

Clark Kent* and Lois Lane* in 2010 Information Professionals working in the "Technology Fashion House"

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by

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Abstract

The year is 2010. 20th century US icons *Clark Kent** and *Lois Lane** worked as reporters for *The Daily Planet**. Their modern day Australian counterparts operate in a very changed business, information, technology and media environment.

What has unfolded since the beginning of this century for the modern day Clark and Lois and their information peers is a career change – recognition that several professions commenced converging in the early part of the 21st century: business consultants, business and government librarians, information experts and knowledge managers.

Modern day Clark and Lois established their own business: the ***Technology Fashion House***. They now work as ***Business Information Architects (BIAs)*** in this organisation that relies heavily on international knowledge, technology and e-relationships.

Clark and Lois reflect on the **environment** and **drivers** that led them to their new roles in a new organisation in a new business environment, and their **development** from 2003-2010 that included an on-line and personalised vocational one-year Masters degree in ***Entrepreneurial Information Management***. Several global universities and major information vendors provided guidance and expertise in:

- Working in a complex, connecting environment
- Innovation and mastering strategy
- Business simulation
- E-information supply chain management
- Business advisory services and global e-learning
- Advanced analytical and evaluation methods
- On-line competitive intelligence - searching, interpretation and deduction
- Programming and database management
- Foreign languages
- Stakeholder communication and relationships
- Risk minimisation.

1. Introduction

This paper presents the views of two Australian information professionals - from very different backgrounds but who have considered the convergence of ***information specialists*** with ***business consultants***, to create the future information, knowledge and decision-making professional that will be of increasing value to business, industry and government.

2. The Opportunities and Challenges: what emerged and what was emerging

The location is Australia. It is the beginning of the 21st century. Modern day Clark and Lois have witnessed some remarkable local and international and business events upon which they reflect.

2.1 Global Economics, Politics and Business

At the turn of the century, global *gross domestic product (GDP)* was valued at US\$30 trillion (World Bank 2001 World Development Indicator). One-third of the world's population of more than six billion people was found in two emerging economies - China and India.

Political tensions in 2002 were evident, in particular between the USA and Iraq, between Israelis and Palestinians, and with the USA and North Korea. Key drivers for these tensions included concern about international terrorism, weapons of mass destruction and the control of natural resources such as oil. In late 2002, Venezuela went into an economic decline through a deliberate slowing of oil production, which led to short-term political instability.

The international business environment in 2001 and 2002 was both turbulent and interesting. The US economy had been struggling for some years, but was supported by its Federal Reserve and low interest rates. Australia's economy had prospered despite severe economic downturns in neighbouring Asia in the late 1990s.

In early 2002, Bankers Trust Australia projected (at a February 2002 Sydney seminar hosted by the NSW State Chamber of Commerce) that:

- ❑ From 2002 to 2011, Australia was expected to record amongst the strongest growth of any OECD nation, as were the United States, Spain and New Zealand. Inflation was expected to remain less than 3% in each of these countries.
- ❑ Japan was expected to have very low growth over this same ten-year period, with a near zero inflation rate.
- ❑ The greater Asia-Pacific region would be the fastest growing global economic region in the same ten-year period, with projected fast-growing economies being China, India, Malaysia, Singapore, South Korea and Indonesia.

In Australia in 2001, an insurance company HIH, one of the major airlines Ansett, and the Communications company One.Tel, all collapsed - through alleged mismanagement, and in some cases through corrupt practices (as reported by the *Australian Financial Review*). The reputation of Australian entrepreneurs was again tarnished as it had been in the late 1980s.

Despite a serious drought in the second half of 2002, Australia's agriculture was still very internationally focussed. The wine industry witnessed export growth of 30% that year, to take wine export value to A\$2.3bn - a highly successful sector with a 30-year strategic view that was developed in 1996.

In the USA in 2001 and 2002, there were several business scandals: with the Enron organisation and Arthur Andersen, and with the communications giant, Worldcom. Tom Peters, the US based internationally renowned management guru and co-author of the 1982 *"In Search of Excellence"*, admitted to including false data in this successful publication. The credibility of financial auditing and that of management and business consulting *nose dived* in the US, and flowed over to Australia as witnessed in late 2001 and during 2002 by the downsizing and/or mergers of business advisory services.

2.2 Technology and Business Convergence

In 2002, IBM purchased the consulting arm of PriceWaterhouse Coopers (PwC) - the *convergence* of information technology, communications and business consulting.

Convergence of technologies for lifestyle benefits increased at a rapid rate:

- ❑ A spectacular example in 2001 was announced in the press - IBM, along with several other ITC companies, had participated in the successful experimentation of voice technology being fitted into the frames of eyewear.
- ❑ Similarly, in January 2003, Microsoft demonstrated at the annual US Consumer Electronics Show, a Windows Bernina sewing machine that could download stitch patterns from the web. Citizen, Fossil and the "wrist-tops" computer maker had worked on a Microsoft watch. The watch had a small digital screen to display news, sports results, weather updates and stock prices.

2.3 Information Industries

The Australian *library and information services industry* had changed. Its focus was increasingly online and user-centric: *front office*, not *back-office*. Of the five sectors in the industry:

- ❑ **Government** (Federal and State departments, agencies and organisations)
- ❑ **Corporate** (Private Sector organisations)
- ❑ **Education and Training** (Universities, TAFE and Schools)
- ❑ **Community** (Public Libraries)
- ❑ **Cultural and Heritage** (National Library of Australia and State Libraries),

the corporate and government sectors were experiencing change, consolidation, downsizing, and in some cases, improved positioning.

Shared service and consortium business models were emerging. There was increased collaborative activity between organisations within sectors - information professionals were increasingly working with functional teams within organisations. In some cases the closure of internal libraries and information services occurred and begged the question of the perceived relevance and value to their parent organisations.

As with technologies and business, *convergence* occurred in the library and information services marketplace with roles such as records managers, web managers, knowledge managers and librarians being meshed together, and were sometimes confused or misunderstood by end users and clients.

Media and *publishing* also witnessed ongoing and rapid change. In 2003, the delivery of news by online news organisations was becoming increasingly important. By December 2002, there were over 4,000 on-line news sources continuously being crawled by Google News (a statistic on Google News).

At *UK Online Information 2002*, Roberta Shaffer (1) commented that:

- ❑ *"End-users or information consumers had direct access to more information each year (36% more on the Internet alone) and have conflicting expectations: to access and use systems directly with no intervention between themselves and the system, and at the same time, to expect content customisation and personalised presentation.*
- ❑ *Publishers and content providers continued to consolidate, so that the choices among content providers and conduits to carry information were increasingly limited.*
- ❑ *Decision-making was being based less and less on hard facts, thereby elevating the "informational" role of gossip or gut reaction in the decision-making process.*
- ❑ *Problem solving was increasingly trans-disciplinary and information was drawn from a variety of disciplines - that must meld together in terms of terminology, disciplinary cultures, methods of communication and peer acceptance.*
- ❑ *The visual presentation of information was fast over-taking text as a preferred method of communicating."*

Virginia Walsh stated at the 7th Asian Pacific Specials Health and Law Librarians' Conference (2) in 1997, when describing a project to research company expectations of Australian library professionals:

"Special librarians are particularly vulnerable in this new information age. Many corporate managers believe that the proliferation of online information delivers all the information they require to the desktop. Corporations have already demonstrated a willingness to cut library services from the organisational structure in the belief that staff can negotiate their own way through the information networks to secure the knowledge resources they require.

The jargon of the 'information economy' and 'knowledge economy' reinforce this perception... The task for the library community is to effectively mark out its territory and secure its future role into the next millennium....

This research is new to the Australian library sector. Importantly, it seeks to add an Australian perspective to the American studies undertaken in 1990 and 1995 by James Matarazzo and Laurence Prusak (3 & 4). These particular studies examined the attitudes and perceptions of senior managers with budgetary responsibility for the library facilities of their companies as a way of evaluating the performance of the corporate library and of gauging its value as a resource to the organisation.

The American research results suggested that corporate management was neither familiar with the role of the library facilities in determining the success of their companies nor had they any formal procedure for measuring its contribution.

They therefore concluded that if corporate library professionals wish to consolidate their position within the corporate environment, it was incumbent upon them to work to demonstrate the value of their services to their parent companies....

Electronic database library services provide the highest value to the companies surveyed.... In fact the results of the 1990 study by Prusak and Matarazzo placed an even higher value on these services (78%) which led the researchers to conclude that non-library staff may be accessing the databases themselves and by-passing the library...

This project is a first step in marshalling facts and figures which will assist corporate librarians to demonstrate the value of their services to management."

Roberta Shaffer (1) commented that:

"We constantly hear from experts in all sectors of our global village that we live in the Information Age and that knowledge is the critical currency of the new century. According to Peter Drucker, the ease and speed at which information travels will require that every institution - businesses, universities, and even government agencies - in the "knowledge society" be globally competitive, and be ready to respond to customers who have access to information that crosses the dimensions of distance, time and cultures...

...Today, information professionals must be prepared to perform information management functions along a service continuum that spans the traditional functions and bridges into an ever-expanding definition of "knowledge work." This new workplace, often defined as the "wisdom workplace," demands that the information professional take jurisdiction over information from myriad sources in myriad formats, and consolidate it into a tapestry of intelligence. The end result is a competitive advantage for the overall organisation and certainly not limited to the library or information center."

Ms Shaffer considered the professional characteristics of future information professionals. These included:

- Partnering*
- Personalisation of information*
- Price - determining the value of obtaining, reviewing, analysing, and applying information to problem solving or to new product or service development*
- The "big picture" understanding of the parent organisation, and*
- Positive deviance - information professionals taking risks, trying new approaches and thinking beyond the bounds (and not being caught by the ease of benchmarking and borrowed best practices).*

Similarly, in 1996, a *Competencies for Special Librarians in the 21st Century* review (5) was prepared for the Special Libraries Association Board (USA) and considered both *professional* and *personal competencies* for future special librarians. Some of the required competencies identified in that study included:

- Expert knowledge of the content of information resources, including the ability to critically evaluate and filter them*
- Specialised subject knowledge appropriate to the business of the organisation or client*
- Develops and manages convenient, accessible and cost-effective information services that are aligned with the strategic direction of the organisation*
- Sees the big picture*
- Looks for partnerships and alliances*
- Personal business skills; creates new opportunities*
- Flexible and positive in a time of continuing change.*

Elizabeth Swan, in a paper (6) delivered at New Zealand's 2002 LIANZA conference, commented that:

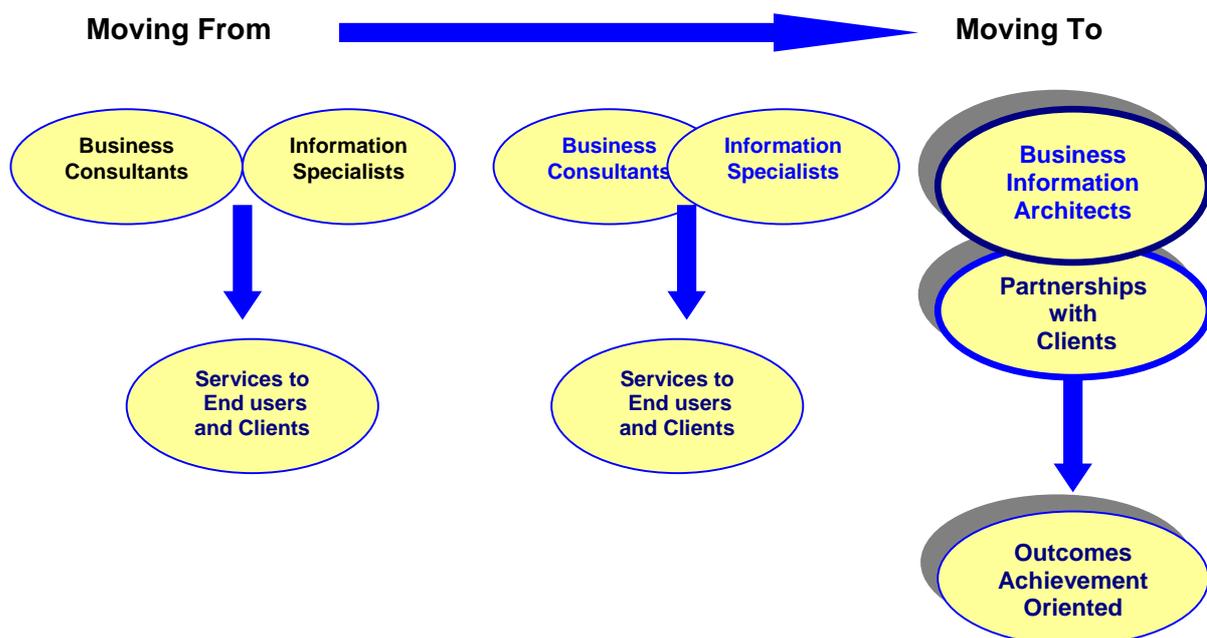
"So what many special librarians are facing is the need to change the roles they play. Instead of managing a collection, they now need to manage access to information, often arranging delivery of information to the clients' desktops. This means they have to evaluate the services that are needed, negotiate and manage the supplier licences, and train the users for effective use. There is no doubt that if special librarians do not accept this challenge, the large commercial providers will by-pass them and go straight to their clients."

Finally, the US Bureau of Labor Statistics predicted a net increase of more than 10,000 information professionals in the US labour force by the year 2010, and that jobs in librarianship would grow more slowly than average in the same time frame (7).

3. Creating the Future - Continued Convergence of Ideas and Professional Services

The global environment of the early years in the 21st century led the Australian-based modern day Clark and Lois to develop and consider a range of scenarios. These shaped their next years in a "decision-making and information value-adding" services business. The 2003-2010 *timeframe* assumptions that they considered were:

- ❑ Geo-political and economic changes and instabilities would focus professional service providers to be enterprising and resourceful in their offerings to the marketplace and to their clients.
- ❑ Private and public sector organisations would continue to seek quick and easy access to readily useable and available local, national and global data, information and expertise.
- ❑ Major business and professional service opportunities would occur in the wider Asia-Pacific region - professional business services would be delivered by virtual, multilingual teams requiring minimum infrastructure, but essential communication and information tools.
- ❑ Risk management would be considered from both financial and non-financial perspectives, and would be associated with industry and organisation processes, practices, products and services.
- ❑ Global supply chains would be shorter, and the contact between suppliers, customers and other key stakeholders increasingly on-line and instantaneous.
- ❑ *Corporate social responsibility* would have a higher profile in developed economies, for considering an organisation's contribution to an economy, social structure and the environment.
- ❑ The continued emergence of highly skilled information literate and capable students from the education system of developed and developing economies would change the perception of the application and value of information.
- ❑ The continued reduction in the numbers of Special Libraries in many developed economies in the corporate and government sectors, together with an ongoing *perception of limited relevance and capability* associated with the term "Librarian".
- ❑ The *continued convergence* of roles of information professionals working in either technical or advisory areas.
- ❑ *Information Specialists* and *Business Consultants* would converge to create a new professional role: a "**Business Information Architect**" (BIA) - an innovator, designer, navigator, communicator, educator, risk-taker and decision-maker.



4. Modern day Clark and Lois - Developing their Capabilities

From February 2003 to January 2010, Australia's modern day Clark and Lois enhanced their capabilities. They became increasingly valuable to their clients and to business partners, assisting them with learning, organisation projects, and with strategic and day-to-day decision making.

Modern day Clark and Lois have a come along way - from the early days of *Clark Kent** and *Lois Lane** who were both real-time information gatherers and event observers, with no more than a typewriter and a telephone (booth) at hand. Their skills have developed and their image has changed.

They had always been strong conversationalists and caring of people.



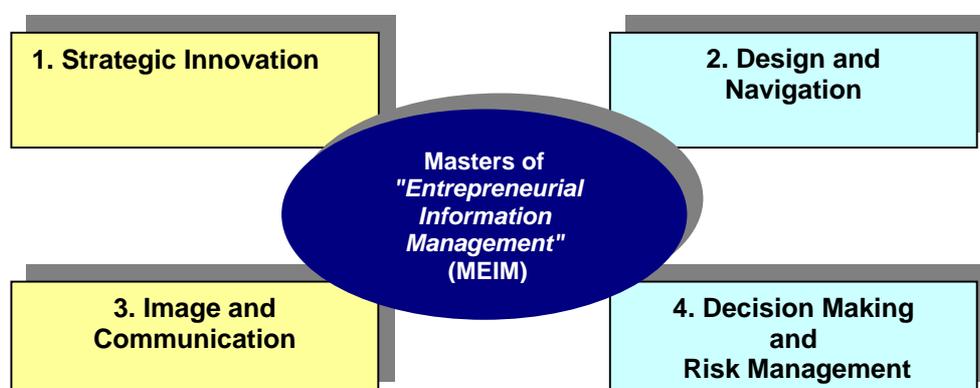
Clark Kent photo sourced from: <http://superman.ws/fos/thescreeen/tv1/>

Lois Lane photo sourced from: www.supermanhomepage.com/shop/shop.php?topic=shop-books-tie-ins

In 2004, our Australian based modern day Clark and Lois commenced a one-year, on-line and personalised **Masters degree** in **Entrepreneurial Information Management** (MEIM) which they completed in 2005.

The degree was offered by a leading and innovative Australian business school that had connections with the private and public sectors and with universities in Australia, the USA, UK, France, Hong Kong and Singapore.

This **vocational degree** was undertaken in four segments, and many of the topics covered in the segments consisted of a series of short projects that involved interaction with other MEIM students and with both local and overseas organisations. The four segments were:



**The On-line, Personalised
Masters degree in *Entrepreneurial Information Management* (MEIM)
Offered by a Leading and Innovative Australian Business School**

MEIM's objectives were to develop *Information Professionals* who would be:

- Capable of participating in strategic and innovative discussions, scenarios and projects
- Able to access and evaluate relevant data, information and expertise, through appropriate technologies and relationships
- Perceptive, communicative and able to impart knowledge and skills to others
- Supply chain focussed, outcomes oriented and value creators
- Able to make observations, recommendations and decisions to clients on strategy and direction, in the client's organisation environmental context.

MEIM Segment	Purpose
<p>Segment 1: Strategic Innovation</p> <p>Modules:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Working in a complex, connecting environment <input type="checkbox"/> Innovation and mastering strategy 	<p>To increase both strategic and lateral thinking capabilities of information professionals through:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Creative thinking <input type="checkbox"/> Strategic thinking <input type="checkbox"/> Global awareness practices
<p>Segment 2: Design and Navigation</p> <p>Modules:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Advanced analytical and evaluation methods <input type="checkbox"/> On-line competitive intelligence - searching, interpretation and deduction <input type="checkbox"/> Programming and database management 	<p>To enhance the capabilities of:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Seeking and finding relevant information, sources of knowledge and expertise, using contemporary tools and data bases, and people and technological networks <input type="checkbox"/> Evaluating, interpreting and tailoring data, information and knowledge <input type="checkbox"/> Technology use - "searching-related" programming, and effective data, information and knowledge storage and management
<p>Segment 3: Image and Communication</p> <p>Modules:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Foreign languages (one language studied over the 12-month program) <input type="checkbox"/> Stakeholder communication and relationships <input type="checkbox"/> e-information supply chain management 	<p>To enhance the capabilities of:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Speaking, presenting, listening, facilitation and interpreting <input type="checkbox"/> Virtual and physical relationship building and maintenance - in the information supply chain <input type="checkbox"/> Negotiation <input type="checkbox"/> Coaching and guidance - imparting skills and knowledge to others in the information supply chain
<p>Segment 4: Decision Making and Risk Management</p> <p>Modules:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Business advisory services and global e-learning <input type="checkbox"/> Risk minimisation <input type="checkbox"/> Business simulation 	<p>To enhance the capabilities of:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Constructing strategic and tactical advice, and defining the associated rationale, implications and impacts <input type="checkbox"/> Making decisions and evaluating risks within the decision making process <input type="checkbox"/> Risk assessment within information and business supply chains

5. **Modern day Clark and Lois:**
Their *Technology Fashion House* and *Business Information Architects*

Modern day Clark and Lois jointly established their business, the **Technology Fashion House (TFH)** in early 2005. They work as **Business Information Architects (BIAs)** in their commercial organisation that relies heavily on international data, information, knowledge and expertise access, and technology and e-relationships in information supply chains. They create value for their many and varied clients.

"Technology Fashion House"

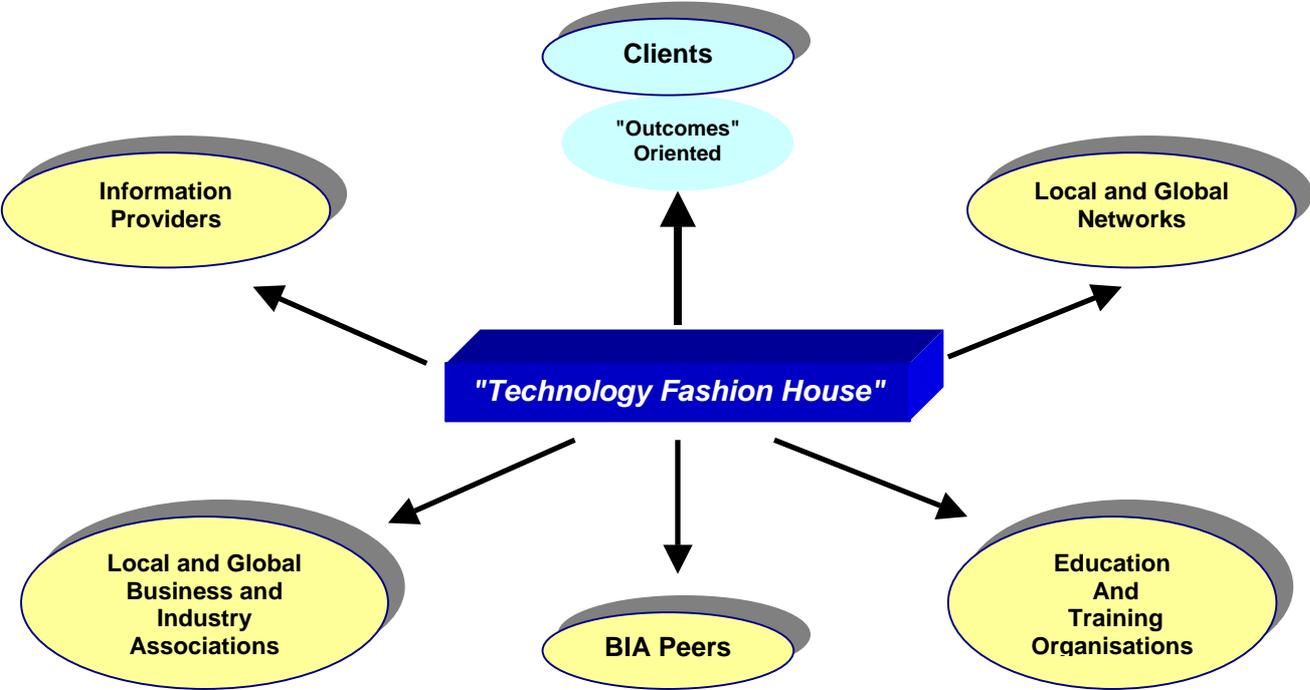


TFH was the brainchild of both modern day Clark and Lois.

After discussions during 2004, and recognising the importance of new brands, new images, information supply chain value, and new perceptions of information and business advice in an ongoing changing and competitive world, modern day Clark and Lois established their enterprise as the two founding directors.

Sourced from *The Emirates Computers Nokia Technology Fashion Show 2002*

TFH operates as a virtual organisation, with its home address being an Australian web site. Its directors are located in different Australian cities, and have local and international links with a range of stakeholders including BIA peers.



"Technology Fashion House" Strategic Direction

TFH Aspiration	To optimise information supply chains and be recognised by clients as a key virtual member of their organisations
TFH Purpose	To create value: provide, support and assist clients' access to relevant and focussed data, information, expertise, decisions and collaboration
TFH Strategic Focus	<ul style="list-style-type: none"> ◆ People and technological relationships and networks ◆ The information-supply chain ◆ Information products and services for decision-making and organisation positioning
TFH Markets	<p>The markets on which TFH focuses are those of business, industry and government (all tiers). They include key decision-makers within organisations and organisations' projects.</p> <p>In particular, the target industries and supply chains are:</p> <ul style="list-style-type: none"> ▪ Natural resources and the environment: agriculture, food, mining and waste management ▪ Hospitality and tourism ▪ Medicine and health ▪ Law and law enforcement ▪ Education and learning ▪ Security and defence ▪ Manufacturing ▪ Transportation and logistics ▪ Financial services
TFH Products and Services	<ul style="list-style-type: none"> ◆ Tailored business, industry, government and organisation information ◆ Coaching in information strategy, access and management ◆ Organisation improvement advisory services ◆ Project management
TFH Goals	<ol style="list-style-type: none"> 1. To work profitably, both nationally and internationally, with business, industry and government clients 2. To access appropriate tools and technologies that will assist in accessing information products and services 3. To be visibly well-informed 4. To impart skills and knowledge 5. To identify and act on improvement opportunities for clients and for ourselves
TFH Key Strategies	<ul style="list-style-type: none"> ◆ Relationships with clients ◆ Relationships and web presence with relevant industry and business associations ◆ Relationships with major providers of information and information technologies ◆ Relationships with relevant education and learning organisations ◆ Product and service development/acquisition ◆ Self development

Business Information Architects In TFH

The **Business Information Architects'** roles have been diverse and evolved out the convergence of Information Specialists and Business Consultants.

The BIA's capabilities focussed on being **innovators, designers, navigators, communicators, educators, risk-takers and decision-makers.**

These capabilities were developed and explored when modern day Clark and Lois undertook the MEIM in 2004. Since then, and through both formal and informal development and learning including **real-time projects** and **short online learning programs**, the BIAs continually enhanced their *capabilities* of:

- ❑ Strategic and lateral thinking
- ❑ Information product creation
- ❑ Thinking and applying the "outputs/outcomes" model from service delivery and client perspectives
- ❑ Relationship building, networking and communication
- ❑ Problem solving at strategic and operational levels
- ❑ Information management: locating, accessing, interpreting, integrating and presenting data and information in various formats
- ❑ Expertise management - locating and using subject matter experts.

The BIAs are both **globally** and **industry aware**. TFH subscribed to a range of media items, and linked with local and overseas professional and industry organisations. This enabled its BIAs to keep abreast of major trends and developments in their client's industries and sectors. The BIAs:

- ❑ Had regular online access to, and review of, publications including *The Australian Financial Review*, *International Business Week*, *The Harvard Business Review* and *Australia's Business Review Weekly*
- ❑ Attended breakfasts, lunches, seminars and workshops (sometimes with clients and business partners) that focussed on the latest business, industry, government, technological and information trends. These events were hosted both physically and online by a range of organisations including:
 - The Australian Institute of Company Directors
 - State Chambers of Commerce
 - The American Chamber of Commerce in Australia
 - The Australian Institute of Management
 - Business Schools
 - Information providers such as Factiva, Thomson, Walter Kluwers and Reed Elsevier
 - The Association of Independent Information Professionals
 - *Information Online* - in 2005, 2007 and 2009 (2009 was the first *Information Online-Onbody* exhibition and conference), and
 - The BIAI - *Business Information Architects International*, a global network of like-minded professionals that was established in 2005.

An integral part of the BIA role has been **relationship management** - relationships with a diverse group of information supply chain stakeholders that included:

- ❑ Clients
- ❑ Business and industry groups and associations
- ❑ Information providers
- ❑ Peer groups
- ❑ Education and learning organisations.

BIAs are "**virtual front-office**" people, who have relied on the support of technologically and related providers to undertake much of the "**behind-the-virtual-scenes**" work for them. BIAs created their future.

6. Here we are now - it is January 2010



A view from the *Horizons Bar* at Sydney's ANA Hotel: sourced from the ANA Hotel website

It is January 2010. The location is Sydney, Australia - for a meeting of **TFH's** BIAs and their business partners. With clients, colleagues and information providers, modern day Clark and Lois are enjoying spectacular skyline views from a large international hotel overlooking the magnificent Sydney Harbour, while tasting fine award-winning Australian Chardonnay and devouring local seafood.

Modern day Clark and Lois are globally aware and well positioned. They are very knowledgeable of the environment in which they and their clients operate.

They are **fashion conscious** - in the sense of knowing *"what is current, and are flexible in adapting and adopting new thinking, practices, products and services"*.

They wear their colourful Microsoft wrist-tops that replaced both laptops and desktops some years ago. They have their invisible communications ear-wear and eyewear - Australian eyewear companies that were once in the *"See Better, Look Better"* business, are now in the *"See, Look and Hear Better"* business.

Modern day Clark and Lois have updated and improved their capabilities and knowledge since January 2003 - both formally and informally, and have been regular participants at the world famous and Sydney hosted *Information Online-Onbody* exhibition and conference - the largest number of delegates ever, attended the 2009 spectacle.

They are fluent, conversant and influential, and their professional assignments are varied and diverse. They took and created opportunities. They still operate virtually.

They have wide ranging professional relationships with international supply chains, clients, colleagues, and professional and industry groups including national and international Chambers of Commerce.

Modern day Clark and Lois are very experienced and qualified BIAs, recognised by BIAI (*Business Information Architects International*). They still own and participate in **TFH**, a business that was floated on the Sydney Stock Exchange in late 2009.

As the management author Peter Drucker once commented:

"The best way to predict the future is to invent it".

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Note: * Fictional names that appear in the *Superman* series of movies by Warner Brothers.

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