

Death of a Knowledge Project

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Abstract

Introduction

The roots of what experts today know about disease can be traced to early pathologists. These ‘researchers’ examined organs, recorded observations and made tentative suggestions based on their investigations. In this paper, we feel akin to those early researchers. We are going to pore over a dead knowledge management project; one of us witnessed its transition from inception to demise. Together, we examined the project to understand the breakdown of vital components such as artifacts and commitment. We maintained the practice of pathologists: anonymity. Much academic research on knowledge management is based upon instances of success. Such studies are vital to our understanding of knowledge management. This paper contributes to on-going academic debate by studying an instance of knowledge management failure. We used our analysis to identify four constructs that seek to explain the downfall of this knowledge management initiative. These are: Manage knowledge interdependencies across functions; Knowledge management projects should not be synonymous with IT implementation; Actual users should identify knowledge; The artifacts of knowledge management must be owned by the organization. These constructs are based upon one knowledge management initiative; hence generalisability can only be limited. Similar knowledge management projects need to be examined to generate generalisable results. Nonetheless, the constructs developed can begin to guide practice. We identified next steps to progress this research; in particular the need for analytical tools to assess organization’s readiness for knowledge and to determine executive’s propensity to learn from others’ knowledge management mistakes.

1. At the start ...

Pharmaco is a global leader in its industry. Its world headquarters is in a major European capital, with operations in 70 countries. It is an active global player in the “order handling services” market, with product offerings ranging from repetitive to more specialized advisory and consultancy services. The order handling services business is significant, generating nearly US\$500 million (EUR 435 million) in annual revenues.

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A series of high-level discussions took place between Pharmaco's senior board executives and representatives from Top 5 Global Consultants, Inc. Their message to the board was quite clear: it is important that the organisation improve its order handling services business—and quickly. The sense of urgency was further re-enforced by a series of lost 'bread and butter' deals. According to internal documents, the organisation was quite aware of the state of affairs:

We are unable to deliver much of what our customers want today and we are even less capable of delivering what they will want in the future. They want integrated solutions and a seamless service offering. Our processes and systems are fragmented, redundant and inconsistent around the globe, contributing in part to our falling revenues and market share while our biggest competitors are growing both in terms of actual revenues and market share.

Pharmaco's Managing Board commissioned a study from external consultants to provide "a rapid assessment of the strategic implications and viability of a Global Order Handling Services (GOHS) line of business. This initiative was called the "GOHS Project" Phase I. Two essential conclusions were drawn during this phase. One, Pharmaco needed to reduce its reliance on country specific products and increase its focus on individual client requirements. Instead of creating unique, silo-based products, the organisation had to create a *library* of products that could be combined to customize solutions for each client. Two, Pharmaco needed to provide a seamless global product set that could be delivered on common processes and systems capabilities.

The GOHS Project identified the need to create global processes, evaluate and select integrated global systems, test new products for specific client segments, implement shared knowledge and design and pilot a new organisational model and reward structure. The clear intention was to contribute to the creation of a detailed blueprint for gaining and maintaining market leadership.

The GOHS Project became one of the Pharmaco Managing Board's "highest priority projects." At the end of Phase I, Mr. Wilco Smith, Managing Director, was

appointed GOHS Project Manager and reported directly to the Board. The vision for GOHS was stated as follows:

PHARMACO will build a profitable global order handling business, delivering:

- Order handling services
- Advisory services linked to order handling
- Integrated information and knowledge for our clients, translating data into information and then knowledge

PHARMACO will become one of the top two global providers of this service, dominating targeted market segments and benchmarking our services against best-in-class competitors.

2. Evolution to Adolescence

Pharmaco's Managing Board continued the rapid trajectory and approved Phase II of the GOHS Project. The objectives of the second phase were to build the business foundation, create a detailed business case, and test the concepts internally and with customers. Top 5 Global Consultants Inc continued to play a significant role in the GOHS Project, specifically in developing the comprehensive GOHS Business Case.

The GOHS Project Team grew to approximately 100 members. During Phase I, the team consisted of approximately three outside consultants for every one Pharmaco employee. By the end of Phase II however, the ratio of Pharmaco staff to outside consultants was 3:1. The Project Team worked in various "streams" and "sub-streams" (i.e. strategy stream, product stream, knowledge management sub-stream, etc.) with the collective goal of making the GOHS vision become a reality.

Although the proportion of consultants was low, they had a disproportionate degree of influence. Pharmaco's employees felt that the momentum of consultant enthusiasm was carrying the project, by engendering a sense of "hey guys, we've got to do this!"

The confluence of geographic spread, technological support for order handling services and the need to share knowledge across the organisation, led to the need for an integrated Information Communication Technology (ICT) infrastructure. The GOHS Business Case specified the need

for an infrastructure solution under the banner of a knowledge management initiative. That knowledge management, as defined in the GOHS business case, was seen as pivotal to the overall success of GOHS is evidenced by the following business case extract:

The Organisation's success in the GOHS business will ultimately depend on how well it manages to leverage the aggregate knowledge and experience of GOHS staff worldwide.

Knowledge Management became intricately tied to the development of the ICT solution, known interchangeably as the "GOHS Worktable" or the "Knowledge Enabled Worktable." The *GOHS Worktable Project Initiation Document* described it as follows:

Computer systems shall allow users to access, add and use knowledge in a useful way that is integrated into the business process. Several of these "Worktables" will be built, each tailored to directly support different processes and roles [e.g. order handling, sales & services, product management, etc;]. The Worktables will be easy to use and will gather relevant information from the processes automatically, simplify user tasks, support decision making and will allow users to quickly and easily enter feedback, comments and informal insights. This will, in turn, help content area owners to identify new needs, and/or out of date or inaccurate content.

The Worktable concept was originated by Top 5 Global Consultants, Inc., who in conjunction with their strategic alliance partner, Perfect Solutions, had a track record of implementing Worktable initiatives.

The envisioned *main* GOHS Worktable was an application designed to "seamlessly and through an easy-to-use interface," bring together the other Worktables on the ICT infrastructure. Examples of the "other Worktables" included the Sales & Services (S&S) Worktable for GOHS sales professionals and the Operations Worktable. Underlying the "seamless" interface was the GOHS "Knowledge Base"—or the "Library." The Library would be a large data repository of valuable documents, information, and other knowledge ("content") from both the Pharmaco global network and external sources (i.e. competitor intelligence reports). Organizing the access to the Library would be a dynamic document management system.

Also planned was an externally facing Client Worktable linked both to the yet-to-be-built Pharmaco order handling system and the Library. The fully linked configuration of Worktables

was called the “Client One Window.” The order handling system of the Client One Window, although envisioned by Top 5 Global Consultants, Inc. was to be built by Global Systems Developer Inc. By design, the internal GOHS Worktables would have varying levels of access to the data within the customer facing order handling system (see Figure 1).

The integrated Worktable, order handling system, and Library was labeled the *Total Solution*. This was to deliver cost savings, revenue improvements, high levels of customer satisfaction, and greater internal cohesion.

An interim version of the GOHS Worktable was planned for development. This version would integrate Pharmaco’s existing knowledge sharing applications such as K-Base and future applications such as “PharmaPilot.” According to original Worktable planning documents, the target date for the first *significant* release of the Worktable was ambitious.

The “Knowledge Management Initiative” was charged with managing the overall Worktable initiative and developing the related “Knowledge Management architecture”. Jack McKay, Pharmaco Vice President and GOHS Project team member, was appointed to manage the Knowledge Management Initiative - which at the time was staffed exclusively by outside consultants. McKay was valued for his knowledge of Pharmaco and the order handling services business, but had no previous experience with Knowledge Management or Worktables. Thus, Sandy Bertelli of Perfect Solutions, Inc. played the leading KM role. One KM team member described the leadership dynamic as follows:

From the start, Perfect Solutions was the visionary. McKay was “being the manager” working together with Perfect Solutions, Inc.—but Sandy Bertelli was running the show, she had the most experience—nobody had done any knowledge management [before this].

In order to reach Worktable functionality, four KM “teams” were established and detailed in GOHS Business Case supporting documents. The Perfect Solutions team spent considerable time and effort in establishing the working methods for each team. For example:

- *Field Analysis Team*—determine specific business requirements and functionality for the Worktables

- *Worktable Design and Content Development Team*—design the core components (e.g. what the Worktables will look like) and determine content requirements (documents, information, tools)
- *IT Build Team*—build the Worktable based on the information from the previous two teams.
- *Implementation Team*—implement the Worktables including a governance model to keep the information “up to date.”

The knowledge management initiative achieved two significant deliverables during Phase II. First, a Knowledge Enabled Worktable “mock-up” was designed and demonstrated. Second, the PharmaPilot, which was designed to test people’s buy-in, assess the viability to connect people in different geographical locations, and to move beyond “theoretical KM”. PharmaPilot was a web-based forum that allowed experts in the U.S., U.K., and selected western European countries to communicate and exchange knowledge with one another. The pilot was deemed to be a success by those involved.

By the end of Phase II, the role of KM within GOHS was clear: to design, develop, and enable the GOHS Worktable. Quite simply, GOHS Knowledge Management was the Worktable.

Phase II concluded with the submission of the GOHS Business Case to Pharmaco’s Managing Board. The case recommended and the Board approved the following:

- GOHS would move from a “project” to a full-fledged “line of business”
- An five year investment budget of US\$300million (Euro 261 million)
- An expense budget of US\$89 million (Euro 77,4 million)
- A loss of US\$65 million (Euro 56.5 million) in the year 1 Profit and Loss Statement.

3. The onslaught of middle age

The Managing Board declared GOHS to be a “line of business” and appointed Mr. Wilco Smith as CEO of GOHS. The GOHS head office operated out of Europe and would support the global, country-organised GOHS network.

Once an official “line of business”, a formal GOHS corporate structure was established (see Figure 2). GOHS was divided into six functional areas, Sales & Services (S&S), Product Management (PM), Operations (Ops), Human Resources (HR), Program (IT & Business Architecture), and Information, Planning and Support (IP&S). The Directors of each of these domains and GOHS CEO, Wilco Smith, made up the GOHS “Management Team.”

The Knowledge Management group became a department within the IP&S function. According to Gordan Wiegel, Director—IP&S, the rationale for this was as follows:

Anything that did not have a clear place in the line organizations and/or was not claimed by any of the line managers as something they should do, landed with IP&S. Thus, KM landed with IP&S.

Jack McKay, who was responsible for the KM Stream during the GOHS Project Phase, was appointed Vice President of GOHS—Knowledge Management. McKay immediately set out to establish a core GOHS—KM team and hired five new staff. Up to this point GOHS—KM consisted of one Pharmaco employee and four externals from Top 5 Global Consultants, Inc. The first three were hired with the job title Content Analysts, although this later changed to Knowledge Analyst. They had varied backgrounds and work experiences, ranging from Physical Therapy to Private Banking. Two had the title, Knowledge Consultants. They both came from a Knowledge Management department of a large UK company.

The primary responsibility of the new staff was to embed content management and to implement Worktables across the 70 countries. One KM staff member recalled McKay’s description of the new position as follows:

I was told that I would be more in Sao Paulo and Miami than I would be in Europe. This is what I thought I would be doing—rollout. I would go and find out what knowledge requirements people have—that is my skill—and then try to align that with everything else we have, trying to embed content ownership within the countries and in GOHS Head Office. Implementation was my project, I really came as an implementor. I am a real doer—I am not into “best practices,” I did not come for that, nobody ever asked me that.

Shortly after recruiting these people, McKay resigned his position in GOHS-KM and moved to a different part of Pharmaco. With Perfect Solutions, Inc. already co-ordinating the day-to-day

Worktable efforts, the impact of McKay leaving was described as minimal. On an interim basis, a senior consultant from Perfect Solutions, Inc. ran the KM department. However, he preferred his freedom as an external consultant to the responsibilities of leading a department. Both he and Wiegel thought it best to quickly find a new Head of KM.

A few weeks after GOHS was declared a line of business, the Field Analysis and IT Build streams were separated from GOHS—KM and placed under the GOHS—Program domain. GOHS—Program (the IT arm of GOHS) was staffed by Perfect consultants, representatives from Pharmaco Corporate IT division, and other external consultants. Perfect Solutions coordinated all Worktable activities and maintained “sign-off” authority for each stage of the Worktable project. Around the same time, Top 5 Global Consultants, Inc. concluded that the resources needed to build the envisioned global order handling system did not fully exist in-house (or with Top 5 Global Consultants, Inc./Perfect Solutions). Therefore, Global Systems Developers was retained as the “IT build partner.”

It was decided that the first Worktable to be developed by GOHS—Program was the Sales & Services Worktable (S&S Worktable). The major components of the S&S Worktable would be a sales force automation tool (SFA) and the GOHS Library—to be accessed via a “dynamic document management system.”

The GOHS—KM activities centered on content development. Decisions about the specific content development needs were based upon S&Ss core business. The new Knowledge Analysts partnered with Perfect Solutions Inc’s consultants to work on the content related aspects of the S&S Worktable. “Content” became the all-inclusive term used to describe data, documents, information, and other knowledge that may find place on a Worktable. Perfect Solutions introduced a content development approach to the GOHS—KM team. The Content Analysts used the methodology extensively to analyse and determine Worktable information requirements (for the domains, countries, and regions) and to design overall content development and content management tasks.

Perfect Solutions identified drug formulae content as a particularly important area of focus. Thus, a considerable amount of such content, to be housed in the Library of the S&S Worktable, was developed. While awaiting GOHS—Program’s delivery of the S&S Worktable, it was deemed important to maintain “network buy-in” for the Library concept. Therefore, an interim, Internet-based tool to publish Library material was designed. SKAN (Sharing Knowledge Across the Net) began as a compilation of drug formulae information for country managers. Quickly its scope expanded to include other content, for example a directory of GOHS sales professionals.

However, due to infrastructure problems and a wider acceptance of the K-Base application throughout the Network, SKAN was not as widely accepted as hoped for. Therefore, certain SKAN content, particularly the drug formulae content, was also put into K-Base.

K-Base was the globally accessible, Pharmaco-wide Lotus Notes database application that served as a repository of valuable and diverse knowledge, ranging from sample sales proposals and product and service information to country-specific pricing data. K-Base, in use since 1994, was to be migrated to the Worktable Library. However, given the Internet-based design of the Library, the migration process was to be a gradual one.

There were serious information quality issues within K-Base. One KM staff member estimated that only 10-15% of the K-Base content was being systematically maintained. One of the principal KM tasks as described in the Worktable project document was “designing the underlying knowledge management processes and support tools for maintaining and enhancing the content of the Worktables.” Thus, improving content quality and functionality of K-Base was seen as a clear GOHS—KM requirement. As such, two of the new Knowledge Analysts, along with a Perfect Solutions’ consultant, worked diligently on improving K-Base.

4. Rediscovering Youth

Sam Parsons, Ph.D. was hired as Vice President, GOHS—KM. Parsons previously worked as a research physicist and later as founding partner of a small management consultancy. Parsons changed career to focus upon organisational development rather than building tools and systems.

Parsons spent his first few weeks within Pharmaco and GOHS getting to know the KM staff and the Perfect Solutions consultants. They told him of the Worktable initiative, of which he knew little. According to Parsons:

The focus of all of the activities of the KM group was on explicit knowledge, that is to say, the managing of content. My past experience was in setting up expert groups and creating expertise maps—while here they were primarily looking at content.

KM was the interface between the Worktable and the Client One Window. This is just data warehousing—this is information management, which has nothing to do with KM. The cultural aspects of KM are entirely lost in this picture. But that was what people were working on when I arrived.

Parsons discovered that a GOHS—KM mission and business strategy did not exist. He organized an “off-site” for GOHS—KM staff members which resulted in the development of a so-called “Mission, Vision, Strategy (MVS)” document. Parsons cited three reasons for initiating this activity: to take on-board new staff, to share his vision for GOHS—KM, and to initiate a discussion about KM, given the divergent views within the team. According to Parsons, KM was the first GOHS department to have a “MVS”—shown below.

Mission

We want to lever the application of Knowledge, directly supporting the strategy of GOHS to become a top provider of services in the area of global order handling services.

Vision

We want to make GOHS an organization in which people enjoy and are encouraged to learn and create, share and use knowledge for the benefit of clients and themselves.

Strategy

In order to accomplish the mission the KM team:

- Wants to be a centre of expertise in the area of knowledge management
- Will drive the culture (change) that supports the knowledge management processes
- Will pay particular attention to the practical, tangible aspects of knowledge management in the context of Pharmaco GOHS.
- Facilitates the creation, maintenance, and dissemination of relevant knowledge (content)

- Will participate in KM networking activities inside and outside Pharmaco
- Will support training and information on knowledge management
- Maintain close working relationships with our clients and customers inside and outside GOHS

One KM staff member described the day off-site as follows:

After the work that we did on our day off-site, where we said “this is our mission, this is what we are going to do,” there was too much non-understanding among team members. Everybody had their own views and that was never aligned. Some good work was done, but we never referred to [the document]. I mean what do you do when you read “we should add to the enjoyment factor” what does that mean for my work? It means absolutely nothing. What should have been done was to translate that into tactical direction and things like “our first priorities are....”—and that has never happened.

Parsons decided to broaden the scope of GOHS—KM by taking on “KM projects” to assist the GOHS business, both at headquarters and country levels. The shift to a “project approach” from what was previously a single focus on “knowledge-enabling” the Worktable was significant.

According to Parsons:

It was clear that in that context KM meant data warehouses and information that was relevant to order handling services. Most of that work was being done by Perfect Solutions before and while I was here. I therefore focused on setting up the KM department, determining what type of projects to initiate.

I chose a project approach for two reasons. One, I believe in the organisational aspects of KM, and I cannot see it working in any other way. Two, I was not convinced about the success chances of the Worktable and I did not want to play all of my cards on the Worktable. KM was much more than the Worktable.

But not everyone in the team saw the project approach as a positive shift. One team member commented, “KM was the Worktable—that’s it. The only vision that had ever been presented was the global rollout of Worktable. The project trajectory, therefore, was completely out of scope.”

To ensure that KM would be ready to implement the S&S Worktable, plans were developed for global implementation. The recurring issue surrounding implementation, however, was that a

functioning S&S Worktable was nowhere in sight. Nevertheless, the team was anxious to begin “implementing KM” throughout the GOHS countries. Parsons commented:

When people were hired they were promised that they would travel throughout the world to bring the message of KM to all the countries. When I arrived, they were very frustrated that they were still at head office. Actually, mutiny was threatening me because people said, “this has been promised to us and we want to see it.” So I said “well if you think about the network idea of GOHS, it makes sense to share some of our tools with the colleagues in the network.” Then we started to develop the idea of implementation.

Therefore, with the assistance of Perfect Solutions, two KM staff members modified the S&S Worktable implementation-working document and developed a detailed “KM Implementation Plan.” The plan focused on implementing the underlying content management processes as they related to the currently available tools (e.g. SKAN, K-Base). The resulting process, briefly outlined below, would be delivered in each country by a GOHS—KM staff member.

- Appoint a Knowledge Management Coordinator (KMC), who facilitates in-country KM activities.
- Determine the local, GOHS-specific content needs through content analysis and content mapping (e.g. determine what documents, processes, information, etc; should be published on the on the Intranet).
- Identify and assign Content Owners, responsible for creating and updating assigned content.
- Create and implement a process to ensure that content is maintained.
- Prepare the technical infrastructure and provide tools training
- Assign content management responsibilities to KMC
- Publish content.

GOHS-KM was intent on building a network of KMC’s who understood the tools. A well-functioning KMC network could play a leading role in linking together the different parts of the GOHS organization. Parsons and the GOHS—KM staff “implemented KM,” beginning with the GOHS European countries. The 2-year country rollout plan is displayed below.

<i>Year 1 KM implemented</i>	<i>Year 1 KM partially implemented</i>	<i>Year 2 To be implemented</i>
Portugal, Spain, UK, Belgium,	Germany, Czech Republic,	UAE, Bahrain, South Africa,

Sweden, Austria, Ireland, Denmark, Poland	Luxembourg	Netherlands, ASIA
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The KM team anxiously awaited the delivery of the Worktable application. It was late, very late. Nevertheless, GOHS—KM continued with its content development activities. Then, priorities changed for the Pharmaco Managing Board. With the imminent introduction of the Euro and the need for readiness, the Board decided that the S&S Worktable technical efforts of GOHS—Program would be reduced in favor of a Euro readiness initiative. Responsibility for this fell under the GOHS—Program domain and consequently resources shifted from Worktable completion to the creation of a Euro ready infrastructure. The loss of resources meant that the Worktable application fell even further behind schedule. Wiegel described the change as follows:

The Euro mandate had a major impact on the way GOHS was run. Suddenly GOHS was charged with coming up with the short-term solution for the Euro. So there were suddenly things that had to be ready, immediate deliverables. The order was to “stop other things and deliver on Euro readiness.”

The relationship between external parties such as Perfect Solutions and GOHS staff became strained instantly. Global Systems Developer had to stall the development of their own KM business competencies and rumors surfaced that Perfect Solutions were becoming increasingly frustrated with Global Systems Developer tactics.

Nevertheless, the S&S Worktable project limped forward. The document management application to be used for the S&S Worktable Library was selected. Subsequently, GOHS—KM was invited by GOHS—Program to assist in developing the Library’s information requirements. Based on the specified requirements, GOHS—Program would build the Library application. It was envisioned that users would have Library access via the Internet based S&S Worktable.

Over the period of several months, GOHS—KM steadily submitted information requirements for the Library to GOHS—Program which had retained consultants from Documents Inc to develop the application. Many of the requirements submitted by KM could not be implemented using the standard “out-of-the-box” Documents Inc product. The Documents Inc consultants began building a largely customized document management application which, due to a “lack of communication” between departments (Documents Inc consultants reported to GOHS—

Program), remained unknown to GOHS—KM. Delivering document management functionality was slow and the resulting application was “bug” ridden due to the extensive amounts of custom code introduced to the application. This resulted in negative user feedback.

The first version of the Library was announced and launched in the internal GOHS head office newsletter as the “first deliverable of the Worktable.” However, lacking a functioning SS Worktable, the Library was sited in an emergent GOHS Wide Web.

Parsons decided to create a GOHS Intranet site—the GOHS Wide Web (GOHSWW). There were several reasons that led him to this decision. First, the Library would be functional in the short term without a Worktable to house it and an Intranet site was a viable alternative. Secondly, the eventual launch of the SS Worktable would only be accessible to Sales & Service users; whereas the Intranet site was available to all. Third, Parsons wanted to create a GOHS-wide tool for information and communication to bring the functions and country operations together. Finally, Parsons believed that several of the objectives of the Worktable could be realised using Intranet technology:

I thought we could immediately realize several of the Worktable objectives by making the project much easier. I saw that the Worktable was not going to be ready soon, so I said, “What are people waiting for?”

However, even as the GOHS WW was being developed, there was resistance. GOHS—Program viewed the GOHS WW development as “going for the quick win while we are working diligently on the S&S Worktable. They [KM] are in Program’s territory and instead should be working with us on the *Total Solution*.” The KM team, on the other hand, was enthusiastic about the prospect of an Intranet. One KM staff member summed it up as follows:

Parsons had always intended to build an Intranet. To be honest, every company that thinks it is going to do KM builds a huge Website. I was quite positive about it. Why wouldn’t you build a Website? That seems to be a common, normal practice, because it helps people do their job.

An external consulting firm was hired to deliver the Intranet site and shortly thereafter the GOHS WW was launched. The site contained links to GOHS head office information, information on

the Pharmaco network, knowledge sharing forums, and a functioning Library (but only for those with the latest browser technology). However, the GOHS WW received a chilly welcome from the other business domains. According to Wiegel:

The first criticism was that KM should be doing KM—whatever that was. Concerns were built up because GOHS—KM should not have been building the Web, GOHS—Program should have. Tools development was a threat. GOHS—Program saw the GOHS WW launch as a counter move to the SS Worktable and saw GOHS—KM as attempting to position themselves as coming up with a product. Rather than be enthusiastic about it, they were not and the GOHS WW was never embraced by the organization.

5. The Last Rites

GOHS—KM's dependency on external consultants was not sustainable. Parsons did not have access to a KM budget, as until then it was simply an IP&S consolidated budget. So, as long as people were within budget they could draw from the overall IP&S budget. However, employing four Perfect Solution's consultants, each costing an average of US\$2750 (Eur 2400) per day, was not, according to Parsons "a situation that you want to maintain forever." Further, Perfect Solution's consultants, although highly regarded professionally, were perceived as *de facto* staff members rather than external consultants. Around June, Parsons was informed that GOHS—KM was out of budget for external consultants and the process of off-boarding Perfect began. Parsons comments:

Then you see my problem. When you look at the skills in my team at that moment, it was virtually impossible for me to off-board Perfect Solutions because I would have been left with people with no affinity for KM at all. It was a very difficult decision, because at that moment the skill set of the team was not such that I could rely on them to cover all of the activities that were needed to implement a KM environment. It therefore took some time to off board the Perfect Solution's people, an expensive exercise.

Organisational change also ensued. The GOHS—KM and GOHS—Training & Development departments were merged to become "GOHS—Learning." The rationale for the merger centered on the envisioned synergies that existed between the two departments and Parsons's willingness to take responsibility for training and development.

A Content Analyst left the team for personal reasons. She insisted that she would not return to KM due to “unfulfilled professional expectations.” Parsons stated, “She was told that she would travel around the world, implementing KM—and that didn’t happen.” ”

After an investment of nearly two years and several million dollars—the viability of achieving a “seamless and easy-to-use” knowledge-enabled Worktable was being questioned. According to Wiegel “the Worktable wasn’t going anywhere, GOHS—Program just couldn’t pull it off. The complexity was such that it could not be started up.”

The sense of concern reached the highest levels of GOHS and Pharmaco management where it was concluded that given the high-level of dependency on outside IT consultants, GOHS was not in control of its IT-related projects. The Head of GOHS was under considerable pressure from the executive to cut costs. He began to raise specific concerns regarding the “value-added” of the Knowledge Management function. According to one Board member, the Head of Knowledge Management had not linked knowledge management with the actual jobs people carried out in the business. These sentiments, coupled with the absence of any senior executive coming to Knowledge Management’s defense, led the GOHS CEO to hand down the decision to dissolve GOHS—KM. The S&S domain absorbed the KM tools, while the training and development group was handed to HR. The Knowledge Consultants and Parsons were advised and assisted in finding new positions, either internally or externally.

Thus, the Board handed down a significant decision: *the Worktable initiative, as originally envisioned by Top 5 Global Consultants Inc and Perfect Solutions Inc, would be abandoned—and GOHS—Program as a separate staff function would be dissolved.*

6. Discussion

In spite of fulfilling many key success factors such as senior management sponsorship, significant financial support, and highly skilled people Pharmaco’s knowledge management project failed to deliver benefits. People associated with the project faced career setbacks, and some even lost their job. The organization invested considerable sums of money with little or no

return to shareholders. In this section we analyze Pharmaco to develop constructs that can better inform practice for knowledge management.

Within the GOHS Project, knowledge management was implemented along functional silos: sales, product implementation, customer service and so on. Each function wanted its own Worktable, in other words function specific IT interfaces to the knowledge Library or knowledge repository. An 'Alpha Worktable' (see again Figure 1) was to be developed to form a link across the functional Worktables. People in each silo would be able to define the knowledge they needed in their function to be stored in the knowledge Library. Therefore, people defined content at a very high level to be stored in the Library. People expected to be able to store share, transfer and retrieve information that ranged from subjective opinions to facts such as customer addresses and mobile phone numbers. Content relevance to others was hardly considered. The technical architecture grew in complexity as people had differing requirements. The IT domain's promises, of 'easy to use interfaces' that allowed seamless interconnectivity, were unfulfilled. Eventually executives and senior managers withdrew their commitment from the IT domain and merged it with another domain. Consequently, the Knowledge Management domain was unable to deliver the content they had developed, and executives disbanded it as well.

A review of the literature shows that knowledge can be considered at several units of analysis. The broadest unit is the industry (Leonard 1998) and the narrowest is the individual (Nonaka & Takeuchi 1995). Units that lie in-between include the organisation (Hasan 1999), function (Davenport & Klahr 1998), business processes (Braganza, Edwards, & Lambert 1999), groups and team that form communities of practice or interest (Brailsford 2001). Many organisations form communities of practice to generate and share knowledge. For example, Ford defines communities of practice to be central engineering, body assembly, paint, materials planning and logistics (Stewart 2000a). Each community of practice, in essence, pulls together people from the same function. Yet vehicles are not made by a single function: thus, knowledge that improves the efficiency of the paint function can hold significant implications for other functions such as body assembly materials and planning. Stewart points out that Ford's knowledge initiatives based upon functional communities have delivered significant savings, however, it did not prevent the Firestone tire debacle (Stewart 2000a).

The danger of managing knowledge on a functional basis is that knowledge interdependencies are barely considered. This leads to knowledge, and its supporting IT systems, being defined in broad, generic terms because each function focused upon its own knowledge management developments.

The context for specifying knowledge should be cross functional processes and the activities that are coordinated by each process. Activities are ‘day jobs’ people and systems carry out to address stakeholder expectations. People in cross functional processes need to share their knowledge that is created in their activity. They need to combine knowledge that is dispersed across several activities to ensure the business process operate effectively across the organisation. Knowledge in the context of business process should be visible to the right people, in the right function, at the appropriate time. This is because people creating knowledge in one function (within the process) would understand the knowledge requirements of colleagues in other functions in the same process. They would understand the implications upon colleagues ‘day jobs’ were the knowledge to be withheld. People who need knowledge from other functions can state their knowledge requirements more clearly as a common language is developed across the process. This is vital as the same knowledge can hold different meaning and relevance to people in various functions that are in the same process. By examining and managing knowledge on a cross functional basis people understand changes *of* meaning and relevance that the same knowledge has to colleagues in different functions. This visibility and understanding of the importance of knowledge to others in the business process should lead to greater efforts to share knowledge.

Construct 1. Manage knowledge interdependencies across functions

Pharmaco’s knowledge management project became associated with IT developments, exemplified by Worktable and SKAN. The knowledge content held in these IT applications included data e.g. customer name and address; competitor intelligence e.g. market share; and employee information e.g. names and contact phone numbers. The knowledge repository was being developed to enable people to search on a ‘term’ and identify what was known or being

done about that subject. The underlying assumption was that once people had the information they could then take appropriate actions.

Pharmaco's experiences suggest that defining content to be held by the knowledge repository can become unfocused, with people asking for every item of data to be held by the system. In order to prioritize content, people doing the activities that form a business process should define the content. Aligning content to peoples' activities requires them to focus upon the information they specifically need to be able to do their 'day job'. The need for a particular piece of information can then be scrutinized in the context of other activities that form the business process to assess its importance.

There are two types of knowledge: tacit and explicit (Polanyi 1966). Tacit knowledge is highly personal in nature (Nonaka & Takeuchi 1995). It is steeped in experience, commitment, and involvement. Tacit knowledge is context specific, which when considered together with its uniqueness to individuals makes it difficult to share through formal, structured communications. Tacit knowledge is embodied in people's behaviours and know-how. Explicit knowledge refers to knowledge that can be transmitted in systematic language. Explicit forms of knowledge are codified and structured, and hence easily communicable. Explicit knowledge is contained in documents, manuals, and information systems such as databases (Leonard 1998; Madhavan & Grover 1998; Nonaka 1994; Nonaka & Takeuchi 1995; Seely Brown & Duguid 2000). IT systems are better suited to support explicit knowledge, which people need to structure and configured to do their 'day jobs'. Hence, systems developers and users can share a common vision of the relationships between data that people need to perform their job. Pharmaco concentrated heavily upon IT. This is common to many knowledge management initiatives that yield poor results (Davenport, de Long, & Beers 1998). Tacit knowledge, especially peoples' behaviours, is rarely the central feature of a knowledge management project (Earl & Scott 1999). This suggests that in addition to defining explicit knowledge and the supporting IT systems peoples' behaviours should also be considered (Cohen et al. 2000).

Construct 2. Knowledge management projects should not be synonymous with IT implementation

Pharmaco's knowledge management team attempted to define the content that would be used by people indifferent parts of a global organization. The team consulted with knowledge users but these were at managerial levels. Hence, the managers were proxies for the 'real users' – people who actually did specific jobs. This gave the team a high level view of knowledge content.

Understanding the knowledge requirements to operationalise a cross functional process goes beyond the rhetoric of involving people. At its heart, knowledge is integral to people. The knowledge that people have, the ideas they generate, what they share and how they utilize it, needs to be managed with care (Ruggles 1998). Knowledge is highly personal: gained over long periods of time, through an individual's experiences, background and cultural heritage (von Krogh 1998). People at all levels of the organisation must feel part of the knowledge management initiative (Davenport, Jarvenpaa, & Beers 1996). They must be able to contribute their ideas, shape knowledge in a way that enables them to improve their activities and feedback the results for others to benefit (Grover & Davenport 2001). People should balance and align explicit and tacit knowledge across functions. This requires senior managers to create a space within which people from different functions can come together to forge knowledge across each business process (Fahey & Prusak 1998; Seely Brown & Duguid 2000; von Krogh 1998).

Construct 3. Actual users should identify knowledge.

Pharmaco used three consulting and IT developing firms at different times. Each external consultancy company supplied its own people, who brought with them different methods and language. The technologies deployed by the companies overlapped, conflicted and often operated independently. The external consultants maintained key roles of influence over the nature and direction of the knowledge management project. They positioned themselves between executives and project team members. This placed team members at a disadvantage when the consultants left, as they took with them many of the artifacts associated with knowledge management project. This included language, workshop style, and analytical tools.

People in the organisation must own and manage knowledge management initiatives. While external consultants and IT developers can be used to provide analytical tools, executives and senior managers must make external artifacts of knowledge management projects relevant to

their organisation's situation. People in the organisation should develop a language that is common for understanding the vision of knowledge management in their organisation. They should then personally communicate their interpretation of knowledge management throughout the organisation (Stewart 2000b).

Construct 4. The artifacts of knowledge management must be owned by the organization.

7. Next steps

The intention of this research is to increase the probability of knowledge management being implemented in organizations and hence to reduce the risk of other knowledge management projects failings. However, we recognise that the constructs are based upon the experiences of one organization and hence are limited in terms of their generalizability. To overcome this limitation our next step will be to study organizations that have had similar experiences. Our aim is to identify whether the above constructs can be found in their experiences of knowledge management implementation. This will improve the robustness of this research. In addition to this, we have through our discussions with the managers involved and after reviewing current academic research identified two issues that we believe are worthy of further study.

One, the organization's readiness for knowledge management was barely considered by the external consultants or the executives. In hindsight, people in the organization were not ready to share knowledge with others, to loosen functional boundaries, or to put aside past divisions. People continued to behave in traditional ways and were unwilling to change these behaviors. Thus, we believe there is a need to develop an analytical tool to assess organizational readiness for knowledge management. The scope of the tool should include tacit and explicit knowledge. The results should serve as a bell weather for the likely implementation of knowledge management. The assessment should be aimed at executives and senior managers as well as key influencers in the organization. Such a tool can take the form of a questionnaire with a seven-point scale so that individuals can assess their own perceptions of readiness. This could be followed up with semi-structured, informal interviews by people on the knowledge management project team. The tool can be located on the intranet so that it is easy to administer, with

potentially instantaneous feedback to respondents. The aim should be to develop a rich picture of the organization's readiness for knowledge management.

Two, another next step is to determine people's propensity to want to learn about the mistakes others' have made. Pharmaco's executive and senior managers had available to them many articles that set out the pitfalls to avoid (Earl 2001; Leonard & Rayport 1997; Madhavan & Grover 1998; Nonaka 1994). Yet they fell into many of the traps that others had fallen into – or to use Fahey and Prusak's analogy – Pharmaco's executives committed a number of 'sins' (Fahey & Prusak 1998). As academic researchers in the field of knowledge management we need to be able to distinguish the drivers of this behaviour in management teams. Without this many more knowledge management projects will find their way into the 'project graveyard'. Rather than contributing to organizational prosperity, a mismanaged knowledge management project destroys shareholder value.

In summary, we examined a knowledge management project that well and truly failed. There is little more we can offer to Pharmaco's executives beyond consolation. However, practitioners and academics can use the findings presented in this paper to influence their knowledge management actions.

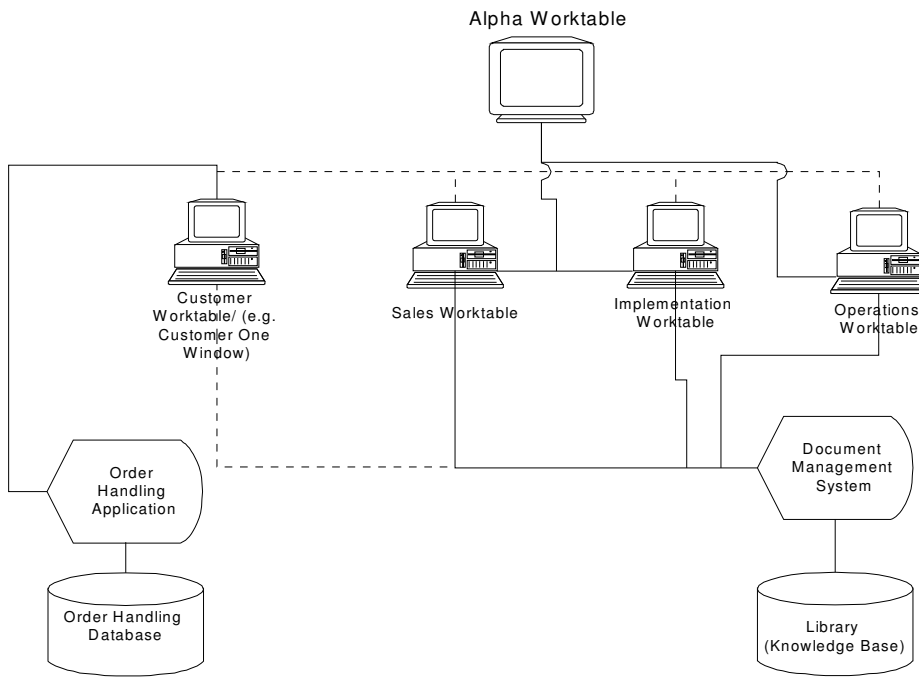


Figure 1: Overview of the Worktable

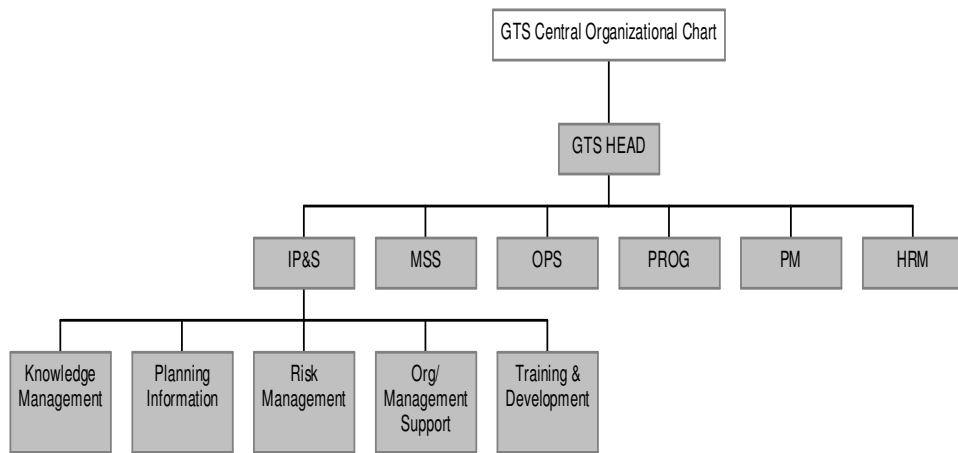


Figure 2: An abridged organization structure chart

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