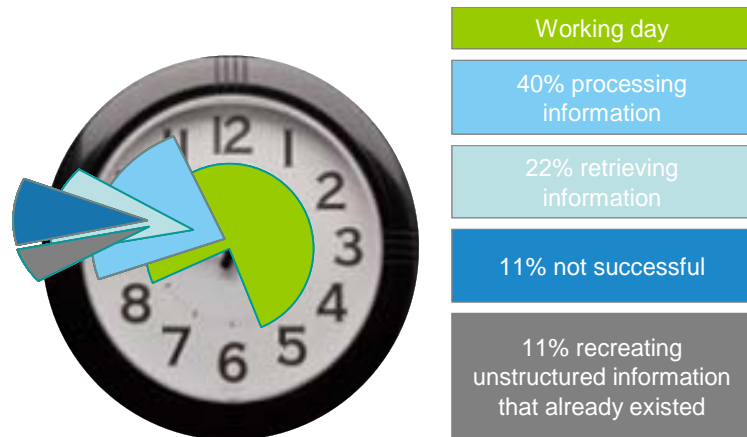


Figure 3: The working day of knowledge workers

Boosting the productivity of knowledge workers becomes a major issue.

4. Information productivity improvement

The knowledge worker's environment is fast changing and hard to grasp in the form of processes. In fact just like the business environment today. People do follow the changes of the business environment, though processes stay mostly unchanged. [5]

Let's take the example of the account manager (fig.4) who has accepted a new role in the health care sector, coming from the sector financial services. In stead of financial services he now will address the health care sector.

This will imply:

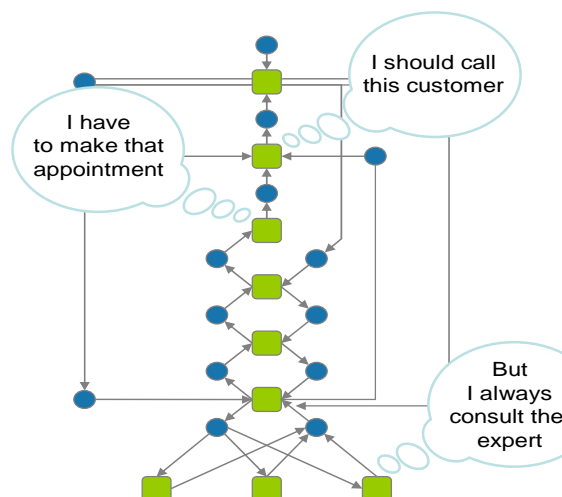
- His headline summaries should include health information.
- His contact profile should make connections to his internal experts, professionals and other account managers in the health care sector.
- His general meetings, qualifications and events of the healthcare should be on the agenda.

Classic business process improvement isn't enough

Knowledge Worker Communication:

- Unstructured
- No order
- Fast changing
- Hard to grasp in a formal process with a standard process language

Business Process Analysis:



Not taken into account:

- Communication
- Knowledge acquiring
- Indirect intertwined relations with other processes
- Mobility
- Job contexts
- Change in business goals
- Change in regulations

Figure 4: Some aspects are not covered sufficiently.

But the business process will stay unchanged! In a classic business process some aspects of the daily work are not covered sufficiently. In our example of the account manager, the move to health care, as a consequence of changing the business goal, is not captured in the process. This new focus also means that the account manager is directly involved in the business development process. This involvement also is not captured in the processes. Therefore this knowledge worker has to be supported in more ways than just either by ERP or BPR. The question is how to help him achieving time savings regarding logistics aspects such as searching or retrieving, creating, processing and distributing information.

5. What can be done in order to improve the logistics of information?

The aim of IL *is to deliver the right information 'product', in the right format, at the right place at the right time for the right people and all this customer demand driven*. In order to improve the performance of the knowledge worker, the approach presented in the sequel would be recommended.

- As a first step an awareness assessment at senior management level has to be executed. It's important that c-level executives realize the impact of information logistics issues on the business, driven by their most valuable employees.
- As a second step identify the processes where these issues are most urgent. In the identified processes people related time studies and a bottleneck analysis have to be performed in order to determine which improvements can be rapidly realised.
- As a third step should be an introduction of generic performance measures and commitment to those measures by all involved.

In parallel a blue print for structural improvements can be designed.

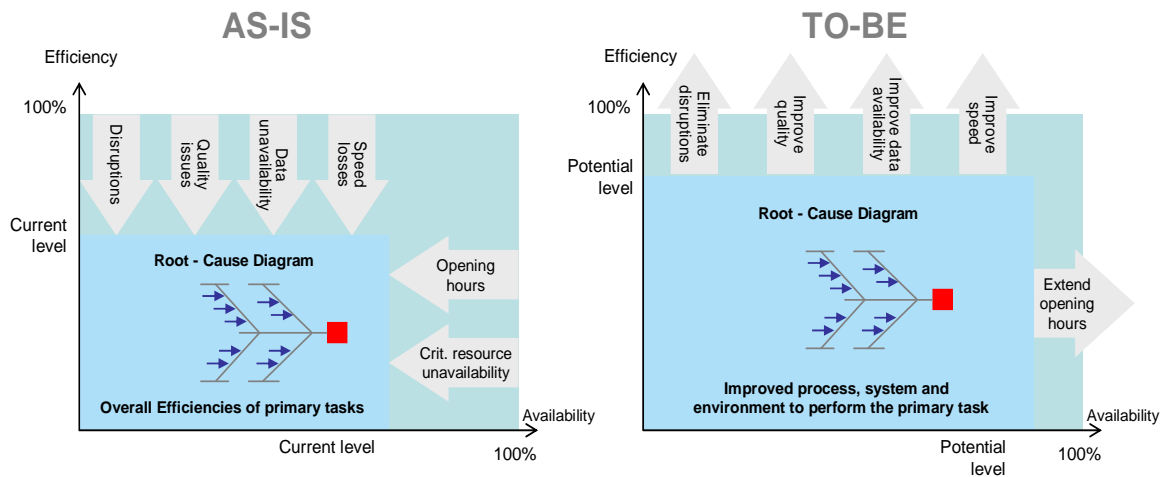
The use of software based performance monitoring tooling (a.o. BearingPoint) can further enhance the overall impact of such an approach. In this way, the need for a global overview of best practices represented in an equally professional way can be realized.

What should an IL analysis look like?

After creation of awareness at c-level, commitment has been given to start an IL analysis.

The overall performance of the knowledge worker is impacted by availability losses and efficiency losses (fig. 5). The 'availability' is the time that the service can be provided to the clients. The 'efficiency' is the way your work is organized during the time that the service is operational. Creating improvements in the execution of primary tasks will enlarge the inner area (the light blue quadrant) in order to improve the knowledge worker's performance. When you are able to make information accessible 24x7, the traditional opening hours will disappear (any where, any time and any device). When you can remove 'excuses' (unasked email, poor quality, etc) the time spent on primary tasks will be better utilized.

Information Logistics Analysis Framework



- Overall performance of the knowledge worker is impacted by availability losses and efficiency losses
- Improvement of processing time and capacity utilization will improve overall performance

Figure 5: The IL Analysis Framework

The next case will demonstrate the analysis more in detail. An international engineering company with a turnover of €181 million and 1450 employees, working very ‘fragmented’ at many offices & customer locations, expect the next coming years a double digit growth in revenues, partly organic partly via mergers & acquisitions. This will imply an intensive hiring of highly skilled (technical) people. Already now the productivity of the HR professional is burdened by fragmented and unstructured information. The question was how to free up time of these professionals. In other words **‘can we do more with less?’**

After the awareness assessment we identified the Hr filing process where information logistics issues were most urgent. The Focus was on efficiency (cost-down, eliminate time eaters for HR advisors and HR staff) as well as on effectiveness (improved quality of HR advice, improved productivity). We defined two phases, namely: phase 1. Create a climate for rapid improvement and 2. Create a Blueprint for structural improvement, e.g. the implementation of an ‘employee self servicing concept’

Phase 1 started with a time spent analysis. This analysis, (based on 1900 active files 520 new hires 7000 different kind of updates 450 discontinued contracts) delivered the following results.

The left illustration in figure 6 shows that a limited amount of time is being spent on primary tasks (only 55%). The right one shows that a lot of time is being spent on tasks that are not adding value. A major part of the activities are performed at least twice, due to the fragmentation in the process. Above that, there are major inefficiencies as almost every task encompasses a waiting time.

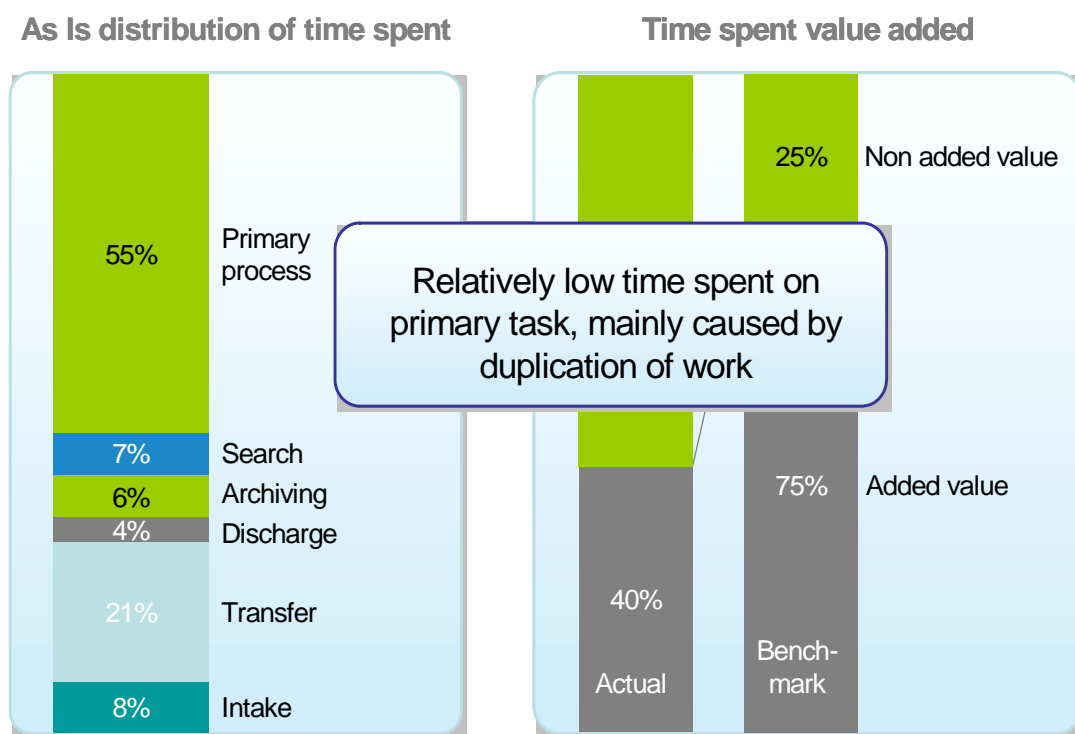


Figure 6: Time Spent Analysis

The reason is that not all information is delivered correctly right away and in a number of cases information needs to be found from the paper personnel file before next action can be performed.

Based on these first results a Root - Cause Diagram (RCD) for the HR filing process was being created. In this diagram (fig.7) the information elements that build up the HR file were determined. Next the high demand (fast moving) elements that consumed most time were ranked.

Bottleneck Analysis

One Information Element can be part of more chains, having different values

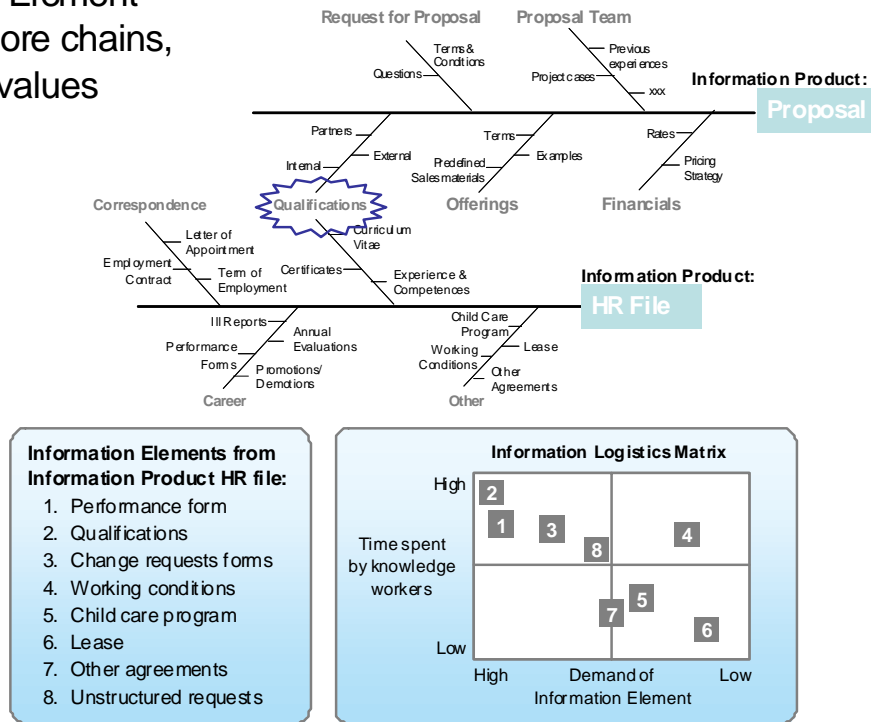


Figure 7: Bottleneck Analysis

This IL matrix shows the relation between time spent and customer demand for these information elements. Improving the elements in the top-left corner would have direct impact on customer satisfaction with time savings for the knowledge worker. A more detailed analysis of the qualifications-element showed that this also was part of proposal making and doing projects.

The frequent demand for Qualifications, coming also from other parts of the organization besides HR, was perceived as a disturbance for the HR knowledge worker being busy with maintaining the HR files. This was not properly tackled, resulting in customer dissatisfaction and time waste of other knowledge workers. So therefore it turned out to be a bottleneck. The traditional approach of solving these types of issues would be scanning every single document of all existing HR files and implementing a document management

system. This would be more time consuming, less efficient approach leading to delay of at least several months up to one year.

What was done instead? A rapid way was developed to improve the situation for the involved knowledge workers with immediate impact. The idea was generated to scan the qualification forms for the target group of 200 engineers using an MFP with OCR facility. After that an index was created using an information access tool. Finally a local but secure availability of only necessary information was implemented.

The results were impressive. The processing time (throughput time) reduced by 80%, the time savings (capacity) for the HR knowledge worker reduced by 70 % and the ROI was only 3 months. Besides that, a high degree of stakeholder involvement with positive attitude towards change & continuous improvement and improved employee satisfaction of the involved knowledge workers were created. Finally a 'business dangerous' bottleneck was eliminated. Building and implementing the solution took 2 days. So, hardly any cost, hardly any implementation time and with a huge impact on business!

6. Summary

In order to improve the knowledge worker's performance, an IL approach will result in the following:

- Approach focuses on the personal information demand of the knowledge worker, derived from the customer's demand. With a defined and structured information product and the right approach, time-savings and reduced processing time with direct impact on performance improvement, resulting in improved customer satisfaction, can be realized.
- It extends business process improvement and information lifecycle management, making hidden tasks visible and transparent resulting in eliminating bottlenecks.
- It builds a new class of solutions and applications, improving the performance of the knowledge worker (thus the company) by a better utilization of existing IT infrastructure, using more functionality. This approach will be a basis for continuous improvement attitude. With using software based toolset, sharing best practices will become possible. ***In this way local initiatives can be made visible, transparent and measurable to others and shared on a global scale***
- Information Logistics make use of the basic models of the Physical Logistics allowing reusing experiences from the past. [6], [7]

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