

infoLeader magazine

for the leaders of today and tomorrow

Streamlining Supply Chains

What a Waste

**How You Sap Your
Emotional Energy**

**The Importance of
Clarifying the Corporate
Vision**

**Why an interview is a sales
pitch not just a chat**

**Web Services: Where are
they now? Hype or Reality?**

**Knowledge Engineering:
Grand Promises, Missed
Opportunities**

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Editorial

Mark Stanarevic

Editor-in-chief, infoLeader Magazine



In this end of year edition of **infoLeader** we take a look at some topics of interest in the business community and at large. We have a great article on preventing energy drain in the workplace as well as articles on interview strategies and the hype of web services and whether they are really cutting it.

Our feature interview with a Director of Open Harbor exposes some of the secrets to supply chain optimization and future trends in that area. George Ambrose writes a brilliant article on the necessity of corporate vision and Skeeve comes across with his interesting workplace insights to help save IS time and resources. Also we have an article on Knowledge Engineering and adjacent field interest to that field.

Looking back at the year it's been a very interesting one indeed in the ICT arena. Novell is in the purchasing phase of Caldera Linux, SCO instituted legal proceedings against IBM and the hype of .NET and J2EE and web services was rife in the media.

As InfoLeaders we need to stay focused on delivering core value and look beyond product offerings. The culture we create in an organization, the emotional mood and dedication that exists in a company is often more of an indicator of customer satisfaction than any potential software application. The emotional state of the inner self will get reflected back in the department and out to the customers. The real definition of values, and a congruent work culture needs to be present and living in an individual first. As leaders can we shape individuals to fit the mould, should we recruit to fit the mould or create a mould that is flexible for different levels of personality and achievers? These are some of the core questions as InfoLeaders we will need to answer.

This whole fuss of EQ (Emotional Intelligence) isn't rocket science. It is actually common sense. You treat people well and with respect and they treat you well and with respect. And this can often mean they will work with dedication and are happier. For the quasi-leader who cannot see their own flaws lies the issue. Engaging in negative emotional patterns or stressful behavior leads

staff to be miserable. Staff end up feeling like trash and as a result this gets reflected back to the customer most of the time more than likely.

We can bring numerical models and methodologies to measure these factors but that's often where the problem lies. The use of the cartesian "business" mind set and habit of decomposition of a relation into parts. By focusing on one element we can often miss out on the entire hologram of emergent behavior. A Common "sense" we all share is feeling. Yes we are in business and lead and utilize resources to achieve the profit forecasts for the enterprise. We need to connect with our people more and feel what they feel and demonstrate that as leaders our humanity and shared vision can help us walk down the path of success together.

As I have said previously, it is easier to say this than actually to do it. The main reason for that is because it is hard work. Its hard work opening up your true feelings to staff. Its hard work being a great mentor and friend. Its easier ignoring people or writing a memo than approaching them one on one and sharing their passions and fears and dreams.

If there is only one gift that you take away from reading **infoLeader** then I hope it will be the knowledge of what a leader really is. Not what the cover of a toys for boys magazine leads you to believe but what you truly feel.

So what is a leader really all about? That's something we all learn along the journey we choose and follow. In essence, we are creating the very definition as interact with others.

What would you like being a InfoLeader to mean for yourself?

Thank you in advance for exploring this journey together.

Your Editor,
Mark

Have a wonderful holiday season and stay well. Our first issue next year will be out the later part of January.

Streamlining Supply Chains

Interview Questions with Mahipal Lunia

Director of Solutions, Open Harbor.



Q. Mahipal, where do you see the future of supply chain integration and with Web Services?

A. A company is typically only as good as it's overall supply chain and being able to move with partners and suppliers across the world in near real time is one of the key defining characteristics of the new emerging supply chain. The second key to the emerging supply chain is its global nature, almost no true supply chain remains purely a regional or national phenomena. The supply chains are moving from being hardwired and one way is to do more things with adaptive and emergent systems that learn and respond to signals from the market in real time.

To be able to learn and respond to changes in real time for maximum profitability and be truly adaptive to move on the fly means that the supply chain must be able to add and remove partners, suppliers, new customers on demand or with very little lead time. Further in the post 9/11 world, security against global terrorism is something that every supply chain has to deal with as well. This means that not only does the supply chain need to be adaptive but it also needs to offer an unprecedented level of visibility into the parties involved, products shipped, procedure followed and physical tracking of these goods to all stakeholders in the supply chain.

This new adaptive, vigilant and self aware nature of supply chains calls for a new breed of technologies to meet with the challenges. The current technology

“The web services paradigm will have a transforming effect on industries with two key characteristics, one those that have rising cost structures and need streamlined process and two companies who compete on speed (such as fashion, technology and consumer electronics).”

such as legacy systems and client server software is unable to meet with these challenges. This is where Web Services come into play. Web Services essentially allow computers to talk to one another easily and in a secure fashion. These conversations take place through Internet standards and protocols that allow computer applications to reach beyond the confines of operating systems, programming languages, and middleware. Web Services using SOAP and XML communicates with other systems seamlessly. The language of communication is XML, which “tags” digital content in standardized format. Once systems have been linked that way it becomes easy for business to be able to connect their operations quickly and cheaply and thereby cut their transaction costs and improve service delivery. And this technology for the first time offers the make the promise of an adaptive, vigilant and self aware supply chain possible.

Q. Can you please explain the concept of Global Brokerage?

A. One of the key problems that pioneers such as Open Harbor are addressing in the area of global trade management is how do multi national companies, freight forwarders and transportation companies clear the goods with customs in the most effective and efficient manner. It involves with processes such as making sure when goods are moving along your supply chain from one country to another they address key concerns such as figuring out the right description, the right valuation, they have the right documents and that these goods can be electronically cleared with the

various government and customs agencies around the world.

Historically customers and their brokers have communicated via phone and paper, which often results in discrepancies, delays and problems due to incomplete data. Then layer on we have very unique customs clearance processes in each country. This is where technology comes in again to be able to move this “clean data” across borders and have it cleared with government agencies as or before the goods hit the national boundaries. This allows the process to now become efficient, and adaptive to changing needs while ensuring an unprecedented level of security to all parties involved.

The removing of these inefficiencies via technology and smart applications is what Open Harbor terms Global Brokerage (TM).

Q. *How can the web enable true B2B portal development and not just be another fad. Do you think Web Services are here for the long haul?*

A. The web is in essence a “collaboration platform” and what it allows is portals or gateways into applications, people and projects. It is all about bringing them together in context so as to enable work to be completed in the most effective and efficient manner. Collaboration and using the internet to create these workplaces or portals is one step forward towards smart collaboration, and in my opinion it is here to stay.

Along with the whole theme of collaboration enabling technology is the key. This is where web services come in. The web services paradigm will have a transforming effect on industries with two key characteristics, one those that have rising cost structures and need streamlined process and two companies who compete on speed (such as fashion, technology and consumer electronics). Here web services enable these industries to have a more cost effective solution to their problems whilst enabling them to be nimble enough to move as the markets and consumer decisions change.

Keeping this in mind, I believe the adoption of web services has just began and its promise of effective, speedy and efficient use of technology can be seen in such pioneering companies such as Open Harbor, GT Nexus and Grand Central to name a few.

Q. *How can smaller suppliers in the US or Australia compete with internationally price competitive countries such as China or India in regards to exports?*

A. Competing can happen on three fronts. A firm could compete either on the basis of lowest cost, deep customer relationships or cutting edge technology. Though countries like India and China do produce some of the most price competitive products, and it would be hard to compete with them solely on the basis of price, the smaller supplier need to focus on leveraging these low priced production powerhouses to build the next generational products and services while building deep customer relationships in local markets, as the smaller suppliers will have the advantage of home turf.

On the international front, the suppliers basically have to find and fill needs of customers whose needs have not been met. At the end of the day, the most profitable business is one which enables its customers to become more profitable. If companies find niches and fulfill needs not addressed by price competitive suppliers, then the smaller suppliers be it in the US or Australia have more than a fighting chance to prosper nationally and also export these capabilities to international markets.

Q. *How can CIO's cut costs whilst streamlining their supply chain?*

A. The key challenge is to look at the health of the entire extended supply chain, when you look to only optimize locally you create system level inefficiencies. Hence the key is to make sure that you are able to cut costs in the most efficient manner and to employ the best technology and automate the manual tasks. And the platforms that you build should reflect the philosophy of how the company competes’ meaning. If you say you are a high tech company that essentially brings out new versions of products every few months then the supply chains should reflect the company’s philosophy of being agile and able to respond to changes in very short time.

On the other hand if your company is in a mature industry such as chemicals manufacturing then you need to make sure that your supply chain also reflects this. What is important here is that your supply chain is process driven and the focus is NOT so much on speed but on making sure

processes are followed and time is sacrificed to a certain degree to get efficiencies on cost.

So in order for a CIO to cut costs whilst streamlining their s, they need to focus on making sure that the companies philosophy is reflected in their supply chain. I see the supply chain as the life blood of most organizations and the health of ones supply chain usually determines how well a company competes in the market it serves. Hence if the executives focus on making sure their supply chains are effective at the level of the eco-system, then the costs will start to drop as new technology is employed to make the entire system more effective. The key is Global Optimization (system optimization) not Local Optimization (parts of the whole optimized).

Q. You mentioned real time supply chains responding to market conditions... if these supply chains are exposed as Web Services what rule structures must be in place to enable effective price negotiation based upon volume, quantity and other factors without involving the human element?

A. Web services can bring a whole new level of visibility into the system. One of the key things to remember is that if supply chains adopt web services technology to enhance their competitiveness, then an unprecedented level of flexibility and visibility is possible in the entire system. These web services can EMBRACE existing systems and infrastructure, EXTEND their functionality and effectiveness and EVOLVE the entire firm to a new level of competitiveness.

This is possible because these services will communicate seamlessly with your current systems whilst enabling partners and customers of your choice to be able to connect and collaborate with your systems via web services without having proprietary technology. This creates visibility into the entire system, and once you can see into the system you can control it. What you cannot see, you cannot control or leverage.

A good example is visibility into duties, taxes and regulatory requirements when goods

“I see the supply chain as the life blood of most organizations and the health of ones supply chain usually determines how well a company competes in the market it serves.”

cross national boundaries. By using global trade management web services such as Open Harbor supply chains of multi national companies can have the latest information pushed into their supply chains to calculate important decision criteria as total landed cost, generate documents etc. not just on one desktop or client, but actually be able to distribute these across all partners and parties in the eco-system. Hence by creating visibility into the information and levers of the system, it allows corporations to actually make the system more intelligent.

Q. If a supply chain is external to the company what are the inherent risks in this process?

A. Most supply chains are both internal and external in the current context. It is internal to the extent that it is your supply chain and all your customers and suppliers link into the system, while it is external in that other parties and partners link into the system. When thinking of risks you have to manage risk at two levels, the level of information and the level of physical goods.

The key to making an supply chain effective is that the information on products and their movement should be made accessible to all partners involved with the transaction who are typically external to the companies firewalls. This can be a risk if there are no measures put in place to build security around this information in the product catalog (where most product information will be stored). With today's technology you can build multiple levels of security and ensure that only "authorized parties" have access to this information. This can mitigate the risk of information being exposed to wrong or unauthorized people.

On the physical front, meaning, physical movement of goods there exist and initiatives such as the Cargo Security Initiative helps facilitate procedures and processes to ensure end to end security. So as technology is leveraged security, which was the biggest risk, can help in mitigating risk at both the level of information and goods.

What a Waste

Skeeve Stevens, *skeeve@eintellego.net*
General manager, United IP



An employee checking his bank balance at lunch isn't much use to anyone. Another employee reading a news item during the day – nothing. Yet another employee sending a funny joke to a few colleagues – harmless? What about the employee who keeps their online trading account open in the background? That same person also making the odd trade – Should this activity concern you? Yes it should.

Corporate networks, both internal and their external internet connections are slowly drowning in non-work related activity. A few employees doing a few little personal things during the day doesn't really add up to much. I mean who doesn't make the occasional personal call from work? We are all guilty of stealing a little of works 'time'.

In a large enterprise this sort of activity, when not kept in check can turn into something that not only 'costs' the organization significant money, but can actually do damage to the smooth running of the network.

A couple of years ago the CEO of a company I was working for wandered into the IS area and asked if there was something wrong with the network. They were expecting an important email from the office of a federal minister and it was sent over an hour ago – yet it had not reached her desk.

After investigating I found that our internet connection was swamped. A user in the finance department thought a particular email was funny – just a little video, no more than 4

megabytes. So they decided to send it to some of their friends. These friends consisted of nearly 50 people inside the company (a few internal mailing lists and so on) and about 25 outside the company. 4mb times 25 – 100mb – for a 128k ISDN (2 years ago remember!) is quite a significant amount of traffic and the connection was barely coping with it.

“So with all these extra hours, should you forgive your employees for these liberties they are taking with the corporate internet connection? The problem is where to draw the line – who to let do it or who to not.”

We slowly killed off the outgoing mails, hunted down the user and gave them a lesson in the quickest way to lose all internet access – annoy the CEO.

This is one of numerous examples I have been involved in over the last couple of years where personal or 'entertainment' traffic as we often called it was responsible for crippling either

the company's internet connection or the internal network itself.

Many people that I know who are in I.T (and more who are not) arrive at work and spend the first 10-15 minutes reading the online general or I.T news. This activity isn't harmful in isolated incidences, but when you can't get on the Net between 8.30am and 9.30am because of the sheer volume of surfing, something is wrong.

Online News, Hotmail (and others), online shopping, online banking and trading, peer-2-peer, movie websites, online forums and chats, comedy websites (Dilbert is a huge I.T favourite!), software downloads, music downloads, dating websites (yes I have seen it!), booking and researching holidays, online gaming, adult websites and much, much more – your companies network is probably being used for it.

A survey conducted in New York on 451 employees and 670 employers gave the following results. The number one reason workers use the Net on a daily basis is to catch up on the day's news. 72 % of users use the Internet for news, followed by 45% making travel arrangements and 40% trying to make online purchases of some type. 37% of users said they use the Net to look for new jobs and 34% checked on their stock market investments while 13% said they

Skeeve Stevens is an Internet Visionary who has a motorcycle, 2 cats and a wife... yes, in that order :)

downloaded music and 11% said they played online games. Lastly, 4% openly admitted checking their favourite porn sites.

What does all this cost your enterprise? Well you need to start counting the hours that an employee wastes, by the number of employees doing it, and you will probably faint. The largest organization I have worked in (2500 employees) probably had (we guess) over 100 hours per day of time (most likely) wasted by the Net drain. This was based on an analysis of a few days of traffic, excluding sites which were obviously work related. The US Department of Labor said that wasted time costs companies US\$3M for every 1000 employees that a company has.

Time is wasted. Money is wasted. Resources are wasted – both network and human BUT (and yes there is always a 'but') – does it really hurt you?

They say that the working day is getting longer and the average employee is putting in an extra 5-7 hours per week into their job. This is from people turning up early, leaving late, working on the weekends or when they go home as well as those not going anywhere for lunch or breaks – employees sitting at their desks while they eat, still working along. This is something I am very familiar with.

So with all these extra hours, should you forgive your employees for these liberties they are taking with the corporate internet connection? The problem is where to draw the line – who to let do it or who to not. Do you let those managers who may work many extra hours have the luxury of uninterrupted internet access?

I think that an enterprise has to develop a very carefully worded, but easy to understand policy, and carefully consider the needs of the company and the employee's. If Mrs. Jones in Accounting spends her

lunch time doing her online grocery shopping, and doesn't leave her desk – Is this a good thing? Yes and No... Yes for the company in some ways – but no in that people really should be getting away from their desks every now and then to recharge. Going for a walk, doing the water cooler thing and just generally moving – is a good thing.

There are many ways to look at this ever growing problem, but a CIO along with the HR department really need to work together to develop an 'Acceptable Usage Policy' for their staff – and preferably get them to sign it. What?! Sign it? Well I have been involved in several incidents where employees have been downloading illegal or extremely inappropriate material and we have just had to act – mostly resulting in the removal of the employee from the company. This signed document helps you in unfair dismissal cases where the employee pleads ignorance of what they were allowed to download. This WILL eventually happen to you.

A recent survey by the Gartner Group for software filtering company Websense revealed a few interesting facts:

- 73% feel it is acceptable to surf

the web at work during breaks, but only half feel it is appropriate before or after official hours.

- 44% admit using the internet from work for "personal interests"

Websense, based in San Diego, California-based said that it estimates U.S. companies lose US\$63 billion a year in lost productivity due to the Net, which the company claims is a "major distraction" for employees.

In another recent survey conducted by the Santa Clara, California-based Saratoga Institute, said that only 4.5% of the 244 companies surveyed said they were "extremely concerned" about employees surfing the Net for personal reasons. 15.2% said they weren't concerned at all, and about 50% said they were "somewhat or more concerned."

Should you be 'monitoring' what your employees do with the Internet? This is not a question I can answer for you. The solution will be different for different types of workplaces and how much it is actually being abused.

There is software out there to profile your staff and see what they are up to. Should we know? I think yes... it is our network, and our dime – how we actually respond to what we learn, that is the hard part.



How You Sap Your Emotional Energy

George Gintilas



Following on from last month, in this issue I'd like to expand on how you personally sap your own emotional energy in the work place and the effect that this has. This is an area that wise leaders take time to maintain (and it is mostly unspoken) but it is critical to your ongoing real success in life.

Energy sapping happens in a number of ways. They can be categorised under a few broad headings:

**Mental,
Physical,
Environmental,
Nutritional,
Emotional
and Spiritual.**

Each of these ways if not maintained correctly can sap you of vital energy that is required for you to function and be the most effectively day to day. Of the six in the list it is the last two that are most neglected and therefore the most likely ones, that if handled, can boost your energy the greatest, and make a real difference.

The first four are obvious and we are well educated about them so I'll go over them quickly.

Mental

This one we know about very well, especially when your mind is overworked thinking and juggling a dozen things at once. Mental stress is sapping you of vital energy leading you to think in inefficient ways. Lacking information on your

particular project.

Some important questions to ask:
Q. Do you keep a good up to date TO DO list each day? Most successful people these days do this very well. It is common practice.

Q. When was the last time you attended a professional development course?

Never allow yourself to believe that you know enough. As that will be the day when you stop learning and developing and you begin to slowly lose the respect of your team.

You must stay abreast of developments and stay 'ripe' in your mental faculties. Otherwise mental fatigue begins to set in.

Physical

Gymnasiums have become commonplace because of this important area. If you don't keep fit, you drag your body around each day with sloppy muscles that fatigue easily. As they say, 'use it or lose it.' When you lose it, you place a lot of pressure on the remaining muscles to do the work in moving you around for you. This is very tiring. You then feel more tired and slow down even more going around on a downward spiral. Exercise is a MUST. It frees up a lot of energy by waking up the underused muscles.

Environmental

This is the environment you work and live in. The pollution in the air where you work, going into your lungs. The fluorescent lights zapping you, the electromagnetic radiation

from PC screens, the sterile office environment with little fresh ionised air. If there are few plants in the office – you breathe in less than natural fresh air. The contaminants in the water you drink. All these add up to a percentage of energy sapping. Changing some of these areas can show a difference.

Many of these stressors become habitual and your body adapts to working in them. Eventually you don't even realise the amount of effort your body is using to sustain the work effort required under these conditions. We numb out our body to cope. I walked into an office a few months ago that had catered carefully for the environmental effects of a standard office. It felt like walking into a tranquil garden with a hive of activity quietly going on around the place. It felt so peaceful yet it was busy. My body was saying 'yes!' I can work here peacefully. It is rare to find

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For more information visit George's web site, where you'll find more information, articles, products, programs and news to help you further. Web site: www.relaxedmind.com or email him at georgeg@infoleader.net

such office environments that do not add stress to your body and sap your energy.

Nutritional

The food you eat: Excess sugary food – forcing your body to work hard to recover. Smoking – which among other things kills off vital oxygen for your cells. Alcohol – which dehydrates and dulls your mind. But mostly, energy sapping happens in this area because of the lack of vitamins and minerals in our food. This is due to your daily meal habits. But also it is well known that the soil in our farmlands is not as rich as it once was only a few decades ago.

So the important point to make here for a quick boost is to make sure you take a strong vitamin and mineral supplement, and not just one little tablet a day. The food your cells need in your body to thrive normally requires a strong supplement. I certainly notice the difference each day by taking a strong mineral/vitamin.

Emotional

The Emotional drain on your energy is one of the least talked about in an office environment because we have traditionally excluded this area from business as being a sizable influence to business performance. But it is a big factor when things are added up. When you feel drained it is easy to blame it on something else other than your emotional makeup, which is too close to the bone.

Many people have no idea what emotional blockages could do and are doing to them. This is especially true for men in our western culture. Once we are taught to not express or consider our feelings, then a whole range of things are shut down that we do not readily consider anymore.

So how do you personally sap your energy emotionally that you are probably not even aware of? This is critical issue for people in I.T

because computers are the furthest away from this. So it is one of our biggest blind spots. By addressing this important area you will work so much more comfortably and get much better results. You will also know more about what is going on in the work place and have more idea and control as to why you are treated the way you are in your organisation, and why your employees in your team behave the way they do.

Leaders have the ability to regulate this important area. Without this regulation you react when you shouldn't, you deny, blame and overly justify things, and the people you are leading – your team – feel the effects of this. They will not normally say it directly to you. They will whisper it amongst themselves in between moments when no one is around and talk to their trusted colleagues after-hours.

I've personally learned that it is wise to have emotional maintenance sessions on myself every year, even though I'm fine. Because I've learned that if I don't do it, the emotional blocks will creep up and hit me later on. I am constantly amazed at what we store in our bodies that we forget is there, because of the slow build up over time – all the unfinished business that saps vital energy each day.

If you do not maintain yourself emotionally you may begin to find that:

- You feel like you are carrying around a weight in your body, even though you may be reasonably physically fit
- Certain relationships are becoming more shallow and distant, drifting apart.
- After a good sleep you still wake up feeling drained.
- You can't get the office work out of your mind when you get home.
- You have more than one employee with behaviours that you don't like.

- You begin snapping and reacting to certain behaviours in people.
- You don't smile enough around the office as you did before.
- It's hard to get enthusiastic about a project and hard to get this across to your staff.
- You have lost that spark or spring in your step.

People, who do not understand emotional maintenance work, attribute losing energy and spark to growing older or old age. It has nothing to do with old age. It has everything to do with the unfinished emotional material that has weighed you down over time. Most of this occurs unconsciously because we have a good ability to shove it away and suppress. And we suppress it so well that after a while we even believe that it is gone.

Some questions to ask yourself honestly:

- Who in my company or team do I have the least contact with? Whom do I avoid contact with?
- Whom among my staff do I have some unanswered questions with?
- Whom in the team do I not like?
- Whom in my work life have I longed to say something to but never have?

You may think it is trivial or unimportant. But I think you will be amazed at what this can release energetically when completed. So DO IT.

Wise leaders maintain relationships and dialogue even when it appears that it is not necessary or they are over doing it. That's why regular meetings even when it looks like it's not necessary are essential. It is critical that a leader maintains an air of openness among staff, where material gets expressed and aired and not just suppressed.

Good emotional maintenance gives you a feeling of feeling lighter and more alive and human. In other

words you have much more energy. Unfinished business with people really does stay in your nervous system and it takes a lot of energy to keep it shoved down and suppressed. Many times this is the weight that people feel in their body when there is no physical cause for it. I see this many times in my practice.

Each time you neglect to say something personal to someone you create a little unfinished pocket of nervous system in your body that lies in waiting to complete its function. If enough of these little unfinished businesses build up over time, you are sapping vital energy away from your daily tasks.

Emotional maintenance is a prerequisite to more aliveness, energy and charisma that certain people seem to have. You become more engaging and your presence commands more attention naturally. This is the realm of emotional energy and it can be under more of your control.

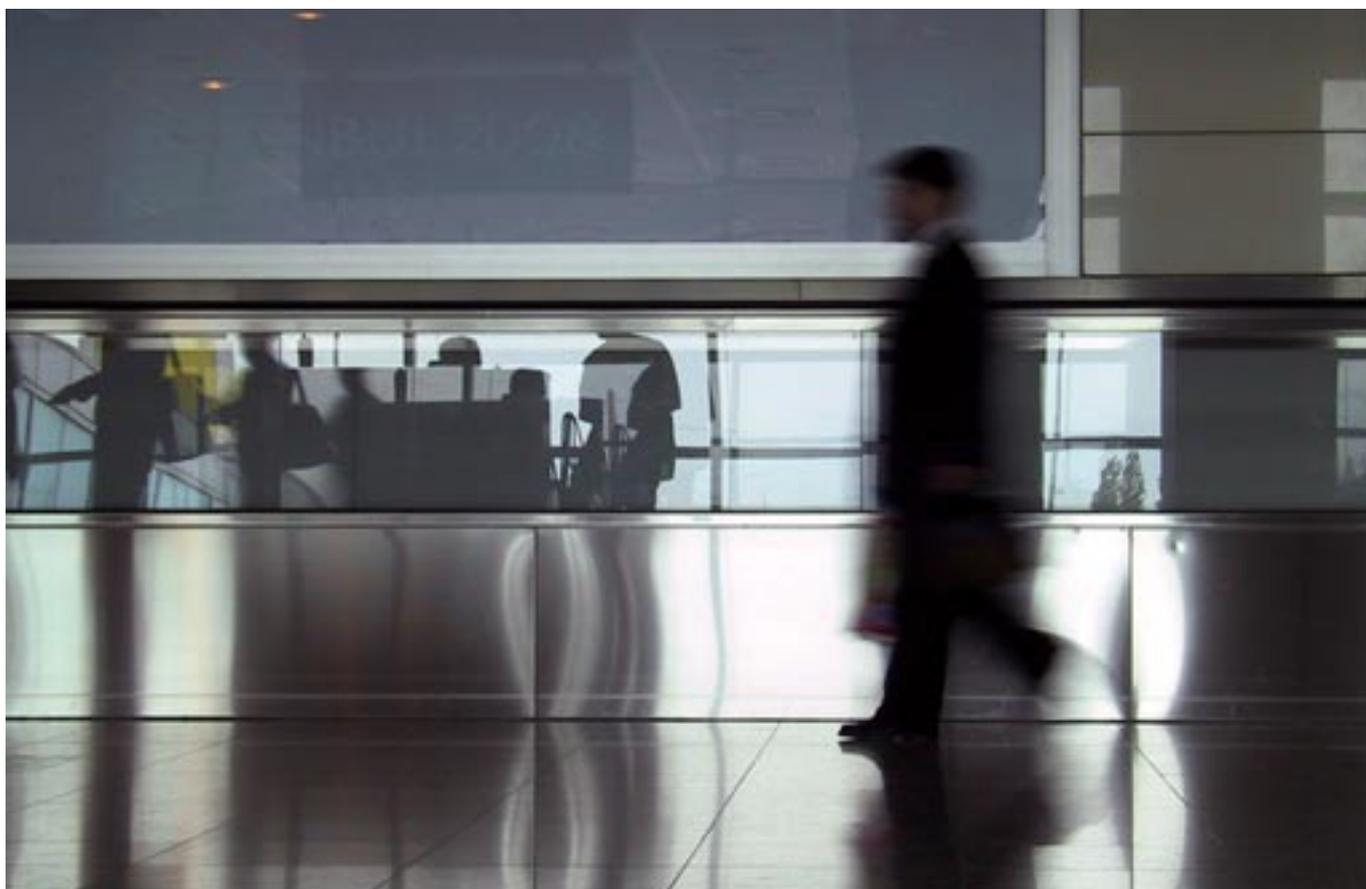
Spiritual

This is another word that will be rarely heard out loud in an I.T department, or any department for that matter in an organisation. I even had to think about whether to include it here in this article. But it needs to be addressed to some extent because it plays a big role on how you use your energy at work.

When was the last time you checked in with your soul or spirit and had a dialogue with it? We often neglect this part. We think it will function okay automatically. Your deepest self needs to be touched from time to time, to make sure that you are heading in the right direction. Where is the meaning for you for why you do the job you do? If the meaning of life to you does not match the job you are in – you are dragging yourself around on that job. Your energy is being sapped by the struggle in holding at bay the unfulfilled part of you that takes you

to work for other smaller reasons, like money.

These may seem strange questions because we do not often ask them. We expect to function like robots at work without feeling and deep meaning. Your job must have a very deep meaningful purpose. You must find that deeper meaning for you and adjust your career accordingly to match this. Then more of your energy will free up and you will feel inspired daily to accomplish tasks. You will have much more natural energy and as a leader in your I.T area, you set the example to those below you, so it crucial that you have it so it can pass on around to your team.



The Importance of Clarifying the Corporate Vision

George Ambrose



A leading financial service organisation had employed the services of a management consultancy to develop and implement a computer-based sales productivity tool for over 1500 advisers over a 24 month period. The tool provided client management functionality, sales tools and the ability to submit business electronically. However, by mid-project it was at risk. Adoption remained very low and advisers were actively resisting the tool. Only a 5% usage rate was achieved and forecasts suggested usage would only rise to between 11% and 20% by this point, which would not have been sufficient to achieve critical mass or deliver business case benefits.

The realisation of the poor uptake of the tool led to a review and a number of initiatives being taken to address adviser concerns and significantly accelerated adoption. As a result of these initiatives a tool

usage of 51% was achieved (see Figure 1 below), enabling the project to be successfully implemented, further realising a 36% increase in the benefit stream identified in the business case.

“Incongruent symbols can present mixed messages as to the importance of the change which can increase resistance to it.”

Clarifying the Vision

There was a clear vision and value proposition for the financial services provider in using the new tool to

build a strategic IT platform to support adviser-based distribution. At a practical level, however, this vision was not integrated into business priorities and decision making. In addition, bad publicity in the past and a limited communication programme had left the tool poorly positioned with advisers: seeing little value for them, advisers were unwilling to invest the time effort required to learn the tool and make changes to their existing business practices.

What was done and why

Two broad streams of activity were initiated. First, the team began working closely with business executives and line management to re-confirm alignment between the vision for the tool and the business vision, mission and objectives. One of the first steps in engineering change is to unite an organisation behind a central vision (Ancona, Kochan, Scully, Van Maanen & Westney (1999)). It was clear that the tool was consistent with business goals, but that it was not necessarily seen as central (or essential) to achieving them. At the start of the second year, the tool

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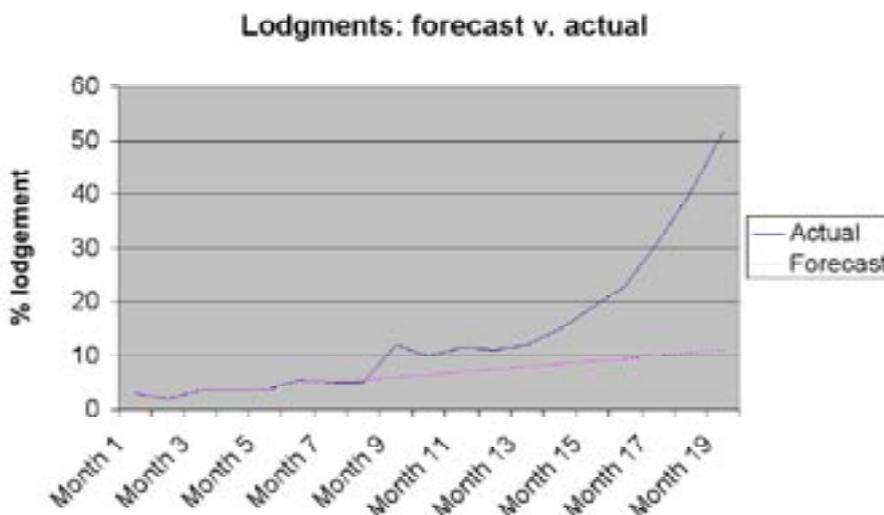


Figure 1 – Actual Lodgments Percentage vs. Forecast

was very much at the periphery of line management activity. In the short term, the introduction of the tool had little impact on overall sales volumes and, in the sales organisation, performance management focused on sales. The project undertook work to detail how the new tool added value, and then worked through this with the business.

Second, an adviser-centric analysis of vision and value proposition was undertaken. This recognised that the new tool adds value in different ways for different types of advisers. For example, electronic lodgement provides direct, immediate benefits to the financial services provider by reducing transaction processing costs; some advisers, however, perceived an immediate cost to them in terms of additional data entry. The fear that a change will result in more work is one of the ten main reasons for resistance to change (Kanter(1983)). In this case, the issue was that advisers did not have a holistic view of what new tool offered them. Early experience gained in the initial deployment revealed that, when provided a broader, more up-to-date view of the new tool advisers saw that it offered strong benefits.

Outcomes

As the biggest contribution top management can make is the ability to define and communicate the vision (ProSci(2002)), strengthening, simplifying and binding the value proposition of the new tool to the financial service providers' mission, vision and values was important. In particular it reassured key executives that the tool was making a significant business contribution. This served to build executive support for the tool and provide the impetus for increasingly effective sponsorship activity. In essence, it helped remove executive doubt as a potential barrier.

Lessons learned

The vision and value proposition

must not only align with business vision, mission and objectives, but must be incorporated into activity and behaviours in a practical sense. Effort is required to ensure this happens. While the vision for the tool was consistent with the business vision, mission and objectives, it was not effectively integrated into business operations, e.g., it was not reflected in decision-making criteria and priorities.

As Simon (1999) argues behavioural integrity is a key part of the effective management of change. In this scenario there was an inconsistent change process as the business operations hadn't caught up with the rhetoric. Armenakis, Harris and Mossholder (1993) identified the importance of consistent symbolism when attempting to implement a change. Incongruent symbols can present mixed messages as to the importance of the change which can increase resistance to it. So by getting the financial services provider to act in accordance with the values they were able to win the trust of those that they were leading through the change.

The vision and value proposition needs to be examined and validated for all key stakeholders. The new tool represented something different to the financial services provider and to advisers: it provides benefits to both the business and the advisers, but these benefits differ. Benefits need to be understood, communicated and leveraged as a change driver differently for each group.

The anxiety and resistance provoked by change will arise from the parties who either have a vested interest in the old one or cannot envision the yields from the new one. In this case the latter was the case. Hambrick & Canella (1989) suggest that to rectify this the strategist faces a major selling job as the very successful Will Langston of Bondall suggests that major changes require selling, selling and selling some more.

Inclusion of the advisers during the development of the strategy may have eliminated the need for the review and subsequent activities. Coch and French (1948) demonstrated the value of allowing organisation members to participate in change efforts. Three reasons are identified for this (Nadler & Nadler (1998, p. 101);

- as people participate they develop a sense of ownership
- participation builds understanding
- participants may have some good ideas

Additionally it has been identified that active participation is a powerful influencing strategy as individuals tend to place greater trust in information they discovered themselves (Armenakis et al (1993)). Elicitation of earlier use of the early releases of the tool could of thus further reduced resistance to change. By not including the advisors the understanding of the new tool and the benefits it provided were not understood nor was their sense of ownership.

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Why an interview is a sales pitch not just a chat

Darren Taylor



Preparation

When a successful salesperson or consultant makes a presentation to a client, or a manager makes a presentation to senior management you would expect a significant amount of preparation and research has been done prior to the meeting taking place. Since it is an important meeting, the successful person will have an agenda in mind and what the expected outcome should be. This is akin to setting clear goals. An experienced professional will use their experience and utilize techniques so they are able to achieve that goal. In the same way, an interview is an important meeting in which you are trying to achieve a positive outcome, and in the same way should have done some research into the role, the information that the interviewer is likely to be looking for and how your experience meets their requirements. I have a favourite philosophy which is: "Make it easy for the client to say Yes". That is, I will present my short listed candidates in such a way that they meet all the selection criteria, and in such a way that it is obvious how and why they meet the selection criteria – so it is easy for the client to say yes they want to interview these candidates. What continues to amaze me is the number of candidates, many of them very experienced and highly qualified, that attend an interview for a chat rather than having a set agenda, having a good idea about the role and what is required and then how their experience meets the selection criteria.

“The first is research. Ideally, you should not attend a formal interview unless you have at least a good verbal description of the role, the background issues and who the client is. This will allow you to do some research on the company and the issues facing the business.”

There are a number of techniques and tips you can use to ensure that you get the best outcome from an interview. The first is research. Ideally, you should not attend a formal interview unless you have at least a good verbal description of the role, the background issues and who the client is. This will allow you to do some research on the company and the issues facing the business. Ideally you will also have received a written job description which should also give you some ideas about the role and the specific issues facing the company and why the role is being recruited for.

Use your initiative and experience. Even if you only have limited formal information, you should have enough basic information to use your experience to understand what a client is looking for. Recently I was recruiting for a Project Management role with specific emphasis on security oriented experience. This was explained in detail over the phone to prospective candidates and was backed up by the formal job description. When I interviewed a particular candidate about his experience he wanted to tell me about every project he had delivered, except the one that was most relevant. It wasn't until I asked him specifically about a couple of lines in his CV that he went into detail about it. On the other hand, if I was being interviewed, I would have brought this project up at the first opportunity, and then related every other project specifically to the role. This can be very frustrating for an interviewer and can count against a candidate because it shows either a

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lack of interest in the role or a lack of initiative.

Know your subject (you). This is a common issue and relates back to a previous article about the importance of a detailed resume. A benefit of having a detailed CV is that it is a reference point and you can review it before you attend an interview. It is very frustrating if an interviewer asks a candidate about a particular project and the candidate can't recall the dates or the technology involved about something in his CV. Again, this can give the impression of a lack of attention to detail, lack of interest or just that the candidate is lying about his experience. This detailed knowledge about your background and what you have achieved will then enable you to relate your experience to the role and where you have done similar things in a similar environment.

Presentation

Once you have done the research, you have used your initiative and experience to understand the issues involved and what the interviewer is looking for and you know how your own experience and achievements are able to meet the selection criteria it is important to present that information concisely. The client, or recruiter is generally looking for

your ability to use a methodology or technique that you have used successfully in a previous situation and be able to replicate it successfully in the client's situation.

The main recruitment technique used now is behavioural interviews, which is basically giving you a scenario and asking you to relate a specific example of your experience. One of the most powerful techniques that can be used to demonstrate your experience in almost any situation is called STAR – Situation, Task, Action, and Result.

Situation is the “Why”. What was the situation when you walked in and why did the company need someone e.g. There was very little information getting through to management, there had been a number of attempts at the project and there were major issues with the application which was causing massive problems with their customers.

Task – this is the “What”. What needed to be done? What specific results was the client looking to achieve? E.g. they needed someone to come in, analyse the project, define what needed to be done and then deliver the project in 6 month timeframe within the specified budget of \$500K.

Action – this is the “how”.

The detail is here and this is your opportunity to “sell” yourself. What did you do to ensure you delivered the project or task? It is important that you detail, concisely, what you did, and how you did it. There will be specific issues that you addressed, what specific actions you did take and what the result of those actions was. This is also where you will most likely get most questions from the interviewer and you will also get the opportunity to ask questions of the interviewer and also find out about the role and the issues that need to be solved. Your ability to concisely explain the detailed issues and explain what you did to solve them and the measurable result is where you will make or break the interview.

Result: What was the result, relative to the task i.e. if the task was to deliver the project, the result was: delivered the project on time, 10% under budget and with a slight increase in scope.

Your ability to understand the clients issues, demonstrate that understanding during an interview, ask questions around those issues, and then present your experience and how you have solved similar issues in a similar environment in the past will ensure you get the most positive result from any interview.



Web Services: Where are they now? Hype or Reality?

Tony Glazebrook, BA (Hons), G.Dip.CompSci.

You may be a Product Development Manager, excited by how you could “chunk” the services you offer to Customers or even expand on them by consuming the services of other providers. Or perhaps a Senior IT Manager, looking to cut SDLC costs. Or a Technical or Business Architect who wants to design the ultimate service oriented architecture (SOA): perfectly modular and highly upgradeable and reusable. What about the Network Security Specialist wishing to understand the risks of exposing critical systems over the web. Or the Developer who needs to position for the “next big thing”.

The truth is that almost anyone in the IT world should be very interested indeed in knowing more about Web Services. But will the technology deliver what you are after? Has it fulfilled its early promise?

Before exploring these questions, a little background is in order on what Web Services is, lest this article be accused of more hype than reality!

There are really three dimensions to answering the question “what are Web Services”? They are in (the author’s) order of importance: historical, technical and business.

Web services are – wait for it – services (read applications that serve clients by exposing an interface) that are accessible over the web.

As such, Web Services represents the coming together of two powerful technology concepts and one powerful implementation:

- The concept of Service Oriented

Architecture (SOA) – the idea of architecting applications around modular components acting as services.

- The concept of open protocols – replacing proprietary “tightly coupled” technologies such as COM/DCOM, RMI and CORBA with the ubiquitous web protocols, chiefly http.
- The implementation of XML – replacing proprietary messaging formats with the self-describing, easily understood and human-readable XML syntax. XML is the language of SOAP – used for describing both the SOAP header and the message body, as well as of WSDL and UDDI.

Explained this way, it is arguable that Web Services was an idea that was bound to arise, if only because it represents a kind of inevitable logical step.

Consequently, the history behind the evolution of Web Services is almost of more interest than the technology itself. The technology is fundamentally simple, even though a bit of “plumbing” behind the covers is necessary to make web services work. This plumbing comes in the form of WSDL and UDDI. WSDL (“Web Services Description Language”) is the standard XML-based way of “describing” a web service to any client on the prowl in cyber space wanting to know whether and how to use it; and UDDI (“Universal Description, Discovery and Integration”) is the standard way

of registering and “discovering” a web service. Machine-based registration systems such as for COM/DCOM, and semi-open interface descriptive languages such as IDL have both given way to the much more useful web metaphor of an open and global description, registration and discovery system.

But what about the third dimension – the business dimension? Web Services may be a beautiful idea with the finest technical pedigrees and apparently destined for greatness. “Ladies and Gentlemen, we bring you Web Services, out of SOA and TCP/IP, trained by XML and ridden today by SOAP...”. But does the use of it make good business sense? What kind of business problems are web services suited to solving?

The answer to this question is the key to the question we started with: are web services more hype than reality? The question is also, in the author’s opinion, much more

(The term “Web Services” is used to refer to the singular concept; “web services” and “web service” to multiple or singular implementations)

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important than the current debate about technical issues: mainly around security but also concerning ease of development.

Security debates always come down to cost versus risk in the context of a particular problem – what are the risks to critical business or personal data or organisation systems inherent in a particular design, what are the probabilities of various forms of attack given the expected usage, what is the cost of providing sufficient security, and is this cost affordable? (Readers especially interested in security issues can pursue some of the suggested further reading at the end of this article). This is not to say that security issues are not important. It is just that they are relative to the design and the risk, not absolute, and can never be solved in the broad, only case by case.

Known, general security issues do exist. Web service topologies are likely to be complex – involving multiple end user devices, routing devices and processing systems. Though SSL/TLS or IPSec provide strong security at the transport layer, data integrity and associated security information can be lost when the data flows beyond the transport layer. General “principles” have been proposed to address this issue – web services can specify their own set of “claims” that the client must fulfil before access to the service is allowed [13]. But whether these principles need to be adopted in a particular web service, and if so how, will be a risk and solution design issue.

In terms of development tools, a plethora of vendors have sprung up hawking their own integrated suite of web service development and management products. Open standards have been good for independent vendors. Overlying this profusion is the division between .NET and J2EE-based development tools. The profusion of packages and the .NET

vs. J2EE debate does raise the entry barrier to Web Services adoption by requiring the IT Community to spend more time analysing the issues and possibly retooling before using Web Services seriously.

It is not to the point here to address the issues of the respective futures of .NET and J2EE – which sectors and which shares of the market they have and will lead in. (Refer to article [6] for a good, though now dated survey). It is sufficient to mention that the well-known debate is a distraction.

Because the fundamental question with Web Services (of either “flavour”) remains – “What real business problems should web services be used to solve in my business?”

There are probably two contexts in which that question arises:

- You have a clear business problem and need to know if web services are the answer.
- You do not have a clear business problem but want to know if web services can create a new business opportunity.

Are Case Studies a useful guide to either or both? In the author’s opinion, not really, although they are probably more useful for the second context than the first – as a prompter to the ways in which Web Services could be employed. There are just too many unknowns in the Case Studies for them to reliably prove much else.

A search on the web for “web services case studies” will quickly enough produce long lists of Case Studies – from Microsoft, IBM and Web Service solution vendors such as Systinet or Forum Systems. A fundamental question to ask is: how reliable are these case studies when they are being promoted by the companies that brought you Web Services and/or have a vested interest in making the technology a success.

The Case studies sound impressive, and cover a range of industries and a variety of problems that needed solving. (Several references for further reading are suggested at the end of this article).

But the fundamental question remains – how much do we really know about the business benefit in each case. These days, the business dollar is harder to come by as organisations everywhere have become much more analytical about ROI. Will this rationality prevail in the face of another new exciting technology, another wave of early adopters and a growing sense that no organisation can afford to be left behind?

Of the attached references, two are recommended above all, both of them on ROI: articles [2] and [7]. In particular, let me quote from article [7]: “How do you measure the ROI of Web Services? Well, there is a right way and a wrong way...The wrong way is to measure the time representatives save in reduced paperwork, or in revenue the company saves by reducing the need for data entry. The right way is to measure the amount of reduction in operational and development costs. The ROI on Web Services comes from the increased operational efficiency and reduced costs that are achieved by streamlining and automating business processes, reducing application development cycle time, and increased reusability in the form of services...The relevance and importance of each of these factors will vary greatly from company to company, application to application, implementation to implementation.”(Italics were added by the author).

By now, readers may have detected an element of technology-weary scepticism in the author’s tone. If you started your IT career as a Developer, have seen the rise and fall of DCOM as the answer to distributed computing

but are fascinated by the beauty of Web Services as an idea, your heart probably yearns for Web Services to be “the next big thing” but your head will be lagging behind.

It is not that web services could not be used to solve just about anybody’s problem. It is more the question: is it sensible to use web services rather than something else?

When you really think about it, any sophisticated, high volume “application” is going to involve a complex set of business objects and actual binary/executable objects. When performance is critical, is it best to use a text-based messaging protocol like SOAP (or its cousin SOAP RPC)? And when the power and utility of the application itself – and the whole business case behind it – rests on offering sophisticated, interrelated functionality that is known only or known best by the organisation that has built the system, how likely is it that much of this functionality could be provided by someone else’s web service?

This last point is worth pondering a little longer. To put the question another way: is it likely that a third party will have exactly what you need in their web service when it has been developed without consulting you and when there is no binding agreement between the provider and you, the consumer, that the web service will even be there tomorrow? The very openness and ease of access is also the weakness. Will we see an explosion of web services designed to be consumed by anonymous clients – for the so-called global “UDDI Based Electronic Marketplace” [4] – which, because they are designed for this, will give you a lowest common denominator of service?

In the bad old days of proprietary EDI messaging formats, at least there was one consolation – they were designed for explicit use by someone to meet a defined need.

They were used between business partners who had a shared interest in making it work. Whether someone else could use it was only of interest in the negative sense – i.e., will their demand put my system at risk?

The Case studies seen by the author essentially involve 2 kinds of projects:

- Those that have used web services on re-engineered or newly developed, fairly complex proprietary systems in place of say COM/DCOM as the way of getting components to talk within the system, and
- Those that have used web services to give external access to clients – either B2C Customers or B2B partners – to relatively simple but popular functionality that is easily modularised and encapsulated in a simple set of interfaces.

In the author’s view, web services are more naturally suited to the latter. There is enormous potential for web services to be the natural logical carrier for the simpler B2B and B2C transactions.

But promoting web services for widespread adoption in large and complex systems is asking a flyweight to punch out of Division.

This is of course a personal view. There is a way that web services could be used for large and complex systems, namely by making web service components that are wrappers for the major functions in a system where the functions are necessarily physically distributed. Then, more efficient protocols could be used to get the business done between the objects that collectively service that function.

So where has this led? Hopefully, to the realisation that the question starts and ends with an understanding of the business need. The ability of organisations to leverage IT to their advantage has just become both more

and less difficult with Web Services. Less difficult for those particular situations where web services offer real benefits and are better than any alternative; more difficult in general to determine which those situations are. Architects and Analysts and Product Managers now have a new set of concepts to understand before they can properly apply them.

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Knowledge Engineering: Grand Promises, Missed Opportunities

Jonathan Altfeld



How to maximize the results & longevity of any company's most valuable expertise.

Have your employees gained increasingly valuable knowledge over time? If so, here are some very important questions for you. Answer every question – don't skip! They're all critical. Not knowing the answers – could be *incredibly* expensive.

Question Set 1: *What are you potentially losing?*

- How much of what makes your business successful is contained in the minds of your most valuable employees?
- How many of them retire or jump ship every year?
- Are any retirements or exits coming up?

Question Set 2: *How much Knowledge Retention are you doing?*

- How much money is spent on training new generations of employees to know what the older generations spent their careers learning?
- How much training of existing knowledge is done while experts are still in house?
- How much is done after experts/exemplars have gone away?
- How do you maximize knowledge retention even when retirements/exits can't be prevented or postponed?

The field of Knowledge Engineering attempted to provide optimal answers to these questions. As a child of the

larger field of Artificial Intelligence – Knowledge Engineering enables us to interview experts, find out **what** they know and **how** they know it, and then build software systems to make the same decisions the experts would make, in the same or similar circumstances.

Because of the resulting streamlining and accountability, these decision systems are often financially very viable for large companies who handle vast numbers of transactions (even with the cost of such systems reaching into the \$millions). The cost usually comprises the cost of proprietary software licenses, the high cost of specialized consulting, and is certainly related to the complexity of any given project.

And though these systems have been and continue to be successful, they can/could all be... more so. And to borrow a cliché, the road to success in Knowledge Engineering is paved with many KE projects that never reached a successful conclusion. Where the field of Knowledge Engineering has failed to excel along the way is arguably always due to inadequate or insufficient education. To understand that better, we have to answer the following question:

What makes a great Knowledge Engineer?

We need someone who can build bridges across personality types and language/cultural styles. We need

someone who can model an expert's knowledge without imposing their own knowledge/bias for an extended time, organize that knowledge in a useful way, perhaps even improve on the expert's own such organization, and then build methods of applying that modeled expertise in a larger context (such as a software system, for example).

- We need someone who is more than just a great programmer. Great programmers often lack the nuances of social skills required.
- We need someone who is more than just a great listener. Great listeners would get to the root of an expert's knowledge, but not know what to do with it.
- We need someone who is more than just a great business process expert. Great Business Process Experts often lack the absence of ego required to truly understand an expert's thinking process, while not imposing their own. They also often lack the programming experience.

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Such an individual is very hard to find – even within the field of Knowledge Engineering! To find such qualities, we might wish to look outside that field.

One field, often considered a form of pop psychology, is known as Neuro-Linguistic Programming (NLP, not to be confused with Natural Language Processing). This isn't a computer-based field at all. It's a field that focuses on deeply understanding human communication and subjective experience, as well as studying & then training others in various mental patterns of success.

It turns out that people very well-trained in NLP are required to become skilled at a process called "modeling." Modeling is about understanding whole areas of an expert's expertise. So that an expert's knowledge can be more readily/accurately learned, understood, encoded, optimized, and then taught more rapidly to others.

That should sound very familiar to people involved in Knowledge Management, or Knowledge Transfer. The outcomes of Knowledge Engineering and NLP Modeling are, while not the same, still very similar.

Unfortunately, many Knowledge Engineers are missing some very important pieces of the human subjectivity puzzle! As my own career in Knowledge Engineering unfolded, it became apparent that all the Knowledge Engineers whose notes, code, faxes and emails I'd reviewed – in my entire career – were missing this piece:

Problem 1: People make logical decisions... with irrational information.

What this means is – we all use irrational information in our decision-making process. Here's an example.

Question: Why do you choose to buy a certain car?

Answer: Because the price is under

my budget (*rational*), and the model is optimal for my lifestyle (*rational*), and when I get inside it... I just feel good...(*irrational*).

“So Knowledge Engineers are unfortunately just as prone as anyone else, to ‘imposing their map on other people. It’s a common tendency, and it leads to many simple misunderstandings. In Knowledge Engineering, it can lead to months of bad decisions, and sometimes, millions of dollars of misspent funds, and worse – dead projects.”

What Knowledge Engineers have been doing, more often than not, is trying to fit a round peg into a square hole. As a result of not knowing how to handle that kind of information, they end up deleting those 'irrational' sensation-based conditions from their modeling process, or attempting to reword those conditions into something they aren't. The result is a polluted process that doesn't accurately reflect an expert's decision making process.

And until the field of Knowledge Engineering acknowledges this on a larger scale, knowledge engineers and the people who hire them

– will forever be working with an impoverished model. Granted it may still make them money and retain knowledge and expand business opportunities, but it's still not as good a model as it could be. And it's still not as efficient (read, affordable) a process as it could be.

Solution 1: Understand the Relevance of Irrational Information & Utilize it

This seems deceptively simple, but it's a critical distinction to make. Programmatically-oriented people need to stop trying to fit a round peg into a square hole, and be educated as to the importance of irrational information gathered from experts or exemplars. If an exemplar tells us he chooses 'Answer A' over 'Answer B' when he 'gets a sense of incompleteness' then we need to utilize that information somehow, not try and explain it away or ignore it. By ignoring that 'sense of incompleteness' we end up modeling something other than the exemplar's actual process.

By accepting that we as human beings always use some irrational information in our decision making processes, we begin to understand better what people are really doing on the inside of their heads. Which is the first step towards modeling it better.

Problem 2: Insufficient Training in Listening

This may be the single biggest problem in the field of Knowledge Engineering. And it's well explained by a concept put forth in NLP, that the 'map is not the territory.' What this means is that we don't actually store reality inside our heads. We all have our sensory input channels, and we do three things to that incoming data on the way into our minds. We delete, distort, and generalize information, while creating maps of the world inside our minds. The

'maps' we create in our minds of the world around us – all differ from 'reality' using these three 'modifications' to information. And each of our maps differ from each others maps, in the same way.

It is an unfortunate fact in communication in general, not to mention Knowledge Engineering, that many people presume that others process information the same way we do. So Knowledge Engineers are unfortunately just as prone as anyone else, to 'imposing their map on other people. It's a common tendency, and it leads to many simple misunderstandings. In Knowledge Engineering, it can lead to months of bad decisions, and sometimes, millions of dollars of misspent funds, and worse – dead projects.

Fortunately, some Knowledge Engineers are still able to muddle blindly through this pitfall, and typically only when they've developed some targeted listening skills on their own. But it would be far more useful for them to be sent to a training that could better ensure their listening skills.

Solution 2: Get better Training, then Listen More Fully to Exemplars.

There are cues in language that can tell a highly-trained listener exactly what was deleted, what was distorted, and what was generalized in someone's map of the world. And this becomes especially important when you're modeling an exemplar's internal map of their own expertise. We need to accept their deletions, distortions, and generalizations – rather than challenging them, ignoring them, or worse yet – using/imposing our own without knowing what we're doing!

There is a wide range of training opportunities available to teach anyone how to listen more effectively. Some are better than others, but they'll all be highly useful

to anyone wanting or needing to do any knowledge transfer.

Once having learned how to (a) listen more effectively, and (b) prevent ourselves from imposing our own maps onto someone else's, we're ready to come back into the knowledge modeling process and listen more effectively and accurately to our exemplars.

How can we use these insights to maximize the results & longevity of a company's most valuable asset – human expertise?

First, we need to do is to take immediate stock of which experts are likely to retire or leave a company in the next 3-5 years. In doing so, we anticipate likely losses to valuable expertise and can plan to turn those potential losses into gains.

Second, we need to create an action plan for Knowledge Transfer. And as I always recommend to my clients, never trust the transfer of your most valuable human expertise to in-house human resources people untrained in these technologies. As wonderful as your employees may be, I strongly recommend you seek an expert in either of the fields of Knowledge Engineering &/or Neuro-Linguistic Programming, to help assure safe transfer of knowledge, and thus ensure years of further growth and minimized setbacks. Also, employees inside a company are often too busy protecting their own jobs to commit fully to a given result. Typically, contractors want to get the job done – properly and efficiently – and do it in a way as to garner more future contract work, and stellar client testimonials. At a minimum, acquire the latest and best training for whoever will be doing the modeling or the knowledge transfer. Identify their strengths and weaknesses on an individual basis, and get them trained up to speed.

Third, engage in Knowledge Acquisition, Optimization and Transfer. This can include open-ended interviews, or thorough reviews of case studies, or both. Additionally, there are other methods that are best chosen based on the specific domain of knowledge being used. Also, it's better to let the Knowledge Engineer drive the process, rather than letting the exemplar drive. The exemplar contains the knowledge, but ought to be gently taught that knowing is not equal to efficiently-communicating. A well-trained and experienced Knowledge Engineer can often acquire relevant knowledge in a fraction of the time an expert would take to train it.

Fourth, we need to steer the expert to help us validate the quality of the transfer. Outsiders can model knowledge, but the actual experts are where 'the buck stops.' Only an expert is a good judge of whether or not the modeling process was done completely or fully or properly. Note, they may not be a good judge of whether their knowledge is optimized, but when validating an expert system's performance, they are the best judge of whether the system behaved correctly or not (i.e., got the right answers in specific case studies).

Celebrate Human Knowledge, Don't Box it In

Keep your eye on the target. The target is to acquire and/or protect valuable human expertise when it is in danger of disappearing. Sometimes the process of engineering knowledge – or managing knowledge – can be fraught with pitfalls, delays, and other undesirable unknowns. And yet, the goal is absolutely worthwhile.

An experts accumulated knowledge is often worth more than \$1 million – often many times that. And that's in yesterday's dollars. To pay someone new to get that same knowledge may

take years and cost far more than that. Plus, for transactional expertise, there is always the enormous pot of gold on the other side. By modeling an expert's knowledge, optimizing it, and building software to make their decisions consistently and quickly, you'll be able to (a) reduce training time for any people still handling transactions by hand, (b) extend your ability to do business by handling more of the same kinds of transactions for more customers, and (c) increase the number of clients you take on, without having to hire more experts!

This article aimed to explain two primary pitfalls that many Knowledge Engineering projects experience, and provide guidance over those pitfalls. Most KE's do not know how to handle irrational data well, and need better training on the importance of 'EQ' (emotional intelligence). Also, most KE's are not world-class listeners, and need to treat their exemplars with the quality

of listening appropriate for the task (and balance that with a need to drive the process of acquiring knowledge). It is a hard balance to strike, but strike it they must, for your project to be successful.

If there is a bigger lesson to learn here, however, it's simply this: If you're ever stuck in a problem situation of any kind, and nothing in your current area of expertise seems to help, don't be afraid to look far outside the context of the problem, to acquire a more creative solution! Sometimes the best solutions come from thinking not only outside the box – but outside your entire field of business! Those who are willing to take a leap into the unknown in order to gain a wider perspective – will often find themselves rewarded in unusual ways. Explore and enjoy!

Making these Insights Available to Anyone Who wants to Unravel Belief/ Decision Systems Conversationally

While comparing and contrasting the fields of Knowledge Engineering

(KE) and Neuro-Linguistic Programming (NLP), we find that both fields can learn a lot from each other. By integrating the best of both worlds, we develop better-trained KE's who can communicate more effectively with anyone, and we develop better NLP'ers who can go beyond their truly amazing interpersonal skills – into more practical applications and longer-term modeling projects.

Thus was born a unique three-day seminar: "KE & NLP." Initially audiences were mostly only from these two domains. More recently, this workshop has been exceptionally useful for people with a wide range of backgrounds, including sales, academia, and therapy. Indeed, anyone who wants to be able to unravel belief systems and decision strategies from spoken language, real-time, and on-the-fly, would benefit immensely from learning from both the fields of KE & NLP.

