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ABOUT FREE PINT

FreePint is an online community of information researchers. Members receive this free newsletter twice a month packed with tips on finding quality and reliable business information on the Internet.

Joining is free at <http://www.freepint.com/> and provides access to a substantial archive of articles, reviews, jobs & events, with answers to research questions and networking at the FreePint Bar.

Please circulate this newsletter which is best read when printed out. To receive a fully formatted version as an attachment or a brief notification when it's online, visit <http://www.freepint.com/member>.

EDITORIAL

In the last issue of FreePint I reiterated my belief that the information profession now has a much greater reach than at any time in the past. I noted that a few professionals, publications, educational establishments and associations 'get it', but many don't.

I'm delighted to say that my comments have been the cause of more than a little dissension in certain ranks. It's great that others are coming forth with their own perspective on how they discovered the information industry:

> "Your experience was to be in the information professional world and slowly realize that others were out there using the skills in different professions. My experience was to be in a different profession and slowly come to realize that there were information professionals! When I started out in this area in 1988, I knew there were librarians but I had no idea that there were independent information professionals or special librarians." http://www.freepint.com/go/b23047

The main issue I think is one of perception. How aware are the majority of the population of the importance and utility of information skills? Shouldn't they know about some of the important information issues that *will* affect them:

> "I often feel frustrated by how little the general public know about developments in the information world and how they could be affected by them - it's small comfort to think 'well if only they knew'. On the other hand, it's an uphill struggle. The coverage in the information press (and virtual communities like this one) goes completely unnoticed in the mainstream press." http://www.freepint.com/go/b22250

OK, so we're agreed. It's time for action. FreePint is getting things started by welcoming a new member to the team...

Annabel Colley is joining FreePint as press and publicity officer. Annabel joins us from the BBC where she was a senior broadcast journalist managing the BBC Current Affairs department's websites and Interactive TV output. Originally trained as an information professional, she has worked in BBC libraries and in investigative journalism at the BBC 'Panorama' programme. Annabel was the Special Library Association's 'European Special Librarian of the Year' in 2001, and can be contacted at Annabel.Colley@freepint.com.

So, we're thinking hard about the issues, and we're acting on them. I hope you will do likewise and that we can count on your support.

Cheers
William

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FREE PINT JOBS

<http://www.freepint.com/jobs>

This week's selected listings are below. All new jobs are posted to the Bar and Bar Digest (circulation 10,000+). This week's is at <http://www.freepint.com/go/b23144> and last week's at <http://www.freepint.com/go/b23049>.

Here are some of the latest featured jobs:

Contract Manager
<http://www.freepint.com/go/j2395>
Chance to work on major RM contract to digitise government records; 3 mgt roles avail, to run the contract and the indexing processes.
Recruiter: Sue Hill Recruitment

Picture Researcher
<http://www.freepint.com/go/j2397>
Corporate comms role for enthusiastic picture researcher with a media background.
Recruiter: Recruit Media

Information Officer (Web Content)
<http://www.freepint.com/go/j2398>
Information Officer (qualified) with HTML and web authoring skills to do research and enquiry work. New vacancy.
Recruiter: Glen Recruitment

Strategic Research Professional
<http://www.freepint.com/go/j2401>
Researcher with strategy experience required. Experience in public sector or general financial services sector.
Recruiter: Intelligent Resources

[The above jobs are paid listings]

Find out more today at <http://www.freepint.com/jobs>

Library + Information Show 2003 - Biggest + Best

LiS is the original, biggest + best event for all librarians and information professionals. Many of the 120+ exhibitors have chosen LiS to show case new products & services or demonstrate improvements to existing ones. Put this together with the comprehensive, free seminar programme and the opportunity for you to meet Roger McGough and Joanne Harris, spending a day at LiS will prove to be invaluable.
<http://www.lishow.co.uk/pint> 30th April + 1st May 2003, ExCeL, London

FreePint Freedom of Information Exchange
22nd July 2003, London, UK

This seminar will provide an overview of the Freedom of Information Act. The session will cover: practical issues to consider when implementing FOI; discrepancies between the Data Protection and Freedom of Information regimes; the role of the publication scheme; records management issues; handling FOI requests; right of appeal, complaints procedures & compliance matters; copyright issues.

http://www.freepint.com/exchange/fi220703.htm

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The CILIP/FreePint Online Community Award

Since group communication and support online have become so important, the Online Community Award is your chance to nominate any online community project from any sector that has brought people with common interests together in a virtual environment:

<http://www.freepint.com/events/cilip-2003/>

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Free to search. Pay-as-you-go detailed reports. Comprehensive. Why not give it a go?
<http://www.freepint.com/icc>

MY FAVOURITE TIPPLES
from Emma Finney

Emma Finney is the Information Adviser for Physics, Chemistry & Biomedical Sciences at Sheffield Hallam University. She works with students and academics.

Tell us about your favourite Web sites. Check out the guidelines at <http://www. freepint.com/ author.htm>, then email <penny@ freepint.com>.

- If I need music at work I listen to last night's John Peel radio show from Radio 1 <http://www.bbc.co.uk/radio1/audiovideo/>.

- RDN have developed subject-based tutorials which are perfect for getting to grips with an unfamiliar subject <http://www.vts.rdn.ac.uk/>.

- Publist has listings of over 150,000 print and electronic journals which can be useful for tracking small press publications <http://www.publist.com>.

- University of Wolverhampton's UK map has direct links to all Universities and FE colleges http://www.scit.wlv.ac.uk/ukinfo/uk.map.html

- I confess, I love motor sport and ITV covers better than most websites <http://www.itv-f1.com/>.

Survey and Search Services

SOLON - an information science and knowledge management consultancy set up in 1972 - offers timely, accurate and economic services in:
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FREE PINT BAR
In Association with Factiva
a Dow Jones & Reuters Company

Spam seems to have been the topic du jour every day at the FreePint Bar for a while now. Posters have been wanting to get their definitions sorted out; defining exactly when commercial email is unsolicitied <http://www.freepint.com/go/b22997>. After you've sorted our your 'definitions', you need to address the 'ethics' of mass mailings <http://www.freepint.com/go/b22544>.

If you're not an instigator but a receiver of spam, then maybe you should check out the various anti-spamming software and tactics used by FreePinters <http://www.freepint.com/go/b21850>.

The FreePint Bar is a fantastic free resource where members help each other with information-related queries <http://www.freepint.com/bar>.

Help for students on information-related courses is available at the FreePint Student Bar <http://www.freepint.com/student>.

To sit back and let the postings come to you, sign up for the twice-weekly email digest <http://www.freepint.com/member>.

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<http://www.factiva.com/infopro>

EVENTS
<http://www.freepint.com/events>

The Library + Information Show will be taking place in London on the 30th April to 1st May. "... share the key industry developments, the latest technology, exchange ideas and opinions and debate current issues" <http://www.freepint.com/go/e162>.

AIIP have their annual conference on the 1st-4th May in Providence RI. It "provides opportunities to meet leaders in the information industry, develop contacts for subcontracting, attend pre-conference seminars as well as free vendor training, and learn about the latest information products" <http://www.freepint.com/go/e169>.

On the 8th May, go along to the Mobilising Knowledge 2003 Conference taking place in London. "This conference provides: - a practical focus - a highly participative environment - a mixture of plenary sessionsand interactive workshops - ample opportunity for networking and sharing experiences - a practical set of tools to take away and implement" <http://www.freepint.com/go/e185>.

"STN will be hosting two free patent forums, in Cambridge on Tuesday 13 May and in Manchester on Friday 16 May. These sessions will provide an overview of patent searching on STN and the databases available" <http://www.freepint.com/go/e182>.

FreePint have an Exchange on the Freedom of Information Act in London in July <http://www.freepint.com/go/e189>.

Submit details of your event today for free promotion. Simply complete the form at <http://www.freepint.com/events>.

Penny <penny@freepint.com>

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There is NO better way to promote your information-related vacancy <http://www.freepint.com/jobs>

TIPS ARTICLE
<http://www.freepint.com/issues/030403.htm#tips>

"Genetically Modified Foods: Official Information Sources"
By Rupert Lee

Rupert Lee works in the Research Services department of the British Library, as Bio-medical Information Specialist. A former zoologist, his job consists of doing online literature searches for fee-paying customers; helping with quick enquiries free of charge; and anything else that needs his expertise. His booklet: How To Find Information - Genetically Modified Foods (published by the British Library, 2000) is still in print; this article covers the same ground as Chapter 4, brought up to date. He has also written a popular science book: The Eureka! Moment - 100 Key Scientific Discoveries of the 20th Century (British Library, 2002).

Anyone, professional or amateur, with an interest in GM foods will sooner or later need to find sources of government information on the subject. Governments are involved in GM food technology in two main ways: regulation and support. On the one hand, they have produced a huge volume of laws and regulations restricting the activities of GM technology research and its commercial application. On the other, they provide funding for much of the research in the laboratories of universities and institutes.

Readers of this article may need to answer questions such as these: What are the current laws about separating and labelling GM products? What are the exact regulations covering the planting of experimental plots of GM crops? Where are these experimental plots located? What publicly-funded research institutes are currently researching in GM technology, and what projects are they working on? Who are the Government's advisers on GM food issues, and what are they telling the Government? How does the British Government's policy on GM foods compare with other nations'?

British Government Information Sources

It is often said that although Britain is a democracy, its government is highly secretive. In fact, a great deal of government information is publicly available, if one knows where to look for it. In particular, the websites of government departments and other official bodies are often rich sources of information. However, the design of these sites can be rather opaque: they do not always flag up very clearly what information is there, or what pages it is to be found on. There is also the problem of identifying precisely which department is responsible for providing any piece of required information.

The main source of government documents is The Stationery Office <http://www.tso.co.uk/>. This site sells White Papers, Acts of Parliament, and other legislative documents, including EU Directives. Click on Online Bookshop and then on Search. A search for documents mentioning the phrase GENETICALLY MODIFIED recently retrieved 119 titles.

British Government Policy - Safety and Labelling

Standards of food labelling and safety are set by the EU Novel Foods Regulations 257/97 and 1139/98, subsequently tightened by Regulations 49/2000 and 50/2000. These require that any food containing more than 1% GM soya or maize, or more than 1% any other GM organism judged to be 'Not Equivalent To an Existing Food' be so labelled. Responsibility for implementing these regulations is given to the Food Standards Agency <http://www.food.gov.uk/science/sciencetopics/gmfoods>. The Agency is advised by the Advisory Committee on Novel Foods and Processes (ACNFP) <http://www.food.gov.uk/science/ouradvisors/novelfood/>.

In order to comply with government policy, manufacturers and retailers have to keep GM produce separate from non-GM. They may consult a code of practice for management of GM crops and supply of information of GM produce, drawn up by SCIMAC <http://www.ukasta.org.uk/news/scimac>, a consortium set up by the National Farmers' Union and several trade associations.

Safe Handling

The Government is advised on safety issues relating to the handling of GM organisms by the Health & Safety Executive, and specifically its Advisory Committee on Genetic Modification <http://www.hse.gov.uk/aboutus/hsc/iacs/acgm/index.htm>. However, its main remit is the safety of contained (i.e. laboratory) use of genetically modified bacteria and the like, and it is not so concerned with GM foods.

GM Crops in the Environment

British policy on GM crops in the environment has to comply with EU Directive 90/220 on Deliberate Release of Genetically Modified Organisms. This is incorporated in British law, as part of the Environmental Protection Act 1990, and regulations subsequently brought in under its provisions. Its major requirement is that before a GM plant variety can be grown as a crop, experiments have to be conducted to see if it poses any threat to the environment. Implementation of this policy is the responsibility of the Department of The Environment, Food & Rural Affairs (DEFRA), and specifically the Advisory Committee on Releases into the Environment (ACRE) <http://www.defra.gov.uk/environment/acre>.

This site is a most important source of information; it contains the text of reports produced as input to government policy, which are not readily available elsewhere: e.g. Cross-Pollination in Relation to Farm Scale Evaluations of Genetically Modified Maize in Wales (2001); A Response to Concerns about the Presence of GM Oilseed Rape Pollen in Honey (2002); and several other titles. It is also a prime source of information on applications for permits to release genetically modified organisms into the environment, to market GM foods, and also trial sites for GM crops. These applications are described in the site's Meetings section, in the agendas and minutes of meetings.

In addition to ACRE's page, the DEFRA website also has a very useful GM section <http://www.defra.gov.uk/environment/gm/index.htm>. This includes a page on farm-scale evaluations (FSEs), i.e. sites of experimental plots of GM crops, with an up-to-date list of where these are located; and also the page Monitoring Large-Scale Releases of Genetically Modified Crops (EPG 1/5/84), a report published in December 2002 on FSE programme.

Government-sponsored research

Not all research into GM crops is conducted by commercial companies. Universities and government-funded research institutes are also active in this field. Funding for research into GM foods comes mainly from DEFRA and from the

Biotechnology and Biological Sciences Research Council (part of the Office of Science & Technology <http://www.bbsrc.ac.uk>, itself part of the Department of Trade & Industry). Click on Discussion Documents for several publications relating to GM technology in agriculture: Ethics, Morality and Animal/Crop Biotechnology; Genetically Modified Crops and the Countryside; GM Agriculture in the UK?; etc. The OASIS website <http://dataserv.bbsrc.ac.uk/oasis.htm> lists research projects funded by the BBSRC during the last three years.

The BBSRC also provides at least part of the funding for a number of research institutes, of which the following are involved in GM food projects: The Institute of Food Research <http://www.ifr.bbsrc.ac.uk>; Rothamsted Research <http://www.rothamsted.bbsrc.ac.uk> (formerly the Institute of Arable Crops Research); The Roslin Institute <http://www.ri.bbsrc.ac.uk> (birthplace of Dolly the cloned sheep); The Rowett Research Institute <http://www.rowett.ac.uk/>. These Websites all contain at least some information about the projects the institutes are currently engaged on.

Government Information

The Rest of the World

All the industrialised nations have at least some policy and legislation concerning GM foods. The Robert Koch Institut in Germany maintains a web page <http://www.rki.de/GENTEC/GENENG/GENTEC_E.HTM?/LINKS/GOVERNMENT_ENG.HTM&1> containing links to the relevant departments of governments worldwide. The design of this page is a little confusing: keep scrolling down the right-hand side, and these links will appear eventually.

The USA

The American GM food industry is likely to dominate the world for the foreseeable future, so the US Government's policy's on GM technology will be of particular interest.

The main general source of US government information is agNIC <http://agnic.umd.edu/>, a gateway to sources on agricultural biotechnology run by the University of Maryland. It has replaced the old Biotechnology Information Centre <http://www.nal.usda.gov/bic>, which is still available as a source of documents up to 2001.

The responsible departments are: the US Department of Agriculture; the Food & Drug Administration; the Environmental Protection Agency. The Animal & Plant Health Inspection Service (APHIS) of the US Department of Agriculture <http://www.aphis.usda.gov/ppq/biotech/> regulates the movement, import, and field testing of GM crop plants. The home page has a Search facility: a recent search for the phrase GENETICALLY MODIFIED retrieved 354 documents.

The Centre for Food Safety and Nutrition of the Food & Drug Administration <http://www.cfsan.fda.gov/~lrd/biotechm.html> is responsible for the safety of GM foods, under the terms of the Federal Food, Drug & Cosmetic Act.

The Environmental Protection Agency administers a wide variety of legislation covering environmental matters. Its website <http://www.epa.gov/epahome> provides links to a plethora of information. Its Browse facility provides both a Short and a Long list of topics, but GM organisms do not appear by name in any of these: the best way to find documents on the subject is by using the Search facility (NB: when using Search facilities on any Websites or search engines, it is worth remembering that although the initials GM usually stand for Genetically Modified in Britain and Europe, in America they more often mean General Motors).

Non-Governmental Sources

This article is about information produced by officialdom. However, this will always be biased by the dictates of Government policy. For a more rounded picture, or for other points of view, one has to go to non-governmental organisations as well. Below are a few useful and (generally) authoritative sources:

The Royal Society <http://www.royalsoc.ac.uk>. Effectively a society of the great and the good among British scientists. It has issued position statements and press releases on GM food issues.

GeneWatch UK <http://www.genewatch.org> is a debating forum/pressure group, more informative than some.

The Royal Society for the Protection of Birds <http://www.rspb.org.uk/> has conducted its own research on the environmental impact of GM crops. Use the Search facility to find its policy statements.

New Scientist magazine <http://www.newscientist.com/> has a section on GM foods in its list of Hot Topics.

FREE PINT BOOKSHELF

<http://www.freepint.com/bookshelf>

"The Librarian's Internet Survival Guide: Strategies for the High-Tech Reference Desk"
Written by Irene E. McDermott
Reviewed by Bekke Aaron

Bekke Aaron is a doctoral student in educational technology at Purdue University and works at their Undergraduate Library Reference Desk. Surfing the 'Net since 1994, she has taught computer classes and workshops for Purdue students and K-12 teachers.

Related links:

- Find out more about this book online at the FreePint Bookshelf <http://www.freepint.com/bookshelf/survival.htm>

- Read customer comments and buy this book at Amazon.co.uk <http://www.amazon.co.uk/exec/obidos/ASIN/157387129X/freepint0c> or Amazon.com <http://www.amazon.com/exec/obidos/ASIN/157387129X/freepint00>

- "The Librarian's Internet Survival Guide: Strategies for the High-Tech Reference Desk". ISBN 157387129X, published by Information Today, written by Irene E. McDermott

- Search for and purchase any book from Amazon via the FreePint Bookshelf at <http://www.freepint.com/bookshelf>

To propose an information-related book for review, send details to bookshelf@freepint.com

Originally written as instalments for McDermott's monthly "Internet Express" column in Searcher magazine, this book is divided into two parts: "Ready Reference on the Web: Resources for Patrons" and "The Librarian as Information Technician: Working with the Medium and the Machines".

Part One explains search engines, online news and reference sites, free full-text resources, and teaches readers how to use the Web to find people, health and medical information, financial information, and how to go "cyber-shopping". Part Two informs readers about using Web-based electronic mail, teaching others how to use the Internet, troubleshooting computer problems, creating and maintaining Web pages, and making the Web accessible to people with disabilities.

The author draws on her experience as Reference Librarian and Systems Manager at the San Marino Public Library in California. Before earning her library degree from UCLA, she was a research editor for Salem Press.

The majority of each chapter is an annotated 'webliography', with the title, URL and brief description of each website. Probably to appear friendly and approachable to novice Web users, McDermott's writing style is so positive that it's almost perky but she did make me laugh when observing that librarians have become bartenders because "prying fixated patrons off the Internet after only one hour is like cutting off alcoholics after a couple of drinks".

Screenshots of various websites (three for each of the 15 chapters) illustrate the book. Internet newbies will appreciate the handwritten annotations on some screenshots that help explain how to set up web- based e-mail account, send your first email message, clear your browser cache, and delete browser cookies.

For someone who hasn't had time to become an Internet expert, this book is a good introduction, but even experienced surfers will learn useful information about some new Websites. While the URLs are still fresh, my colleagues and I will be reading it during slow nights at the Reference Desk.

Related websites

McDermott's book is a collection of her monthly columns for Searcher: the Magazine for Database Professionals, published by Information Today Inc. Some full-text articles, but not all of McDermott's columns, are available online for each issue <http://www.infotoday.com/searcher/>.

Download PowerPoint slides for Irene McDermott's lecture at the Library of Congress, Washington, DC and view a 90-minute Real Player cybercast of the October 25, 2002 event <http://www.loc.gov/rr/program/lectures/mcdermott.html>.

Free Pint Forthcoming Articles

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If you have a suggestion for an article topic or would like to write for Free Pint then please contact <penny@freepint.com> or sign up for the Author Update at <http://www.freepint.com/author.htm>.

FREE PINT

FEATURE ARTICLE

"Information Systems – Never Just Technology"
By Neil Lynch

Neil Lynch joined the University of Canberra (UC) as a lecturer in Information Systems in 2001 following more than 20 years as a practising IT professional. Neil has extensive experience in client liaison, IT project management and the design and support of information systems. Neil's more recent experience was with internet and intranet systems, including large scale internet text publishing. Neil is currently teaching in the areas of human-computer interaction, IT project management and the use of systems to support knowledge management. Neil gained his first degree in Computing in 1981 and his Masters of Information Technology in 1996.

If you're involved with a system that never needs change, never has 'bugs', and is always available, you can ignore this article. For the rest of us, I hope this provides some guidance.

In November 2002 FreePint published an excellent article by Joe Tarrant on becoming a systems librarian <http://www.freepint.com/issues/281102.htm>. As Joe pointed out, all computing systems are socio-technical in nature, i.e. successful systems must satisfy conflicting needs of people yet still add value and be technically feasible. Joe discussed the essential technical aspects of systems (hardware, software, networks) and how a successful systems librarian could address them.

My comment on Joe's article was: "A good article that needs a follow-up to go beyond the technology to some of the other important aspects of being/becoming a 'systems librarian'". This is that follow-up article.

I am an 'information systems professional' (IT background) and have too often seen subject matter experts encounter problems when trying to build/operate information systems. The information management problem they were originally trying to solve has become lost in the complexities of the technology.

Don't get me wrong, enthusiastic and knowledgeable business experts, willing to expand their IT knowledge, are important to the success of any system. But just as I do not have the knowledge to develop or maintain a library, I think it is a difficult for a librarian (or any professional) to "pick up" the knowledge necessary to successfully develop/manage a system throughout its life.

The following brief descriptions are some of the knowledge areas that need to be considered in conjunction with Joe's paper. You may decide they do not apply to your system, and that is fine, but their omission needs to be a conscious decision.

My emphasis is related to supporting an existing system. However these topics, together with others such as development, testing and training, can add value at any stage during system's life cycle.

1. Planning and Budgeting

* Project Planning and Resource Management:

Plan your change. Know what it is you are trying to achieve, how long it is going to take, how much it will cost and how many people you need. It is more than producing a quick Gantt chart. You need to monitor progress, and manage the expenditure of time and money against your plans.

* Budget for Support

Without ongoing attention, production systems 'die'. This support may be as simple as regular backups; adding or removing registered users;

maintaining operational efficiency (e.g. re-formatting the database to improve performance); fixing bugs; or making improvements. It is essential to budget for these activities (money, people, impact on other systems, etc.).

Enhancements to your system, bug fixes, changes to software, and changes to hardware are inevitable. While some can be planned, some 'happen'. Make provision for both.

2. Change Management

Be very afraid of anyone who says "it's only a little change". Record "all" potential changes in scope, or design, or those resulting from testing. Evaluate proposed changes against need, costs, benefits and impact (including potential risks), and assign a priority. Lack of formal evaluation is the single biggest cause of failure in IT systems. The result is often a change in scope that doesn't provide a benefit or is high risk.

The AT&T example in Lee's book (see references) describes an extreme example of the damage a small change can cause. The fix worked for a while but eventually caused AT&T to lose US$75 million in revenue.

As a stakeholder in a system, make sure that you are part of the change approval process. Depending on complexity and risk, changes may take from hours to months to implement. In one organisation, except for emergencies, it takes 9 months for even relatively small changes: systems are large, complex, and sensitive to customer complaints. In this environment, extensive regression testing and sign-off by all stakeholders is not negotiable.

Substantial, or high impact change, may become projects in their own right.

3. The Vision - the concept behind the system

* Business case (cost - benefit analysis)

Keep the original intent in mind when changing a system. Changing your library catalogue system into a library financial management system may meet changed needs, but be aware of the impact of those changes. Estimating these impacts on your organisation and stakeholders, including the costs and benefits over the life of the system, helps you decide whether the change should, or should not, be made.

The systems concept should identify those who have a stake in the system, including those who will pay for it, those whose working lives are changed by the system (customers/clients/patrons), the image aspects of the system, the relationships with existing systems etc. Opportunities for computerising products and services needs to be balanced against organisational impacts.

* Conceptual Analysis and Systems Requirements

When modifying a system you will need to refer back to existing specifications. As a system owner/developer you may already have this knowledge. For anyone else, the lack of specifications may mean the system becomes a mystery tour. Making changes in the absence of specifications will almost certainly create unintended consequences.

The question of whether you use a soft systems methodology (Checkland), structured methodologies (Alter), or an object oriented approach (Larman) is less relevant than representing the more important system elements in a way that is understandable to others. All these approaches are intended to improve information gathering, analysis and modelling to produce a specification for the proposed system. Models are essential but do not solve the problem. As succinctly stated by George Box: "All models are wrong. Some models are useful."

Modelling helps to identify stakeholders, their concerns and relationships; scenarios help identify the processes the system is expected to provide; while more technical analysis such as use cases, improve our understanding of a system and help demystify inherent complexity.

* The Systems Proposal

Alternative designs and development approaches can be considered once you know what it is you want to do. A real business case can then be made which examines purchase costs of hardware and software, support costs (e.g. the help desk), costs of development, cost of running the network, maintenance, ... the list goes on. The expected benefits also need to be estimated for each alternative (identifying, if not quantifying, intangible costs and benefits). Do you modify a system, buy it, or build it? If you build, do you use your staff, contract programmers, or engage a software company? Some of these options may be obvious in your situation, but still need to be considered. You may also need to consider whether particular functions are cost-effective (i.e. development costs are outweighed by benefits over the system's life).

4. Information and IT Architectures

Does your system duplicate information or functions in other systems? If so, can you use that system and save yourself the effort? If you need to duplicate data in your system (e.g. for performance reasons, timeliness, accuracy), what are you doing to ensure this data is consistent?

Are you using the same hardware and software as other areas of your organisation? If not, have you costed the increased charges and reduced levels of support this will incur?

* Configuration Management

The configuration of your hardware, system software and application needs to be known and managed. You need to know which version of the operating system, which 'service pack' (patch level), which version of database software, which versions of software modules are used within your system, and which version of screens so they can be matched with your training notes and online help.

5. Quality Assurance

Quality costs money (but will also save you money). Identify how you are going to define, measure and test the quality you are trying to achieve. A quality outcome is a product (a system change) that is 'fit for purpose' (meets clients needs) be it a highly polished product or something that is 'throwaway'.

Measuring the success, or otherwise, of your change allows you to know if the change was worthwhile and is the first step toward continuous improvement (doing it better next time).

6. Risk Management

Identify and address any risks that may affect the success of your system. Some risks will be beyond your control but many can at least be ameliorated. You need to identify potential risks, assess the likelihood of that risk occurring, and then assess the consequences this risk will have on your system if it occurs. You need to regularly review your risks and their consequences as they change over time.

7. Implementation

After successfully completing testing (possibly a full regression test), and any training, you are ready to implement the new version of your system. You may need any or all of new hardware/software, distribution of documentation, and conversion of data from the 'existing' database to the new. Data conversion may be a large exercise in its own right e.g. converting a single "address" field into several fields (i.e. street number, street name, suburb). Will your system work when implemented? Reduce the risk by parallel-running both systems, or implementing in a pilot site, prior to full production release.

Joe finished his article with a "welcome to the dark side". I hope that this article provides a little light (even if only a narrow pathway) to lift the gloom surrounding the 'dark side' of systems.

8. References

There are numerous texts on project management and software engineering, most of which will provide good guidance in these areas.

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