

- 1. Five-Day Business Process Innovation & Management how to innovate your business, business area or selected business processes and manage the innovation over time
- 2. Ten-Day Certificate in Business Analysis how to innovate your business or business area and develop the required specifications for development purposes
- 3. Four-Day Computer Systems Design

We believe we're the preferred supplier to people and companies like yourself to do their Business Analysis (BA) and Business Process Innovation & Management training through as we're not only a Training company – we also "practice what we preach" – we continuously perform BA- & Process Engineering related work at companies such as Alexander Forbes, the SABS, AngloAmerican, Sasol (to mention only a few) for whom we provide BA- & Process Engineering related work skills from writing Business Requirements Specifications (BRSs) to facilitating strategy sessions. We also help these companies in selecting complex solutions including ERP solutions. We employ passionate people and your trainers range from Engineers to MBAs, to IT professionals.

Our three courses are always a combination of the following modules:

- 1. Introduction to the SDLC
- 2. Business Process- & Information Modeling
- 3. User Experience Design
- 4. Develop Specifications for Software Development
- 5. Business Process Analysis & Measurements
- 6. Introduction to Project Management
- 7. Developing a Business Case
- 8. Facilitation Skills

The above 8 modules cover the following BABOK Knowledge Areas

BABOK Area	Task	Technique
Requirements Planning and Management	<ul> <li>Understand Team Roles for the Project</li> <li>Select Requirements Activities</li> <li>Define Requirements Risk Approach</li> <li>Determining Planning Considerations</li> </ul>	
Enterprise Analysis	<ul> <li>Conducting the Initial Risk Assessment</li> <li>Determining Project Scope</li> <li>Preparing the Business Case</li> </ul>	
Requirements Elicitation	Elicit Requirements	<ul> <li>Document Analysis</li> <li>Interface Analysis</li> <li>Focus Group Interview</li> <li>Observation</li> <li>Requirements Workshop</li> <li>Reverse Engineering         Prototyping     </li> </ul>
Requirements Analysis and Documentation	<ul><li>Analyze User Requirements</li><li>Verify Requirements</li><li>Structure Requirements Packages</li></ul>	<ul><li>Process/Flow Models</li><li>Data and Behavior Models</li><li>Usage Models</li></ul>

	<ul> <li>Document Requirements</li> <li>Create a Business Domain Model</li> <li>Analyze Functional Requirements</li> <li>Analyze Quality of Service Requirements</li> <li>Determine Assumptions and Constraints</li> </ul>	
Requirements Communication	<ul> <li>Conduct a requirements presentation</li> <li>Conduct a formal requirements review</li> <li>Obtain requirements signoff</li> <li>Create a requirements package</li> </ul>	
Solution Assessment and Validation	<ul> <li>Facilitate the selection of a solution</li> <li>Develop Alternate Solutions</li> <li>Ensure the usability of the solution</li> </ul>	

# Five-Day Business Process Innovation & Management – how to innovate your business, business area or selected business processes and manage the innovation over time

#### Format:

The course is presented as a combination of practical exercises in an instructor-led classroom environment (physical- or on-line classroom)

Approximately 12 hours of practical exercises for the delegates to test each new tool or technique in the classroom environment. This workshop is split over two weeks due to the depth and intensity of training.

#### Modules:

- Business Process- & Information Modeling
- Facilitation Skills
- Business Process Analysis & Measurements

#### **Pre-requites:**

- At least two years of working experience
- Business Analysis and Process Analysis experience would be advantageous
- Knowledge of the SDLC would be advantageous

#### <u>Audience:</u>

Business- & Process Analysts as well as IT practitioners interested in innovating businesses, business areas, or selected business processes (practitioners whose goal it is to shift the organisation to a new level and apply a framework for structuring an organisational approach to process-centric change and continuous improvement)

Also, the course is aimed at Analysts, Product Developers or any information systems or business professionals actively involved in producing a business requirements definition or process development or process improvement/engineering.

No Information Technology (IT) experience is required.

#### Course Description:

Steve Jobs was a brilliant innovator as he could think outside the box. If one, however, analyses how Steve (maybe unknowingly) was able to be such a great innovator one realises its because he could separate **what** people want from **how** they get it.

If one looks at how he revolutionised the music industry you'll see that he was able to first establish **what** people wanted and only then figured out **how** to give them what they wanted. People did not want a better experience at the CD Warehouse like a quicker way to find a cd OR have coffee while listening to the CD. Steve also realised that people did not necessarily want all the songs on a CD, but maybe only one. Steve was able to define their needs ("what") described by the following user story:

- As a music lover, I want **one** song and I want to buy it **now** (regardless of where I am, i.e. in my car at my home....) so that I can start listening to it **immediately** (and don't have to wait for an appropriate time to drive to the cd warehouse)
- Steve then looked at "how" he can enable these needs he utilised design aspects (how) such as mobile devices, and cloud- & online payment solutions

Therefore, to effectively analyse any area of the business, the Business Analyst needs to understand the difference between **what** is required and **how** it will be implemented. This course focuses on ensuring that a Business/ Process Analyst understands the most appropriate modelling technique to define the accurate, complete, concise and complete business requirements (**what**) that are to be used as a basis for developing business solutions.

The emphasis is, therefore, ensuring the proper gathering, specifying and designing of Business Processes, so that we do not create faster, bad processes. Business Process Improvement (BPI), Business Process Re-engineering (BPR) and Business Process Management concepts are discussed; debated and practical applications of these disciplines are covered. Systematic, top-down techniques are used to study and decompose a Business Area. The delegate is taken through the four stages possible for analysis i.e. As-Is design As-Is analysis, new analysis and new design. Various tools and techniques are introduced based on a business process engineering methodology.

We're finding ourselves in the 4<sup>th</sup> Industrial revolution, therefore performing Business Process Analysis and Innovation without looking at automation opportunities is a nebulous exercise. So we ask ourselves what can we automate? We can automate process steps, we can automate the data on the move, we can automate the data at rest (Information Analysis).

We, therefore, don't just reengineer or create the TO-BE by merely looking at wastes (i.e. lean and six sigma) we need to look at automation opportunities, and specifically data on the move, data at rest, and the associated business rules.

Reengineering the procedures only won't yield the required benefits.

Business Process Innovation & Management typically follows two stages, AS-IS Design (how it works today) and TO-BE Design (how it could work tomorrow). In between the AS-IS **Analysis** and the TO-BE Design, a key step involving discovering the **What** is involved (we discover the true needs and remove all other unnecessary steps). The TO-BE Design then involves adding the How (mobile devices, and cloud- & online payment solutions) to the What (As a music lover, I want **one** song and I want to buy it **now** (regardless of where I am, i.e. in my car at my home....) so that I can start listening to it **immediately** (and don't have to wait for an appropriate time to drive to the cd warehouse)

Businesses that have implemented our Business Process Innovation & Management (BPI&M) methodology are already seeing solid returns on their investment through improved productivity and efficiency along with a reduction in time and costs. By applying a business process management approach, companies can automate their manual processes and cross the boundaries between people, systems and technology.

## Course Outline & learner outcomes:

After completing this course the delegate will be able to:

- Perform analysis (process- and information analysis) in a structured approach and know what deliverables are required i.e. Process models, Entity Relationship Diagrams (ERDs), Data Specifications- and dictionaries. Start analysing in a structured top-down approach using engineering disciplines
- Understand the phases and deliverables within the Systems Development Life Cycle (SDLC)
  - Understand the difference between the traditional Waterfall approach to the SDLC vs the Agile approach
  - o Understand the difference between the Business Requirements-, Functional- and Technical Specification
  - Getting support for your process initiatives
    - Aligning business processes with business strategy
    - Selecting processes for improvement
    - Define a Business Case for BPI Projects
    - · Creating the process vision
    - Apply the Drivers to Corporate Culture Changeability to implement a change management plan for Business Process Management.
    - Understand the Implementation Issues surrounding BPI
- Determine which models are the most appropriate to use, flow charts, data flow diagrams (DFD), entity relationship diagrams (ERD), functional decomposition, object orientation, narrative text etc.

#### **Process Analysis**

- Introduction to business process architecture.
   Defining business process architecture
- Start a business process model
- Eliciting process requirement
- Document the end-to-end process at a detail level
- Analysing the process components
- Business process patterns
- Produce benchmark statistics via Activity Based Costing
- Understand the CMM (Capability Maturity Model) for continued organisational growth.
- Implementing the new process
- Managing the new process
- The nine critical success factors
- Apply Quality Assurance to each deliverable
- Understand the flow of data through the endto-end processes
- Understand the concepts of Business Process
   Analysis Identify end-to-end processes from
   stimulus to response and how these end-to-end
   processes could be re-engineered utilizing
   automation, waste analysis (lean manufacturing
   principles), and other techniques such as single
   queue and Kanban methods
- Separate the "what" from the "how" (design)
- Ability to model the "AS-IS", what and how in today's world
- Critique or analyse the "AS-IS"

## **Information Analysis**

The emphasis of this aspect of the course is on the gathering and specifying of the Business **Information**.

As data is typically global (i.e. shared by many within the organisation), information analysis is a critical task for any organisation. The inability to specify an organisation-wide set of data and their relationships can lead to mass redundancy of data and unsynchronized information as well as dead data (gathered, updated and never used).

Business Information Analysis draws heavily on graphical as well as textual documentation (models) to assist in this critical gathering activity.

- Normalise data to the 3<sup>rd</sup> normal form
- Develop a logical ERD
- Understand where the data rests in the end-toend processes (understand what a repository is and why it is important).

Two widely accepted and applicable models for Information Analysis are Entity Relationship Diagrams (ERDs) and Data models which graphically represents an organisation's stored data as Entities (cohesive groupings of facts), Relationships (associations between Entities) and Data Elements.

The major focus of logical modelling is to derive a model that reflects the most customer-orientated, stable and maintainable view of the business data. This logical view of the Business Information will flow naturally into the Enterprise/organisation Information Model and data design.

This module contains extensive practical work so that the learner has the opportunity to apply the techniques with a skilled facilitator to assist when issues arise.

- Understand various developmental modelling languages/ techniques in the field of software engineering that is intended to provide a standard way to visualize the design of a system. The creation of these modelling languages was originally motivated by the desire to standardize the disparate notational systems and approaches to software design
  - Know where best to apply modelling languages/ techniques including Unified Modeling Language (UML), Dataflow Diagrams, Entity Relationship Diagrams, and others.
  - Using a Business Process Model and Notation (BPMN)

After completing this module the delegate will be able to:

- Start analysing in a structured approach and know what deliverables are required.
- Understand which type of Data models to use
- Identify essential business data from designer data
- Use a systematic top-down approach to extract information needs
- Normalise data to the 3<sup>rd</sup> normal form
- Develop a logical Entity Relationship Diagram (ERD) with supporting documentation
- Understand cardinality, referential integrity and data integrity

- Basic BPMN modelling elements
- Basic BPMN modelling elements
- Extended BPMN modelling elements
- Identify the characteristics required from a case tool and understand the difference between a modelling tool and a case tool
- The Flavours of Entities
  - Discovering Supertype and Subtypes
  - Specifying Optional/Mandatory Business
     Data Rules
  - Supertype/Subtype Rules
- Analysis of Relationships
  - Defining Meaningful Relationships
  - Representing Relationship Cardinality
  - Relationship Type and Relationship Occurrence
  - Specifying Organisation-wide Relationship Connection Rules and Relationship Cardinality
- Analysis of Data Elements
  - Definition of a Data Element (attribute)
  - Discovering Data Elements
  - Data Element Format, Content/Domain
- Normalisation Bottom-Up Information Analysis
  - The Need for Attribution and Normalisation
  - The Benefits and Limitations of Normalisation
- The Need for Process Analysis
  - The Task of the Information Analyst
  - Overview of Data Flow Diagrams
  - Encapsulating Business Event Memory
  - The Synergy of Process and Information Analysis
- Normalisation Bottom-Up Information Analysis
  - The Need for Attribution and Normalisation
  - The Benefits and Limitations of Normalisation

Both the above course aspects culminate in Develop a Business Requirements document that can be used as input to the design (the System Specification, Technical Specification, Functional Specification).

To summarise, the learner will be shown the purpose of any BPI&M program is to develop Business Process improvement as a key strategy and management tool capable of supporting the organisation's Mission/Vision/Goals and Objectives. BPI&M's goal is to dramatically improve the quality, availability, effectiveness and cost-effectiveness of Business processes. BPI&M is focused on completely Understanding the customer's needs, identifying how best to meet those needs and then inventing the value stream of processes to get you there. It is also about looking at a continuous improvement programme post-implementation.

The objective is to provide attendees with the necessary perspective, knowledge and skills to understand the essential elements and benefits of identifying the processes, mapping them, optimising them and implementing them so that they are effectively monitored, managed, controlled and improved.

Concepts are taught with practical exercises which are performed in the classroom environment with the assistance of a skilled facilitator/ trainer.

# Each delegate will receive:

- Training Material Hand-out
  A case study example of the deliverables required from the analysis effort.
- Certificate of Completion

#### **Ten-Day Certificate IN BUSINESS ANALYSIS**

#### Format:

The course is presented as a combination of practical exercises in instructor-led classroom environment (physical and on-line) and a workplace application as an assignment that's to be completed at the end of each module. A minimum pass mark of 75% in the final examination and an average pass mark of 60% for assignments is required to obtain the Certificate. The learner completes one module at a time and requests the assignment for the module, which they will complete in the work environment. On submission of the assignment, they can move on to the next module.

## **Pre-requites:**

Matric / NQF 3 with English/ Maths/ Science, Computer literate and 6 months of business working experience

#### Modules:

- Introduction to the SDLC
- Facilitation Skills
- Business Process- & Information Modeling
- Develop Specifications for Software Development
- User Experience Design
- Introduction to Project Management
- Developing a Business Case

#### **Audience:**

Business Analysts, Product Developers or Process Engineer involved with Developing business requirements documentation, Product/ Service Development, Business process improvement (BPI), Business process (re)engineering Business (BPR) and process management (BPM).

#### **Course Description:**

This Certificate has been developed to provide learners with a formal method to grow and progressively assess their Business Analysis Skills. Concepts are taught with practical exercises which are performed in the classroom (physical or online) environment with the assistance of a facilitator. The learner then returns to the workplace to apply the techniques in their working environment. This application of theory in the workplace forms the assignment that's to be completed at the end of each module within 2 weeks.

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#### **Course Modules:**

#### **Introduction to the SDLC**

After completing this module the delegate will be able to:

- Understand the phases and deliverables within the Systems Development Life Cycle (SDLC)
- Understand the difference between the traditional Waterfall approach to the SDLC vs the Agile approach
- Understand the difference between the Business Requirement Specification, the Functional Specification and the Technical Specification

# **Facilitation Skills**

This interactive workshop focuses on ensuring Business Analysts are great facilitators ensuring sessions/ meetings/ workshops are productive. The techniques taught involve encouraging participation whilst maintaining the focus and staying within time constraints. The student learns how to plan and prepare for group sessions and how to exercise the required interpersonal skills that will achieve the best results. The student is allowed to apply and refine skills through extended role-playing activities.

After completing this module the delegate will be able to:

- Plan and prepare for various types of facilitated sessions
- Understand the benefits of facilitated sessions
- Understand and apply facilitation techniques
- Understand how to apply the above techniques to one-on-one interviews.
- Define and understand the roles of those involved in the facilitation process
- Use various problem-solving techniques including:
  - SWOT
  - Fishbone
  - Cause Effect
  - Drill Down

# **Business Process- and Information Analysis**

The emphasis of this module is to understand what Business Process analysis is and how to use the modelling techniques. This module covers extensive practical work so that the learner has the opportunity to apply the techniques with a skilled facilitator to assist when issues arise.

After completing this module the delegate will be able to:

- Start analysing in a structured top-down approach using engineering disciplines
- Know what deliverables are required
- Apply modelling techniques to document the end-to-end processes
- Document the end-to-end process at various levels (Context to detailed level)
- Document the detailed Data Requirement via the Data Dictionary
- Differentiate between a repository and a modelling tool

## **Process Analysis**

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   Defining business process architecture
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- Eliciting process requirement
- Document the end-to-end process at a detail level
- Analysing the process components
- Business process patterns
- Produce benchmark statistics via Activity Based Costing
- Understand the CMM (Capability Maturity Model) for continued organisational growth.
- Implementing the new process
- Managing the new process
- The nine critical success factors
- Apply Quality Assurance to each deliverable
- Understand the flow of data through the endto-end processes
- Understand the concepts of Business Process Analysis - Identify end-to-end processes from stimulus to response and how these end-to-end processes could be re-engineered utilizing automation, waste analysis (lean manufacturing principles), and other techniques such as single queue and Kanban methods
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After completing this module the delegate will be able to:

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- Understand which type of Data models to use

desire to standardize the disparate notational systems and approaches to software design

- Know where best to apply modelling languages/ techniques including
   Unified Modeling Language (UML),
   Dataflow Diagrams, Entity Relationship
   Diagrams, and others.
- Using a Business Process Model and Notation (BPMN)
  - Basic BPMN modelling elements
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Both the above course aspects culminate in Develop a Business Requirements document that can be used as input to the design (the System Specification, Technical Specification, Functional Specification)

Once you've **innovated your business or business area** the time has come to capture the requirements allowing your innovation to be automated. During this module, the learner will understand the importance of building a blueprint for the **automated system** before actually building the system itself.

The emphasis of this module is therefore on the gathering and specifying of the Business Requirements and creating a Business Requirements Specification (BRS). The learner will be taught the difference between the traditional **Waterfall** approach to the SDLC vs the **Agile** approach when developing the BRS. The learner will also learn to identify User Stories, what Sprints involve and all the role players in the Agile space.

Various tools and techniques are introduced based on a business engineering methodology. Upon completion, the delegate will be in a position to choose the right tool for the right job. This is a technical business module.

The learner will understand how to apply engineering disciplines into the design, to create a design that will meet business requirements. The concepts of user-centred Design are introduced and explored.

The emphasis is to understand the **integration** between Business Process- and Information Analysis. The Learner will have the opportunity to identify the business process improvement opportunities available when the end-to-end process is integrated without the complexities of existing functional silo's (departments) and their associated solutions (IT systems).

Project management concepts are also introduced including the development of a Business Case, and project scoping (including Risk Analysis). This module contains a large amount of practical work including the sample copy of the documentation required for the entire Business Requirements Specification (BRS).

After completing this module the delegate will be able to:

- Integrate business process and information modelling
- Develop CRUD (Create, Retrieve, Update, Delete) matrices for data elements and entities
- Apply various strategies to analysing / designing / implementing engineered processes.
- Develop a Project Charter including:
  - Project Scope
  - Project Plan
  - Identification and documentation of Business, Project and Systems Objectives
  - Project Risk Analysis.
- Design proposed solutions based on the Analysis
- Apply design techniques for data and processing

## **User Experience Design**

This two-day module is all about the overall experience of a person using a product such as a website or a computer application, especially in terms of how easy or pleasing it is to use.

After completing this module the delegate will be able to:

- Understand the influencing factors in designing an automated system
- Create a Functional Specification.
  - Screen Design (prototyping)
  - Screen Flow (Storyboarding/ Navigation)
  - Report Design
- Factors influencing screen and report layouts
- Understand meaningful error messages.
- Test the emerging design via test cases and heuristics evaluation

#### Each delegate will receive:

- Training Material Hand-out
- An introduction to the book "Creating Customer-Focused Organisations" by Brian Dickinson
- A case study example of the deliverables required from the analysis effort.
- A business requirement specification (BRS) example.
- A template of the Business Requirement and Functional Specification
- Certificate of Completion

#### **Four-Day Computer Systems Design**

This workshop offers ways to drastically reduce development and maintenance time of all automated systems. It advocates building a design blueprint before developing the computer systems itself. This blueprint is a model of the system solution. The major model (a hierarchy diagram) is a development, implementation and testing model and forms a major part of the final system maintenance documentation. Commonly known as a Technical or Functional Specification

Internationally proven methods and models are used for creating a maintainable reliable system design from a well-defined requirements specification. Computer Systems Design picks up after the analysis workshop (Business Process & Information Modelling) and addresses the invention portion of a system development effort.

We're seeing major bugs introduced into important business systems because the old systems are not built with good ENGINEERING practices. Most bugs and difficult modifications are not caused by business or technological changes, but rather by our old methods of Computer Systems Design (or lack thereof)

#### **Audience**

Systems Analysts, Designers, programmers, developers. Any person that's about to, or is responsible for developing functional / technical specifications.