What is a Business Analyst?

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Synopsis

Today the term Business Analyst is synonymous with a career in the IT industry but the most successful and valuable analysts are those who understand the "business" rather than those who understand IT.

So what exactly is a Business Analyst? What is the Business Analyst's role? What is the best background for this job? What skill set is required? What type of person is the best fit? What training is required and available? Each organisation seems to have its own ideas about the role, skills, responsibilities and expectations. Given the importance of the job, a common definition would assist both practitioners and employers. We explore some of the issues here.

The modern Business Analyst – a definition

First we need to clarify our terminology. One of the most commonly accepted definitions of a Business Analyst(B.A.) is that of communicator. The B.A. is the link between the requirements (the client) and the software solution (the development team).

Business Units		Business Analyst		Computer Systems & Business Processes
	⬌		⬌	

1. The B.A. identifies business & client requirements
2. Communicates these requirements to the project team, vendor,
    software factory, outsourcer…..

The skills required by the B.A. are much more than just good inter-personal communication skills – a range of tools and techniques are needed, as well as an appropriate background and personality.

Whilst the modern B.A. performs a highly critical role in software development, the real skills needed for success are not technology centric. It's worth reviewing the evolution of the B.A. to understand how we arrived at this.

Evolution of the Business Analyst

In the early days of commercial computing all of the investigation, design and development work for a software application was performed by the computing specialists, who often had little knowledge of the business they worked in.

During the nineties it became common for staff from the business user community to become more closely involved in computer systems development. This move was designed to ensure that computer-based systems were targeted at the *real* business issues. The title *Business Analyst* (B.A.) became common, although there was no commonly-adopted role definition. The staff filling this role knew about the business – or the part of it that they worked in – but they knew little about IT and their analysis skills were often very limited.

Today, the business process analysis, the requirements specification and the outline design - plus much of the acceptance testing and systems implementation work - is performed by the B.A.

The B.A. requires a range of analysis and creativity skills, data and process modelling skills, together with requirements interpretation and specification-writing skills. They also need interpersonal skills for interviewing and for leading workshops to find out what the clients really want and need. B.A.'s also have to 'sell' the solution to decision-makers and development teams whilst negotiating and compromising on the three crucial elements of speed, cost and quality. To quote Arthur C. Clarke[i] :
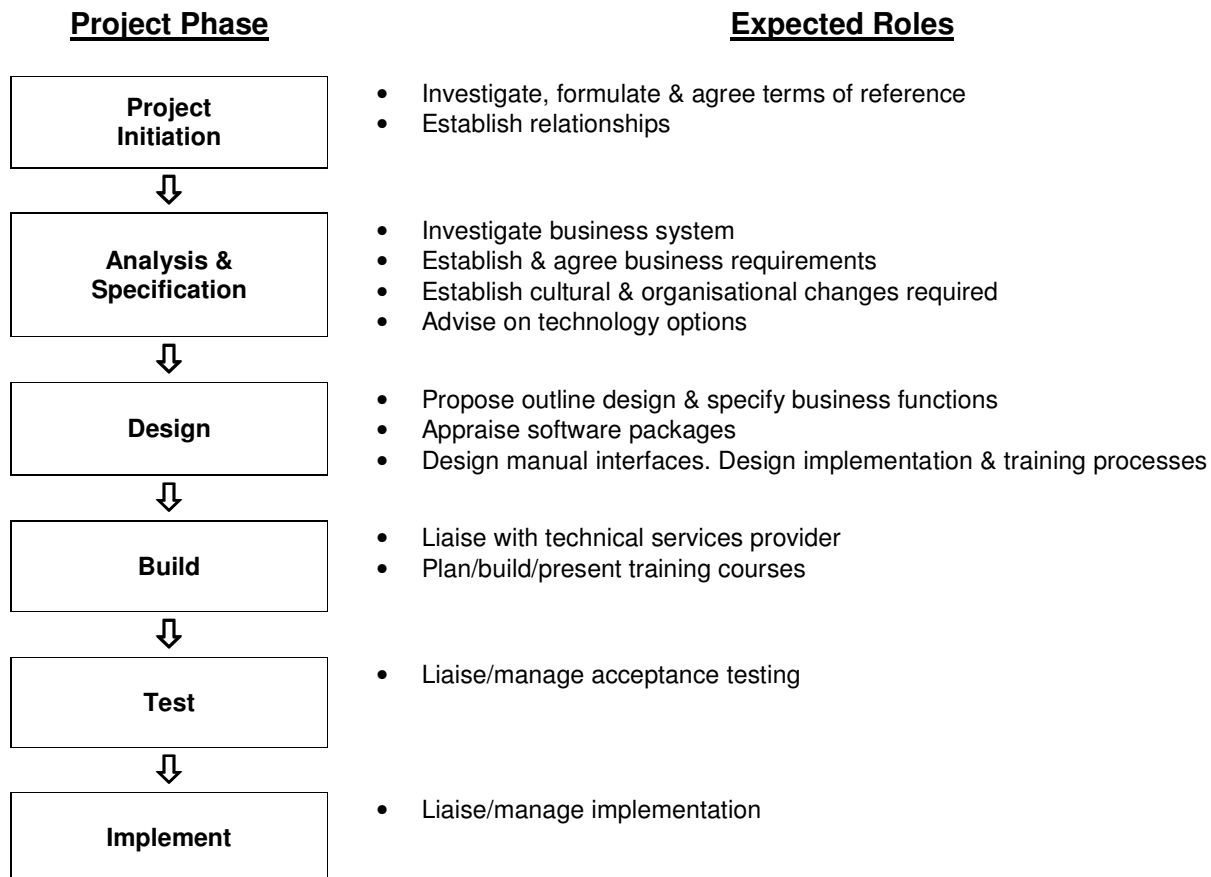
> *"Do you want it quick, cheap or good? I can give you any two."*

On top of this, B.A.'s will often be working in teams – they may need team leadership skills and many are required to take on a project management role. In short the modern B.A. needs a range of 'hard' skills – data and process modelling, design, specification writing – and a range of 'soft' skills – analysis, creativity, interviewing, presentation, negotiation – to perform effectively[ii].

Surveys have constantly reported that more than 50% of large software projects are over-budget or behind schedule. As recently as October 2002, the Australian Financial Review reported on a Sydney organisation which had halted work on a customer billing system due to cost blow-outs and missed deadlines. More than $70 million had been spent, with only two out of 21 elements of the system delivered. With inadequate, inappropriate or inaccurate requirements as a major contributor to project overruns and failure, the role of a skilled Business Analyst in a project team is more critical than ever.

Typical background requirements

Academic level
In our experience the most successful B.A.'s are those with formal, structured education and training. Business administration and similar qualifications are certainly helpful, but not essential. Similarly, a qualification in a computing topic, while helpful is not essential. Professionalism is not widely sought-after or recognised, and most B.A.'s are not members of the ACS[iii] (Australian Computer Society).

Experience
A broad experience of business is required, the more varied, the better. Business experience in insurance, HR, banking, retail, manufacturing, processing and technology industries, etc. is transferable, no matter what the recruiters might say.

Personal characteristics
The B.A. has to get along with everyone, maintaining good relationships at all levels from senior management to junior staff. They must be able to understand the business objectives and be able to quickly prioritise their work, so that they do not spend undue time on the small things before they've sorted out the main issues. They must be analytical and be able to deal with the *abstract*; this is most important. They must be good with detail, and tenacious – following issues through to conclusion. They must be good organisers and good with their own time management. Above all, they must be excellent *communicators*, able to reduce the complex to the understandable. An often under-rated skill is *listening*.

> *"You have two ears and one mouth. I suggest that you use them in that proportion."*
> *G.K. Chesterton*

Computer programmers sometimes make the move to an analysis role, not always successfully. Programming requires a particular personality - comfortable with detail and logical precision. Business analysis is more of the big picture. It is a rare individual that is comfortable – and competent – in both areas.

The Hard/Soft Continuum showing business analysis skills
Adapted from 'Teaching Hard, Teaching Soft', by Colin Corder, ISBN 0 566 02865 4, published by Gower

Today's Business Analyst – the job role

At the core of the Business Analyst's skills are process modelling, requirements gathering and requirements specification. However, because the B.A. has a highly visible role in the project, the expectations from clients, colleagues and the organisation are often far higher and extend through the life of the project.

Project Phase	Expected Roles
Project Initiation	• Investigate, formulate & agree terms of reference • Establish relationships
⇩	
Analysis & Specification	• Investigate business system • Establish & agree business requirements • Establish cultural & organisational changes required • Advise on technology options
⇩	
Design	• Propose outline design & specify business functions • Appraise software packages • Design manual interfaces. Design implementation & training processes
⇩	
Build	• Liaise with technical services provider • Plan/build/present training courses
⇩	
Test	• Liaise/manage acceptance testing
⇩	
Implement	• Liaise/manage implementation

A Business Analyst may find themselves involved in some or all of the above roles. The required skill set may be classified as follows:

Primary Skills	Secondary Skills
• Analysis & investigative skills • Process modelling • Data modelling • Specification writing • Business writing • Inter-personal communications skills	• Presentation & training skills • Technology & vendor knowledge • SDLC knowledge • Project management • Team leadership

Even if the B.A. works predominantly in the domain of primary skills, to be effective within the organisation they will need a balance of secondary skills as well.

Current technology – modelling tools

It can be extremely difficult to agree on what and how things are done *now* in a large organisation, even more so to agree on what and how things *should* be done. Modelling tools are a critical element in this process. A recent Australian survey[iv] (based on 300 responses from practicing computer professionals) revealed the top 4 modelling techniques currently in use.

Technique	Frequency of Use
Entity Relationship diagram	39%
Data flow diagram	34%
Systems flowcharting	31%
Workflow modelling	24%

Software tools are widely available to support these techniques. In our observations however, the most commonly-used tool remains the whiteboard. The growth in the use of CASE tools has been much slower than predicted, with auto code generation, while available for ten years or more, still not widely in use.

The survey goes on to say that OO (object oriented) analysis, design and programming has been the predominant systems development paradigm over the last decade. However, some 64% of respondents either did not know or did not use UML (Unified Modelling Language) and 74% of respondents did not know or use object modelling.

Today UML is making the transition to business process modelling with software vendors supplying extensions and enhancements to cater for the needs of the Business Analyst. But this comes at a price – there is a corresponding need for structure, process and discipline in the development team. For organisations developing new, large scale systems e.g. defence and health, UML offers a clean sheet approach but brings with it the need for investment in disciplined processes and procedures, plus up-skilling and staff (re)training.

Current technology – requirements specification tools

Although software tools are available for specifying requirements, they are not in wide use in the commercial computing world. These high-end software tools enable users to track requirements from original specification down to code level and are useful for the large, complex industries like the defence and telecommunications sectors where rigorous requirements specification and zero software defects are daily objectives – and where the high cost of implementing rigorous processes and procedures can be justified. In these industries, the boundaries on requirements are often easy to set in that they typically define a product (e.g. weapons system, mobile handset) which will be designed, manufactured then shipped. Once in the field, their function doesn't change.

In the commercial and government sectors, requirements relate more to business services and business processes both of which can be in a continuous state of flux throughout their lifecycle. Business Analysts work closely with clients and development teams, refining, changing and sometimes re-defining requirements. The humble word processor becomes an easy-to-master and effective *communications* tool to represent a requirement (a *statement* of what's needed) and even state-of-the-art requirements templates use Microsoft Word as the underpinning technology.
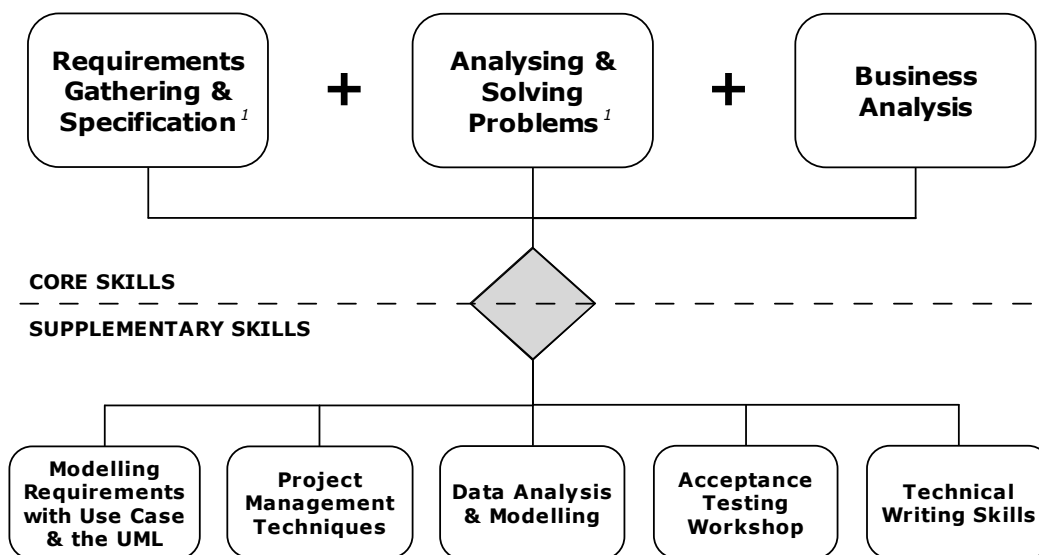
A Skills Roadmap for the professional Business Analyst

So where should today's Business Analyst focus, and what are the best training strategies to pursue?

There is no substitute for practice and the B.A. evolves into a highly skilled practitioner of immense value to their organisations. Those working in the field either become very proficient technically or move into management positions, or a combination of both.

The diagram below is a logical grouping of skills and a roadmap structure developed by IRM from the experience gained in training over 2,000 Business Analysts from many of Australia's Top 500 companies.

(Note: IRM's training roadmap is continuously updated. For the latest version visit www.irm.com.au)

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┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│ Requirements │      │  Analysing & │      │              │
│  Gathering & │  +   │   Solving    │  +   │   Business   │
│ Specification│      │  Problems 1  │      │   Analysis   │
│      1       │      │              │      │              │
└──────────────┘      └──────────────┘      └──────────────┘
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CORE SKILLS
- - - - - - - - - - - - - ◇ - - - - - - - - - - - - -
SUPPLEMENTARY SKILLS

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┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
│ Modelling│ │ Project  │ │   Data   │ │Acceptance│ │Technical │
│Requireme.│ │Management│ │ Analysis │ │ Testing  │ │ Writing  │
│with Use  │ │Techniques│ │& Modelling│ │ Workshop │ │  Skills  │
│Case & UML│ │          │ │          │ │          │ │          │
└──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘
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1 These courses also available as a combined 5 day workshop called Business Investigation (BI)

Today's business analyst will have in depth expertise in some of these domains - and just as importantly will have a conceptual understanding of all of them.

As long as companies and organisations want to add new capabilities or improve existing business processes, there will be an ongoing need for professional Business Analysts.

The deeper and broader the range of a Business Analyst's skills, the greater will be the return to their employer and the further their own individual career will take them.

Acknowledgements