

IA as a means of assessing and creating organisational information coherence

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Summary

Information Architecture may be used as a means of creating information coherence in organisations. In this context coherence is taken to mean the framework in which information is created and used. In most organisations information is not managed coherently and IA may then be introduced as a means of achieving more effective information management.

However, introducing IA in this way will almost certainly meet resistance.

This paper will explore how IA projects can be constructed and undertaken to achieve coherence. It will review how elements such as metadata creation, document creation flows, permissions, version control, change and update management and usage patterns can be used to create a global picture of an organisation's information creation, distribution and use, and thereby to derive the optimum patterns.

For IA professionals such an approach can be an attractive way of extending IA further into information management and change management within organisations, thus creating a role in the overall consultancy function aiming to improve organisational efficiency.

Introduction

Do you recognise this?

- the call for tender or the phone call saying –

‘we have a network set up and we want to:-‘

Make sure everyone sees all the documents they need

Or

We have/need a web site with multiple ‘owners’

Or

We need a thesaurus/authority file/

Or

How should we set up a means of.....

A fundamental problem is that many organisations ask the wrong questions at the outset. Our research into client/vendor relations in the IA area, amongst organisations such as Verity, Reuters/Factiva, Plumtree, etc., discovered that one of the greatest frustrations experienced by vendors was the relative inability of customers to prepare good specifications. Many organisations start from an assumption that they need a CMS, or a portal, or a search engine for their intranet; see what their peer organisations have done and what vendors they have chosen and follow the leader. Another variation is that 'someone' feels that the information needed to do their work is not well organised and speaks to IT who look up what is available on the market and come to the conclusion that x or y piece of software will do the job.

In most cases this must lead to sub-optimal solutions, and in some cases to worse. One organisation, from our experience, wanted an intranet, bought a CMS only to discover that the move from hard copy documents to web pages was not as straightforward as they had imagined. Worse, they discovered that the CMS was not a document management system, so that they had to graft document management into the process as a manual discipline, having spent their money on the CMS. The issue here is that the client has already spent money and is, at minimum, unwilling to admit an error or, at worst, unwilling to spend much more! And it is surprising, sometimes even shocking, to see how much money can be spent on one fashionable product. One professional society spent over £2m on a CRM on the grounds that it would enable them (eventually) to sell more products and services to its members. This starved the development of a collaborative extranet for the very same members. Another client had started to develop a standard enterprise wide-data system in 1998 and this has recently gone live – how many organisations embark on a seven year project to regularise unstructured information?

Consultants have the same problem, and are often asked to come in and solve problem x, only to find that the real problem is something else. One organisation, proud of their 15,000 term thesaurus wanted to know how best to deploy it across a Lotus Notes network serving a range of database owners and web editors, none of whom were trained in the use of thesauri or in indexing. Apart from the difficulty of handling such a large thesaurus using Lotus Notes, it was inconceivable that the database owners and web editors would even attempt to master such a huge thesaurus. The answer was to reduce the size of the thesaurus, divide it into subsets against local profiles and work with the owners to extract simple taxonomies – all maintained centrally. Remember though, that it is just as important for the consultant to ask the right questions, and this is where one of the strengths of information architecture lies.

These are the anecdotal stuff of which Information Architect's bar-room chat is made.

What we would like is the call for tender which [implicitly] says

We need to get organised, we want you to hold our hand....

We hardly ever get the latter and therein lies a problem.

The term "information architecture" does not [yet?] convey anything very clear to the potential client. It is either too abstract, too suggestive of a born again information technologist, or too grandiose (and therefore likely to be expensive). The issue here is

that the client does not see the problem to be solved as part of an overall re-assessment of the way information is handled but [just] a need to organise things differently now that we are 'IT literate'

Most people prefer to move a sensible distance away from pain, and are less likely to choose to start on a long journey towards utopia (how often do you hear people saying that building a taxonomy is not a task but a journey?) The issue here is that IA seems like a long road, whereas it need not necessarily be so, it can be an overall objective/ambition. It needs a clearly conceived plan, in fact an IA concept *IS* a clearly conceived plan. The only risk from the clients' viewpoint is the long term commitment to the consultant!!

However the client views information architecture, after the start of an explanation they tend to get lost in the abstract nature of the approach. Though structured information systems are a legitimate target of information architecture, we are mostly concerned with unstructured information (reportedly accounting for 80% of what an organisation stores electronically) and that creates another level of abstraction as one moves away from data definitions to notions of "aboutness" and probabilistic retrieval. The issue here is that most, if not all, unstructured information is not susceptible to "aboutness" treatment, at best a context may be provided. The lesson is that IA must not promise utopia, only a framework within which coherence can be addressed as an issue so that information may be better used.

Given that most IA related work starts somewhere in the middle how does one manipulate the client to get into an IA situation?

It is usually difficult to challenge the client's assumptions too early in a project, though some caveats can be acceptable and useful. A risk analysis can be written into the proposal, or suggestions made in the proposal or at an early stage of the project concerning implications following completion of the project – the 'ripple effect'. Too often projects are seen as being separate entities, rather than as a stage in a road map for development.

However, if the consultant's view is that the tender or request is so wrong as to be dangerous, then he is morally obliged to say so, even at the risk of (potentially) losing the contract. There is obviously also the risk that less scrupulous consultants will not go through this process, our view would be that they deserve the likely consequences!!

Many clients have the view that consultancy firms below the top 5 are specialists, and if you point out some problem which appears to be outside your specialism you tend not to be taken as seriously as you might be. Again, this is where information architecture is an important concept, because it does not claim for the consultant that he is expert in every aspect covered, but that he is capable of conducting a sensible and disciplined overview.

If one is working for a client in some specialist situation then it is important that the client allows the consultant to have direct contact with other stakeholders and vendors. This may require a degree of tact, if one thinks that others have a misguided view of the larger picture.

Apart from 'laying down the law' on the need to have an IA solution, an unlikely prospect, then the next best things are:-

To [try to] ensure the tools which are installed/recommended are such that they are flexible and can be re-engineered to fit an IA

To attempt to put the job asked for in the context of the overall organisational requirement

To try to involve the highest level of management possible in the decisions

To offer to supply an IA blueprint as part of the work (at no extra cost??)

To deal with each of these –

Many of the software packages offered in the IA space have a requirement to use a consultancy package to implement the suite. Typically this is a requirement to supply sample texts for orientation, to allow a team to 'evaluate' the material to be included, to create an IT environment which will accept the software or to create a Java environment to integrate the solution. An 'external' consultant can negotiate with the software supplier to be the implementer, or to at least be involved in the process. We realise this is not always easy in a situation where the sale is underway, most software suppliers have built the price of the consultancy into their cash flow and want all the revenue, so the external consultant has either to get their fee from the client or do a pro-bono. One solution is for the consultant to be part of the sale process but this implies approval of the software, VERY dangerous ground. The optimum may be to play the traditional consultant role of understanding the role the software is to fulfil and know enough to either place it in context or to suggest complementary actions to enable an IA solution.

The 'context' option is one where the consultant needs to understand where and how the software was designed to work. This is in the (most common) situation where a piece of software has already been bought/leased. In the nice situation where the consultant is there early then the IT environment becomes the context. This means, in most cases, a networked environment, usually built around Microsoft solutions. It is not suggested that an IA consultant needs to be familiar with the fine details but a clear understanding of the Microsoft XML and/or Java role(s) in integration is obligatory. This may seem obvious, but we all know that XML and Java are not 'standards' but frameworks and that Microsoft tends to implement their own versions. If diplomacy is one of the attributes of a good consultant it is here that it will be tested!! In this context we find it strange, to say the least, that SOA (Service Oriented Architecture) – should be considered 'recent' in IT terms. If IT facilities were installed that were not service oriented then what were they??

Typically, IA consultancy is not normally seen as part of projects on work-flow. In one case known to us, described as a case study by Catherine Leloup in our book, a bank had already undertaken a work flow study prior to implementing a web based method of orienting clients to the bank's products or to help the client identify the most appropriate product for their need. In reality the webmasters found themselves unable to identify the documents needed at the various points on the site. One might ask how the webmaster became involved in this process, but they didn't have a means of identifying the persons who 'owned' the various documents in the work-flow

process, so they had to try to decide what was appropriate. It is obvious in such a case that an IA analysis would clearly see the lacunae in the work-flow context.

Involving higher levels of management is the holy grail of consultancy. In reality consultants in the IA space are considered, as was mentioned above, as specialists, higher level management doesn't get involved. The most effective method of involving them is through the training pathway, but even that word has connotations. It is probably best to build in an 'introduction to the new environment' session somewhere in the process and have a short session on the overall effect it will have on the organisation – that should attract some senior figures.

Given some of the problems discussed above, and bearing in mind that some managers are unable to write a cheque for £/\$ x without having to seek higher authorisation or go to open tender, one possibility is to offer to undertake an information architecture audit. Even in quite large organisations this can sometimes be accomplished in as little as 5 days, particularly if the client is prepared to accept an oral report (which, anyway, can be more effective as it allows for informal dialogue and may serve the purpose of involving higher level management).

It might even be possible to establish a low level benchmarking exercise for a small number of organisations, but this would certainly require a fair amount of research in order to set up a package deal. In fact this sort of pre-packaged material may be very effectively used as marketing material. A flow diagram is a good entrée for a comprehensive piece of work¹

Getting a global picture

The overall objective in an IA project is to try to get a global picture. This may not even be known to or perceived by the client, it may require detective work of a diplomatic nature and developing relationships within the client organisation outside the immediate work area.

Typically, information audits are perceived to be a means of achieving a global view but in practise they do not. In most organisations we have seen or studied the information functions are compartmentalised, which does not necessarily map to the famous 'silos' beloved of analysts. For example, accounting information is not normally counted as "information" for IA purposes. Of course sales data may be included but not the associated accounting information. It is often more important to know who has paid than to know who has bought. One of the advantages of accounting information is that it is (relatively) structured, most accounting systems use unique identifiers for clients, for example. Links to accounting data can therefore be easily created at the technical level but the issues are more likely to relate to 'ownership' than to technical questions. Senior management sees accounting as part of their responsibility and has worries about confidentiality, credibility and policy vis a vis the data.

¹ Louis Rosenfeld's EIA map is a good (if maybe too detailed for the non-initiated) example. See <http://louisrosenfeld.com> Similarly James Melzer's map <http://www.jamesmelzer.com/EIAinContext.pdf> but again in simplified form. Perhaps the most comprehensive is StepTwo's intranet map <http://www.steptwo.com.au/products/roadmap/index.html>

Again here a softly, softly approach may be needed. If one is employed to create an ontology (as opposed to a thesaurus or a categorisation) then, even if the concept of ontology is not strictly understood, it can be used as a means of creating coherence. Coherence, in the context of an ontology, is to get an agreement to define and use basic terminology which is accepted by everybody. This may seem rather obvious but in many organisations different parts use their “own” terminology, as a sort of shorthand, as a means to distinguish their activities and even to create a sort of specialisation. A true ontology should pick apart these variations and get agreement.

In this context, IA is more about moving a proposal or an ITT to create a thesaurus to the higher level of an ontology if this is what is actually required. In so doing it is not actually necessary to redefine the requirement but the IA consultant can mentally approach the task as an ontology construction task. This assumes, of course, that the consultant has a clear picture of the role of an ontology versus that of a thesaurus!!

The greatest risk is that, in attempting to achieve coherence, we stray into folksonomy. A recent article in the UK newspaper, The Guardian, described folksonomies as “improvisational, and haphazard”² and we would agree wholeheartedly. In achieving coherence there is a narrow line to be walked between discipline and user requirements. Unfortunately there are a lot of rash ideas out there which see folksonomy as an easy way to create the environment to encourage users to participate in indexing. As The Guardian article states “But in the context of today's information explosion, it [folksonomy] may be as good as it's going to get” – quite. In an IA context ‘as good as it gets’ is not good enough.

A Web Site or a Web based Intranet is NOT the place to start!

These have usually been created out of context and many of the perceived problems have arisen from that.

We said earlier that clients often start from the wrong premise. That may be explained by the relative simplicity of implementing web based tools for accessing information. The tools available to anyone nowadays can make it seem that, for example, creating a portal is easy, just connect the dots. It is true that actually putting together a web based interface is easy, one only has to look at the number of personal sites on the Net in domains like AOL to see the evidence. It is also true that most individuals can create a simple set of links, even to external sources. It is when that simplicity is adopted by (mainly IT) staff in an organisation to the creation of an interface to information that the problems start.

This is like providing people with television sets, and not designing a system of programmes to watch. The creator always takes short cuts and responds to the loudest claims. The intranet is the most obvious and visible example of this – followed by a portal, followed by a recognition that users can't find stuff, followed by a taxonomy, followed by meta-tagging templates, followed by publishing standards and so on and on – moving backwards to the beginning of the information life cycle. IA is lost.

² Oliver Burkeman, The Guardian, Monday September 12, 2005

We fully appreciate that most IA projects come too late to avoid this stage. We have mentioned it earlier. What we would advocate is that IA practitioners not concentrate on Web concepts in implementing projects, however difficult that may be. There is an old joke about the person asking for directions being told “if I were you I would not start from here” but it really does apply in IA projects!! We also appreciate that flow diagrams and such like, which are the stock in trade of IA practitioners, are very easily adaptable to (existing) web based applications in the client organisation but we would encourage a “green field” approach wherever possible. Stepping back and reviewing how the client got to where they are is more fulfilling than trying to repair the damage!

The digital revolution is breaking down barriers: barriers between different formats of information, and between different functional groups in organisations; even the barriers between organisations are becoming porous. Most importantly, it is forcing different information professionals to work together: information scientists, librarians, records managers and archivists, web designers and software engineers. This must be a strong argument for the holistic approach that information architecture provides.

Finally, we recently found this conception, in an otherwise unremarkable article on Measuring the Value of Metadata³ It is oversimplified, of course, but it does illustrate, perhaps in a way clients might better appreciate, the process of implementing an IA, from the viewpoint of organising metadata.

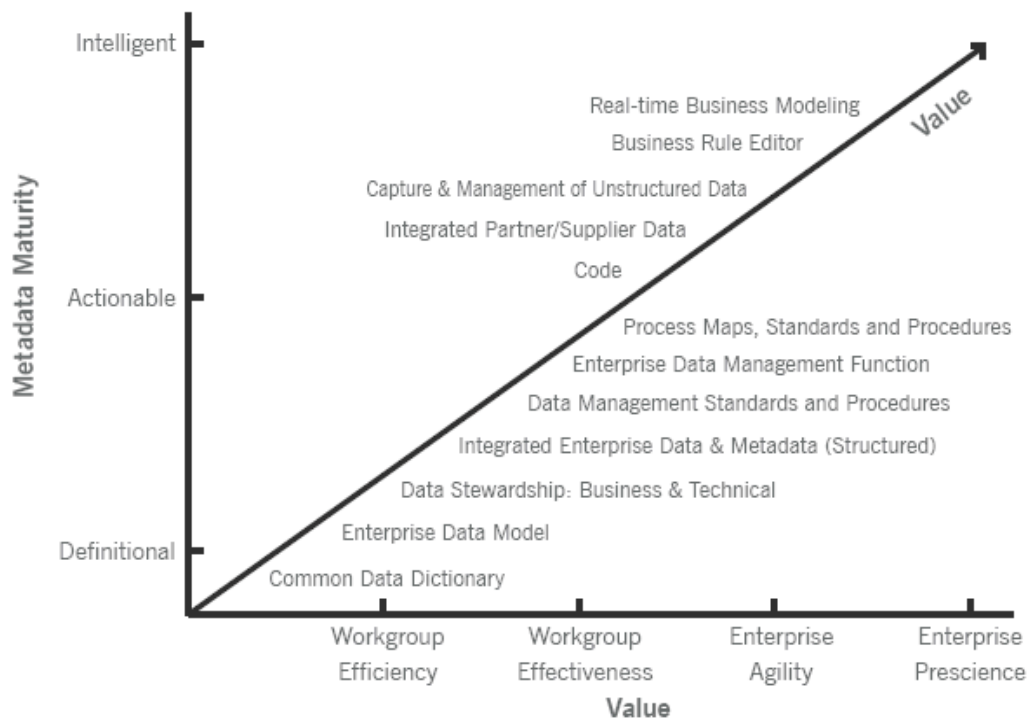


Figure 2. A Progression for Building Metadata Capability

³ Measuring the Value of Metadata, Linda McHugh, Baseline Consulting Group, www.baseline-consulting.com