



DISCON Specialists
Architecting Business Solutions

Training and Certification Programme

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DISCON Training and Certification Programme

Rules and Requirements for the Achievement and Maintenance of a DISCON Certified Practitioner status.

1. The DISCON Certification Programme requires each candidate seeking certification to complete all elements of a chosen discipline in the designated sequence within a period of one year. On completion of the sequence of courses the candidate may complete the applicable assignments to attain certification. These assignments will consist of a case study and written submission in all cases other than those of Facilitator and Scribe where the assignments will be of a more practical nature. The successful completion of an entire sequence of courses and the relevant assignment will result in the candidate achieving the status of **DISCON Certified Practitioner** in the chosen discipline.
2. Costs for each course shown in the attached schedules are those ruling at the time of publication and are valid until the end date specified. Current pricing may however be obtained by contacting DISCON Specialists at the telephone numbers listed on the front cover of this document.
3. Continued concurrency of the DISCON Certification will require that the Certified Practitioner attend the specified Annual Update Course which will vary between one and five days dependent on the changes implemented by DISCON to the methodologies during the preceding 12 months. The cost of this renewal process will be in accordance with the then ruling daily course fee as charged by DISCON to its clients.
4. Any candidate may attend any of the prescribed courses without the intention to achieve certification. No candidate may however claim to have achieved any level of certification without having completed all the prescribed courses and the relevant certification assignment.
5. Other courses are available and may be booked or presented in accordance with clients requirements. To determine which courses are available and when they are to be run please refer to the Training Booking Form at the back of this document and then telephone our offices for applicable course dates.

Course Description	Course Duration	Business Architect	Project Manager	Human Engineer	Methods Engineer	Process Architect	Scribe
		Course Sequence and Requirement					
Business Engineering Concepts	1 day	1	1	1	1	1	1
Business Engineering Implementation	4 days	2	2	2	2	2	2
Business Engineering Workshop	5 days	3			3	3	
Business and Process Performance Management	2 days	3				3	
Data Analysis and Design	5 days	4			4	4	
Data Modelling	5 days					3	3
Process Modelling	5 days					3	4
Facilitation (max 6 delegates)	4 days	5					
Core Consulting Skills	1 day	7	4	4		9	
Package Evaluation and Selection	3 days					5	
Business Measurement (Benchmarking)	1 day					6	
Human Engineering	4 days			3			
Project Management	5 days		3				
Object Oriented System Analysis and Design	5 days					7	
Tool and Repository Management Skills	2 days	6				8	5
Meta Modelling	2 days				5		
Certification Assignments							
- Off-site assignment	-	✓	✓	✓	✓	✓	
- On-site assignment	1 day						✓

For Business Architects and Process Architects there are multiple number three (3) course alternatives. These are alternative routes depending on the areas of specialisation.

- Note:**
1. Business Engineering Concepts and Business Engineering Implementation are run consecutively and must be attended as such.
 2. Numbers in blocks beneath specific disciplines denote sequence in which courses should be attended and ✓ denote which assignment type is applicable.

Course Structure

Business Engineering is presented in three sections. The three individual courses which cover the entire subject are as follows:

- Business Engineering Concepts (1 day)
- Business Engineering Implementation (4 days)
- Business Engineering Workshop (5 days)

Note: Business Engineering Concepts and Business Engineering Implementation courses are run consecutively over a five day period and must be attended as such.

Intended Audience (Any Industry Type)

Business Redesign Facilitators, Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). Key Role Players on any of the following projects types:

- Business Strategic Planning
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Amalgamation of Businesses
- Centralisation/Decentralisation of Business Processes
- Right Sizing of Business
- Multi Skilling
- Business Package Implementation

Pre-requisites

None

Scope of the Courses

All businesses have internal, target and external environments. A change in the target or external environment will necessitate changes in the internal environment. The internal environment must be constructed in such a way that it will be able to meet the business goals and still be able to absorb the changes forced upon it by the target and external environments. With any such change, business processes may need to be altered, organisation structures are affected and the governance of the organisation is challenged. Measurement mechanisms must be implemented to continuously measure the businesses performance and the resultant return on investment.

Architecturally the internal environment is described on three different architectural levels (business, process, and environment) and each level in terms of eight system dimensions (data, strategy, function, organisation, time, locality, object, and operation). The *Scope of Changes* can be grouped in three different categories; Single Process, Organisation Wide or Industry Wide. The influence on each change of the architectural structure and its multiple dimensions is the subject of the three progressive courses that cover the Business Engineering section of the DISCON Methodology.

Course Objectives

The objectives of these courses are to give the attendees a good understanding of the scope and content of Business Engineering. The courses will provide the attendees with a good framework upon which to base business engineering projects in terms of:

- Measurement mechanism as to what should be included and excluded
- Who must be involved and what their roles and responsibilities should be
- What the expected effort involved should be
- What the effect of such an exercise will be

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Business Engineering Concepts

- Definition Of Business Engineering
- Business Engineering, the Subject
- Objectives of Business Engineering
- Deliverables of Business Engineering
- Business Engineering Concepts
- Object Orientation in Business Engineering
- Classes of Business Engineering Projects
- A Systems Approach
- Profile of the Project Members

Course Content - Business Engineering Implementation

- Definition of the Existing Business
- Understanding the Current Business' Evolutionary Stage
 - Evolution versus Revolution
 - Industry Type Growth Rates
 - Age of an Organisation
 - Size of the Organisation
 - Stages of Evolution
 - Stages of Revolution.
 - Growth Rate of the Industry Type
 - Growth Phases of Organisations
- Measuring the Existing Business
 - Generation of Corporate Strategic Information
 - Interpreting the effect of the External and Target Environments on the Business and reflecting it on the Internal Environment
- Designing the Ideal Business
 - Business Design Principles (Classes of methods to ensure resource efficiency & effectiveness)
 - Incorporating the Target Business Environment in the Ideal Business
 - Designing the Internal Business Architecture
- Plan the implementation of the Ideal Business
 - The Business Influence on the Implementation Plan
 - The Architectural Influence on the Implementation Plan
 - Accommodating the Architectural and Business Influences the Object Way
 - Gap Analysis
 - Considering available resources + managing the effect
- Implement the Ideal Business
- Measure the Results

Course Content - Business Engineering Workshop

- Introduction to Case Studies
- Business Engineering Case Studies

Course Structure

Data Analysis and Design is presented as a 5 day course

Intended Audience (Any Industry Type)

- Business Analyst
- Information System Architect
- Application Architect
- System Designer
- System Builder
- System Design Facilitators
- Developer (Programmer)

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

Data must be seen as only one of the eight dimensions of any system. Although the course focuses on the data dimension it also depicts the integration of data with the other dimensions. The analysis and design of data also covers the Business, Application and Environment/Platform architectural levels.

This course covers the total data dimension from modelling the logical business semantics through to physical database design including optimisation parameters. Mathematical data work methods and techniques are covered in detail in terms of theory and practical case studies.

Course Objectives

To enable the attendee to understand and utilise DISCON's data work methods and techniques from logical business modelling to physical database design. The course equips the attendee not only with the theory but, more importantly, enables the attendee to apply this theory immediately in his/her working environment.

In any business, it is data that forms the centre of any decision making process and therefore data needs to be available at the right time in the right format. In the process of evaluating an application package, a change in a business process, or even the change of the physical platform, data again plays an important role. This course will equip the attendee with the ability to identify, gather and analyse the data required to perform any of these tasks.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content – Data Analysis and Design

- Definition of a Data Model
- Data Analysis and Design, the Subject
- Objectives of Data Analysis and Design
- System Framework
- The Data Dimension as part of a Methodology
 - Tailored Organisation Specific Methodology (Methods Engineering)
 - Business Systems - the Eight Components
 - Business - represented across three Architectural Levels
 - The Paracentric Approach

- Plan the implementation of the Ideal Business
- Overview of Data Analysis and Design
- The Relational Model
 - Why the Relational Theory
 - The Data Sub-Language
- Business System Architecture represented by Data
- Definitions of Data Constructs
- Representing Business Semantic by means of Functional Dependencies between Atomic Data Attribute Sets
 - Mathematical origin of Functional Dependencies
 - The Evolution of the Technique
 - Deliverables of an Attribute Dependency Diagram
 - Generic and problematic structures on a Data Model
- Model Structuring and Naming Conventions
 - Naming Conventions
 - Homonyms and Synonyms
- Facilitating the construction of a Data Model
- Data Synthesis and Data Decomposition as a Normalisation Approach
 - Normalisation
 - Normalisation Approaches
- Extending a Logical Data Model
 - Domain
 - Domain Dependency
 - Rationalisation.
- Creating a Physical Data Model
 - Data Structure Criteria
 - Data Structure Techniques
- Functional Effect Back Tracking Recipe
 - Additional deliverables of Functional Effect Back Tracking
 - How to use the Three Inference Rules
 - Applying the Inference Rules in the Functional Effect Back Tracking Algorithm
 - Mathematically Determined Sub-Systems
 - Accommodating the Architectural and Business Influences
- Data Analysis and Design of a Business System
- The effect of a change to a Business System
- The effect of changing the Current Platform
- Using Data to do Gap Analysis
- Meta Model
 - Functional Meta Model of Data Analysis
 - Data Meta Model of the Subschema Interdependency Diagram
 - Data Meta Model of the Entity Dependency Diagram
 - Data Meta Model of the Attribute Dependency Diagram
 - Data Meta Model of the Data Structure Diagram
- Symbol Sets for Data Work Method Techniques
 - Subschema Interdependency Diagram
 - Attribute Dependency Diagram
 - Data Structure Diagram

Course Structure

Data Modelling is presented as a 5 day course

Intended Audience (Any Industry Type)

- Business Analyst
- Information System Architect
- Application Architect
- Data Architects
- System Designer
- System Builder
- System Design Facilitators
- Developer (Programmer)
- Database Administrators
- Business Users

Pre-requisites

None

Scope of the Course

Data must be seen as only one of the eight dimensions of any system. Although the course focuses on the data dimension it also depicts the integration of data with the other dimensions. The modelling of data covers the Business and Application architectural levels.

This course covers the total data modelling aspect. Data needs to be modelled from logical business semantics, or business rules through to physical data models which represent the view of the data as it will be, or is implemented. Techniques are covered in detail in terms of theory and practical case studies.

Course Objectives

To enable the attendee to model data across all of the required aspects from conceptual data modelling, logical data modelling, and physical data modelling. The course equips the attendee not only with the theory but, more importantly, enables the attendee to apply this theory immediately by producing data models.

Data modelling is a skill that is established in the candidate to be utilised in various aspects of the candidate's work. A number of types of projects requires data modelling expertise;

System building projects.

System tailoring projects.

System design projects.

Package evaluation projects.

Package implementation projects.

Business analysis projects.

Business Engineering and re-engineering projects.

Reverse engineering of solutions into system specifications and business requirements.

Legacy modelling.

Projects where data needs to be migrated between physical data platforms.

Report construction and modification initiatives.

Gap analysis projects.

This course will equip the attendee with the ability to identify data elements, gather or facilitate data requirements and analyse and model data required to perform any of these tasks.

The course is designed to equip the candidate with modelling capability that is immediately applicable as the candidate completes the course.

Training Approach

- Formal Theory
- Individual Exercises
- Work related exercises as case studies done by Groups
- Facilitation Exercises
- Progressive Learning Cycle
- Monitored Knowledge Transfer
- Exploration Exercises
- Case studies

Course Content – Data Modelling

- Definition of a Data Model
- Data Analysis and Design, the Subject
- Objectives of Data Analysis and Design
- The Data Dimension as part of a Methodology
- Overview of Data Analysis and Design
- Definitions of Data Constructs
- Modelling Business Rules through Data
 - Mathematical origin of Functional Dependencies
 - The Evolution of the Technique
 - Deliverables of an Attribute Dependency Diagram
 - Generic and problematic structures on a Data Model
- Model Structuring and Naming Conventions
- Model Lay-out
- Facilitating the construction of a Data Model
- Normalisation Theory, Approaches and Normalisation Algorithms
- Extending a Logical Data Model
 - Domain
 - Domain Dependency
 - Rationalisation.
- Modelling Physical Data
 - Data Structure Criteria
 - Data Structure Techniques
- Business System Architecture represented by Data
- The role of data in a Business' Migration Plan
- Data Analysis and Design of a Business System
- The effect of a change to a Business System
- The effect of changing the Current Platform
- Using Data to do Gap Analysis
- Reverse Engineering Systems into Data Models
- Symbol Sets for Data Work Method Techniques
 - Subschema Interdependency Diagram
 - Attribute Dependency Diagram
 - Data Structure Diagram Logical
 - Data Structure Diagram Physical
- Case studies
- Pattern Matching when producing Data Models
- Work Related Case studies
- Practical Facilitation and facilitation guides for Data Modelling

Course Structure

Process Modelling is presented as a 5 day course

Intended Audience (Any Industry Type)

- Business Analyst
- Business Architects
- Process Architects
- System Designer
- System Builder
- Process Managers
- Business Users
- Process and System Design Facilitators

Pre-requisites

None

Scope of the Course

Processes must be seen as the integration of eight dimensions of a business. The course depicts the integration of seven design components that together represent a process within the Process Architectural Level. The seven design components are:

1. Data
2. Activity (automated or non-automated) as well as the contextual Function Structures into which processes need to be packed or derived from. This also represents the medium within which the activity will be encapsulated.
3. Responsibility.
4. Locality (of infrastructure, of responsibility of objects like data, equipment, etc)
5. Time (sequence, parallel execution, parallel but synchronised execution, Non parallel execution, co-ordinated execution, start and end of activities, interruption, suspension and resuming of activities, conditional flows of activities and data and transaction turn-around time).
6. Interfacing and utilisation of systems and components thereof in processes, and the grouping of activities together to form process cycles.
7. Strategy implication on processes

This course covers the total process modelling aspect. processes needs to be modelled from logical business requirements, or implemented solutions that have to be reverse engineered. Techniques are covered in detail in terms of theory and practical case studies.

Course Objectives

To enable the attendee to model processes in all of the required aspects. The course equips the attendee not only with the theory but, more importantly, enables the attendee to apply this theory immediately by producing process models.

Process modelling helps to create a detail view of the current position of the business or future ideal business, and helps to strategise and plan ahead if improvements are needed. It also contributes greatly to systems being constructed accurately, being built accurately and being measured accurately .

Process modelling is a skill that is established in the candidate to be utilised in various aspects of the candidate's work. A number of types of projects requires process modelling expertise;

Business Requirements Definition projects.

Process re-engineering projects.

Design projects.

Package evaluation projects.

Package implementation projects.

Business analysis projects.
Business Engineering and re-engineering projects.
Reverse engineering of solutions into process specifications.
Legacy modelling.
Gap analysis projects.
Process optimisation projects.

This course will equip the attendee with the ability to immediately gather or facilitate process requirements and model them.

The course is designed to equip the candidate with modelling capability that is immediately applicable as the candidate completes the course.

Training Approach

- Formal Theory
- Individual Exercises
- Work related exercises as case studies done by Groups
- Progressive Learning Cycle
- Monitored Knowledge Transfer
- Facilitation Exercises
- Case studies

Course Content – Process Modelling

- Definition of a Process Model
- Processes, the Subject
- Objectives of Process Modelling
- The seven Dimensions that participate in a process
- Definitions of Process Constructs
 - Objects that participate in processes (Applications, Responsibilities, Departments, Physical Forms, electronic Forms, Procedures, Locations, Teams, Equipment, Systems and Components and Tools)
 - Types of flows (Electronic Flow, Physical Flow, Obtain Flow, Capture Flow, Communication Flow, Electronic Interface, Personal Interface, Internal or Processing Activity, Read, Write, Delete, Update and Maintain)
- Model Structuring and Naming Conventions
- Model Lay-out
- Facilitating the construction of a Process Model
- Business Architecture providing context to Processes
- Process Analysis and Design as part of Value Chain Design
- Using Process Models to do Gap Analysis
- Reverse Engineering Processes and Systems into Process Models
- Measurement of Processes (Balanced Scorecards, KPI's, KPA's , etc.)
- Symbol Sets for Process Modelling Techniques
- Case studies
- Work Related Case studies
- Practical Facilitation and facilitation guides for Process Modelling

Course Structure

Facilitation is presented as a 4 day course, is limited to a maximum of six attendees per course and includes a psychometric evaluation of each attendee

Intended Audience (Any Industry Type)

Business Redesign Facilitators, Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). Key Role Players on any of the following projects types:

- Strategic Planning
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Amalgamation of Businesses
- Centralisation/Decentralisation of Business Processes
- Business Package Implementation
- Right Sizing of Business

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

The course stresses the importance of competent Facilitation in terms of Business Engineering and what it means to the success of the project. Emphasis is placed on Joint Application Development Sessions (JAD) as a vehicle for the gathering of information. A number of techniques and methods are presented as tools for successful facilitation.

Mechanisms are taught which enable attendees to identify required business objects and thereafter to derive technology objects for development or purchase.

Course Objectives

The course objective is to enable the attendee to facilitate the gathering of pertinent information across a wide spectrum of Business Forums. Mechanisms are taught which enable attendees to identify required business information and thereafter to facilitate JAD sessions for the procurement of such information.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content – Facilitation

- Facilitation Environments
- Facilitation Management
 - JAD Session Management
 - JAD Session Structure
 - Audience Management
 - Conflict Handling
 - Participant Placement
 - Behaviour Manipulation
- Facilitation Techniques
 - Tricks of the Trade

Course Structure

Core Consulting Skills is presented as a 1 day course

Intended Audience (Any Industry Type)

Business Redesign Facilitator, Business Engineer, Business Architect, Business Analyst, Project Managers and Middle Management (Executive Level)

Pre-requisites

None

Scope of the Course

The basic management and consulting skills required in order to be effective and efficient are addressed during this course. Technical skills alone cannot ensure a successful project.

The DISCON Business Engineering Method Set spans three disciplines:

- Architecture
- Project Management
- Change Management (Human Engineering)

In addition to the specific techniques that address these three disciplines it is also necessary to be skilled in the basic management/consulting skills. This approach ensures a holistically skilled individual who will be able to communicate successfully.

Course Objectives

The course objective is to give the attendee a good understanding of the necessary Core Consulting Skills. Attendees will be made aware of the need for the required skills and will be motivated to develop specific skills according to individual requirements.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Core Consulting Skills

- Consulting/Management Skills
- Managing a Project
 - Project Management Responsibilities
 - Other Relevant Factors to be Managed
 - Management Skills
- Decision Making.
 - Identify the Responsibility of the Decision
 - What is the Apparent Problem
 - What is the Real Problem
 - What is the Goal of the Decision
 - Establish the Nature of the Decision
 - What are the Alternative Solutions
 - Which is the Best Alternative
- Conflict Handling
 - Principle Causes of Conflict
 - The Goal of Conflict Handling

- Four Areas of Disagreement
 - Conflict Resolution
- Change Management
 - What is Change Management
 - Context
 - Reasons for Resistance to Change
 - Change Grid
 - Change Management as an important Discipline
 - Critical Success Factors for Change Management
- Managing the Client
 - Why
 - Difficult clients
- Managing Your Manager
 - “Manage”
 - The Basic Elements
 - Agreement
 - Dealing with Problems
 - Impressing Your Boss
- Time Management
 - Analysis
 - Time
 - Organise
 - Diary
 - Prescriptive
- Writing Skills
 - Content
 - Style
 - Language
 - Proposals
- Selling Skills
 - The Sales Process
 - Project and Client Etiquette and Protocol
 - Elements of Selling - the Marketing Presentation/Meeting
 - Qualify Potential Opportunities
- Presenting Skills
 - Communication
 - Stage Fright
 - Conversing with an Audience
 - Jokes
 - A Three-Step Plan
- Methodology
 - Why a Methodology
 - Definition of Business Engineering
 - The Aim of Business Engineering
 - Differentiating Factors of this particular Approach
- Negative Reactions and Behaviour during Change Management
- Methods for dealing with Resistance to Change
- The Pillars of Human Engineering
- Contracting
- Research
- Catalytic
- Educative
- Sounding board

Package Evaluation, Selection and Implementation

Course Structure

Package Evaluation ,Selection and Implementation is presented as a 3 day course

Intended Audience (Any Industry Type)

Business Redesign Facilitators, Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). Key Role Players on any of the following projects types:

- Strategic Planning
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Amalgamation of Businesses
- Centralisation/Decentralisation of Business Processes
- Business Package Implementation
- Right Sizing of Business

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

The course is scoped to present Package Evaluation and Selection Recipes which create the ability to convert Business Specifications into Package Evaluation Criteria. The processes of Package Evaluation and Package Selection are detailed to reveal the pitfalls and to provide guidelines for the successful implementation of the cycle.

Course Objectives

The course objective is to contextually position Package Evaluation and Selection within the discipline of Business Engineering. The aim is to equip the attendee with a complete methodology with which to conduct the complete Package Evaluation and Selection process.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Package Evaluation and Selection

- Package Evaluation, Selection and Implementation Definition
 - Package Evaluation
 - Package Selection
 - Package Implementation
 - User Training
- Package Project Risks, Pitfalls and Considerations
 - Continuity
 - Maintenance Cost
 - Compromise in terms of Strategic Differentiation
 - Lack of Corporate-wide Integration
 - Premature Package Decisions
 - Legacy Exposure
 - Package Inertia
 - Unrealistic Project Estimates
 - Misaligned Package Solutions
 - Lack of Package Understanding & Stakeholder Commitment

- A Holistic, Object-Orientated Approach
- Definitions
 - Holistic
 - Object-Oriented
 - Integrated
 - Mathematical
 - Encompassing
 - Independent
- The Objectives of the Approach
- The Deliverables of the Approach
- Implementing the Approach
- How is the approach implemented
- Implementation
 - Ensure Alignment with the Strategic Positioning of the Business
 - Analyse, Design and Specify the Business Requirements
 - Define Package Evaluation and Selection Criteria
 - Determine the Suitability of the Package Offering
- Select the most suitable Vendor Offering
- Design the implementation of the Package
- Implementing the Package Solution
- Ensure proficient Package Utilisation
- Measuring Progress, Performance and Achievement

Business Measurement (Benchmarking)

Course Structure

Business Measurement (Benchmarking) is presented as a 1 day course

Intended Audience (Any Industry Type)

Business Redesign Facilitators, Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). The individual could be a Strategic, Tactical or Operational person who has responsibility for any of the following business functions:

- Managing a project or project event
- Managing a business or business area
- Executing a project event
- Executing a business function

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

Business Engineering is a formal approach to restructuring, transforming or engineering a business process or value chain. In order to achieve the objectives of Business Engineering a number of supporting objectives must also be achieved. Project Management, Knowledge Representation, Human Engineering and Benchmarking can all be viewed as supporting disciplines of Business Engineering.

This course equips the attendee with the correct understanding of the relative context of Benchmarking within Business Engineering. The subject area of Benchmarking should be reviewed in conjunction with the other defined areas of Business Engineering such as Business Engineering Implementation, Project Management and Human Engineering.

Benchmarking cannot be executed through using an informal approach. The use of an informal approach can lead to confusion and out of context interpretation and implementation of solutions. The content of this course will enable attendees to identify, understand, and implement leading edge solutions through a formal measurement approach made up of a set of methods and recipes. The course provides an engineering approach to Benchmarking, which will ensure an efficient, accurate and calculated, project or function. This results in the elimination of risk from the exercise.

Course Objectives

The objective of this course is to give the attendee a good understanding of the scope, context and content of benchmarking. The course material provides a reusable framework for benchmarking a given function or project.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Business Measurement (Benchmarking)

- What is Benchmarking
 - Overview
 - Definition

- Description of the Business System
- Business System Framework
- Internal Business System
- Architectural Implication of Benchmarking
- Available Benchmarking Alternatives
- Sub Business System
- Business Wide
- Industry Wide
- Application of Benchmarking
- Typical Business Structure
- Benchmarking Triggers
- Areas of Benchmarking Utilisation
- Typical Benchmarking Project Structure
- Generic Project Success Factors
- Benchmarking Recipe
- Function Decomposition and Classification of Benchmarking
- The Deliverables of Benchmarking
- Scenarios
- Critical Success Factors
- Key Performance Areas and Indicators (KPA's & KPI's)
- Functional Areas
- Resources
- Organisation Structure
- Business Rules
- Procedures
- Locations
- Time Structures
- Technology
- Infrastructure
- Target Environment
- Other Tangible and Intangible Changes
- Impact of Benchmarking on Management
- The Impact of Changes on the Business
- Important Factors of Benchmarking
- Defining the Business Systems
- Benchmarking Sources
- Identification of Best Practice through Measurement
- Converting to a Best Practice Environment

Business Engineering Change Management (Human Engineering)

Course Structure

Human Engineering is presented as a 5 day course

Intended Audience (Any Industry Type)

Human Resource Executive, Business Redesign Facilitator, Business Engineer, Business Architect, Business Analyst, Project Managers and Middle to Top Management (Executive Level), Human Resource specialists with the potential to be utilised as change agents (skills and informal power base), Key Role Players on Projects.

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

Often the greatest problems in Business Engineering stem from human and cultural issues as a result of pending Business Change. DISCON Specialists developed its Human Engineering System to help align people and culture with changes brought about by Business Engineering. Human Engineering involves refocusing not only the project team but also the whole organisation. The objective is to get the organisation to anticipate and welcome the need for fast, radical, and planned organisational change. Measurement mechanisms are implemented to continuously measure return on investment.

Our Human Engineering Approach is unique because:

- It is a scientific approach to Change Management; an issue often wrongly called “Soft” and “Murky”
- It is driven from an Architectural bias

Change Management in this manner is facilitated through a scientifically proven technique set, used to construct a business out of a natural combination of building blocks.

Course Objectives

The course objective is to de-mystify the whole “change management” issue and to give the attendee a good understanding of the scope and content of Business Engineering Change Management (Human Engineering). The course provides the attendee with a good framework for the planning and execution of Human Engineering projects in terms of:

- Methods to assess the organisational need for change
- How to align the change strategy with the business strategy
- Methods and techniques to implement the seven pillars of Human Engineering
 - Communication
 - Leadership Development
 - Training and Development
 - Stakeholder Interventions
 - Practice Development
 - Process Consultation
 - Team Development
- How to align the workforce with the change vision
- Who should be involved in change and their roles and their responsibilities
- The effort involved in Human Engineering
- The effects of Human Engineering

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Business Engineering Change Management (Human Engineering)

- Objectives of the DISCON Specialists Change Management System
- Differentiating Factors of this Change Management
- Introduction to Change Management
- This “Animal” called Change
 - The Nature of Change
 - Change in the New South Africa
 - Traits of Organisational Change
 - Attitudes about Change
- Business Engineering Change Management Implications
- Human Engineering (Business Engineering Change Management)
 - Relevant Definitions and brief Descriptions
 - Typical Human Engineering Roles and Responsibilities
 - Desired Characteristics of a Human Engineer and Change Agent
 - Problems associated with Change Management/Human Engineering
 - Human Engineering Success
- DISCON Specialists’ Human Engineering System
- The Human Engineering System
- DISCON Specialist Meta Model for the Human Engineering Management System
 - Function Structure Diagram (FSD)
- Phase 1 - Establish the Need for Change
- Objectives
- Deliverables
- Functions
 - Define and plan the Research Project
 - Execute the Research Project
 - Assess the Findings
 - Identify Change Problems
 - Ensure Contextual Value of Change
- Tools and Techniques for establishing the Need For Change
 - Change Assessment Workshop
- Phase 2 - Human Engineering Alignment and Project Planning
- Objective
- Deliverables
- Functions
- Assess Strategic Objectives
 - Observing the Existing Business
- Interpreting the effect of the External and Target Environments on the Business and reflecting it on the Internal Environment
 - Classes of Business Engineering Projects and the Human Engineering Implications
 - Human Engineering Project Planning
 - The Organisation Structure of a Business Engineering Project
 - Groups and Committees
 - Project Roles and Responsibilities
 - Job Descriptions
- Phase 3 - Align Workforce with Change Direction
- Objective
- Deliverables
- Functions
 - Establish an Environment and Workforce conducive to Change

- Change Assessment and the “Stages” of Change
 - Resistance to Change
- The “Pillars” of Human Engineering
 - Aligning the Workforce with the Change Direction
 - Human Engineering Pillar Methods and Techniques
- Phase 4 -Establish and Maintain a “Change Sensitive” Organisation
- Objectives
- Deliverables
 - Creating a Learning Organisation
 - Building and Maintaining the Change Competency
 - Advantages of creating an Organisational Change Competency

Business and Process Performance Management Training Programme

Course Structure

Business and Process Performance Management is presented in three sections:

- Strategic Positioning.
- Project and Programme Management in the context of Business Strategy.
- Measure performance of the workforce in the context of Business Strategy.

Intended Audience (Any Industry Type)

Business Redesign Facilitators, Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). Key Role Players on any of the following project or initiative types, as well as any management level:

- Business Strategic Planning
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Amalgamation of Businesses
- Centralisation/Decentralisation of Business Processes
- Right Sizing of Business
- Multi Skilling
- Business Package Implementation

Pre-requisites

None

Scope of the Course

All businesses have internal, target and external environments. A change in the target or external environment will necessitate changes in the internal environment. The internal environment must be constructed in such a way that it will be able to meet the business goals and still be able to absorb the changes forced upon it by the target and external environments. With any such change, business processes may need to be altered, organisation structures are affected and the governance of the organisation is challenged. Measurement mechanisms must be implemented to continuously measure the businesses' performance and the resultant return on investment. Programmes and Projects will be launched to aligned the current business relative to its business strategy.

Course Objectives

The objectives of this course are to give the attendees a good understanding of the scope and content of Business and Process Performance Management. The course will provide the attendees with a good framework upon which to base Performance Management in terms of:

- Measurement of the current business relative to business strategy.
- Delivery of a performance capability relative to business strategy.
- Identifying and prioritising shortcomings in terms of becoming a strategically performing business.
- Ensuring project delivery relative to strategy.
- Measuring workforce in the context of delivering upon strategy.
- Measurement mechanism as to what should be included and excluded.
- Who must be involved and what their roles and responsibilities should be.
- What the expected effort involved should be.
- What the effect of such an exercise will be.

Training Approach

- Interactive Workshops
- Individual Exercises
- Formal Theory
- Progressive Learning Cycle

- Exploration Exercises
- Monitored Knowledge Transfer

Course Content - Business and Process Performance Management Concepts

1. Course Content - Strategic Positioning.

- Scenario Dependency Diagram (SDD)
- Probability of Realisation
- Position Yourself in terms of Scenarios
- Structure Your Business Using Functions
- Explore the Potential of the Scenario
 - External Environment
 - Map External Environment over Scenarios
 - Target Environment
 - Test Performance Ability
 - Determine the Critical Success Factors
 - Determine Criticality of the Business Functions
 - Prioritise the Business System and the Required Resource
- Business Prioritisation.
- Resource gap and the 'Fix It' priority.

2. Course Content - Project and Programme Management in the context of Business Strategy

- Identifying projects as a result of business strategy.
- Managing projects in the context of business strategy.

3. Course Content - Performance Measurement in the context of Business Strategy

- Measuring the workforce.
 - Strategic alignment of the measurement engine.
 - Removal of redundant measurement criteria.
 - Adding strategic business projects onto the scorecard.

Object Oriented Systems Analysis and Design

Course Structure

Object Oriented Systems Analysis and Design is presented as a 5 day course

Intended Audience (Any Industry Type)

Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). Key Role Players on any of the following projects types:

- Strategic Planning
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Centralisation/Decentralisation of Business Processes
- Business Package Implementation
- Right Sizing of Business

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

The course positions Object Orientation in terms of Business Engineering and what it means to the Businessman. Object Orientation initially started at the technology level of systems. The next generation of objects was programmable processes that were designed and coded as objects. Currently the emphasis has shifted to business objects. The emphasis is on Business Engineering with an Object Oriented framework where business objects can be designed in such a way that one object could be plugged out and replaced with another without having a major effect on the surrounding business operation. Mechanisms are taught which enable attendees to identify required business objects and thereafter to derive technology objects for development or purchase.

The course enables the attendee to model the Business, Application and Technology architectural levels with Object Orientated techniques.

Course Objectives

The course objective is to present an overview of all Object Orientated Concepts with case studies and interactive workshops. The course is conducted on a conceptual business level and not at an application system level.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Object Oriented Systems Analysis and Design

- Case study no. 1 - Horse Racing
- Business Activities
- Fulfilment Object Interface
- Case study no. 2 - Buffelsfontein Mining Co. Equipment Maintenance
- Function Structure Diagram for Personnel System
- Function Structure Diagram for Manufacturing System
- Buffelsfontein Mining co. Equipment Maintenance System (Solution 1)
- Buffelsfontein Mining co. Equipment Maintenance System (Solution 2)

Course Structure

Project Management is presented as a 5 day course

Intended Audience (Any Industry Type)

Programme Managers, Project Managers, Business Redesign Facilitator, Business Engineer, Business Architect, Business Analyst, Project Leaders and Middle to Top Management (Executive Level).

Key Role Players on any of the following types of projects and or functional areas:

- Enterprise Wide Package Implementation
- Strategic Business Changes / Initiatives
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Amalgamation of Businesses
- Construction Projects
- Centralisation / Decentralisation of Business Processes
- Right Sizing of Business
- I.S. Management
- Individual Package Implementation
- Project Type Organisations

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

The course covers all four functional areas of the Project Management discipline:

- Project Planning including areas such as:
 - Project Definition, consisting of; architectural identification of project business area, identification of core project deliverables, classification of project effort, formulation and agreement of mandate, etc
 - Project Planning, consisting of; strategising the project, prioritising deliverables, risk identification and analysis, gap analysis, estimating algorithms, etc
- Project Organising addressing problems such as:
 - Organisation Types span of control, responsibility, communication channels, structuring the project, etc
 - Business Engineering project structures in particular
 - Groups and committees, roles and responsibilities and project job descriptions
- Project Directing including areas such as:
 - Directing tools, psychological contract, motivation, behaviour modification, group dynamics, leadership and time management
- Project Control including areas such as:
 - Measurement and control mechanisms, project reporting, JAD control, change control, quality control and standards

Course Objectives

The course objective is to give the attendees a good understanding of the scope, content, and actual requirements of Programme and Project Management. This will give the attendee a good framework to prepare for project management in terms of:

- The Influence of Business and Information System Architecture on projects and Project Management per se
- The project participants and their roles and responsibilities in this context
- The required effort
- To establish a framework for:
 - Extrapolating project plans and estimates from overview business architectures

- Defining change initiatives for gearing a business' resources for future scenarios
- Accommodating Business Priorities into Architectural Priorities during change initiatives
- Driving programmes and projects with real business benefit as an objective and measure
- Aligning programmes and underlying projects with business strategies
- Tailoring project Life Cycles for individual projects within each organisation
- Controlling project Life Cycles

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Project Management

- Objectives of the DISCON Specialists Project Management System
- Differentiating Factors of this Project Management System
- Business Engineering Project Management
- Project Management
 - Definitions
 - Problems associated with Project Management
 - Project Success
 - Desired Characteristics of a Project Manager
- DISCON Specialists' Project Management System
- Introduction
- Project Management System
 - The Project Definition Workshop (PDW)
 - The Project Planning System (PPS)
 - The Project Organisation System (POS)
 - The Project Directing System (PDS)
 - The Project Control System (PCS)
- DISCON Specialists Meta Model for the Project Management System
 - Function Structure Diagram (FSD)
- Project Planning System
- Introduction
 - Hierarchical
 - Planning tool
 - Estimation
 - Communication
 - Priorities
 - Approved
 - Change
 - Graphic
 - Measure progress
- Objective
- Deliverables
- Functions
- Project Planning System: Tools and Techniques
 - Project Definition Workshop
 - Strategising the Business Engineering Project
 - The Business' Resource Gaps Initiating Sub-Plans
 - Event Synchronisation Across Three Architectural Levels
 - Extend Project Plan with Exceptions and Detail
 - Risk Management
 - Project Estimating
 - Obtain Approval
 - Types of Plans
 - Additional Tools
- Project Organising System

- Objective
- Deliverables
- Functions
- Project Organising System: Tools and Techniques
 - Determine Resource Requirement
 - Structure Project Staffing
 - Acquire Resources
- Project Directing System
- Objective
- Deliverables
- Functions
- Project Directing System: Tools and Techniques
 - Ensure a Conducive Project Environment
 - Delegate Project Tasks to the Appropriate Team Members
 - Ensure Team Members' Understanding of Tasks
 - Conduct Session
- Project Controlling System
- Objective
- Deliverables
- Functions
- Project Controlling System: Tools and Techniques
 - Determine Work Progress
 - Identify Exceptions and their Impact
 - Ensure Efficient Resource Utilisation
 - Ensure Strategic Alignment of Project with Business
 - Report Project Status
 - Manage Change (Life Cycle Configuration and Project Mission)
 - Control Quality
 - Ensure Adherence to Standards
 - Control Project Risk
 - JAD Management/Control
- Generic and Other Techniques
 - Project Meetings
 - Project Communication
- Special Topics
- Critical Success Factors for Project Managers
- Speeding up Development
- I.S. Projects and Organisational Change
- Automated Support for Project Managers
 - No Hard Hats or Slide Rules Required
 - Geared to IS
 - Three Targets
 - Future Benefits
- Appendices
- Work Breakdown Structures
 - JAD Sessions
 - External Factors (for use in strategy planning)
 - Specify Logical Models per Functional Area
 - Obtain Solution/Model Approval
 - Application Systems Portfolio and Performance Appraisal
 - Implement Manual Process
 - Prepare Project Estimate
- Infomet Application Estimating Project Algorithm

Tools and Repository Management Skills

Course Structure

Tools and Repository Management Skills is presented as a 2 day course

Intended Audience (Any Industry Type)

Business Redesign Facilitators, Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). Key Role Players on any of the following projects types:

- Strategic Planning
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Amalgamation of Businesses
- Centralisation/Decentralisation of Business Processes
- Business Package Implementation
- Right Sizing of Business

Pre-requisites

Business Engineering Concepts and Business Engineering Implementation

Scope of the Course

The course covers the practical use and management of the DISCON Project Environment Tool Sets and the resultant Business Object Repositories.

Course Objectives

The objective of this course is to give the attendees a good understanding of the scope and content of DISCON Specialists Tools and Repository Systems, which will greatly enhance the attendees' ability to implement a Project and Programme Management Environment. The courses will also provide the attendees with a good framework upon which to record the progress and results of business engineering projects.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Tools and Repository Management Skills

- Repository Concepts
- Modelling Tool Utilities
- Utilising the Repository
- Template Usage
- Project/Programme Management
- Project Management Template Usage
- Tips for more efficient usage of Tools and Repositories

Course Structure

Meta Modelling is presented as a 2 day course

Intended Audience (Any Industry Type)

Business Redesign Facilitators, Business Engineers, Business Architects, Business Analysts, Project Managers and Middle to Top Management (Executive Level). Key Role Players on any of the following projects types:

- Strategic Planning
- Business Process Re-engineering (BPR)
- Business Process Improvement (BPI)
- Business Transformation
- Amalgamation of Businesses
- Centralisation/Decentralisation of Business Processes
- Business Package Implementation
- Right Sizing of Business

Pre-requisites

Business Engineering Concepts, Business Engineering Implementation, Business Engineering Workshop and Data Analysis and Design

Scope of the Course

The course covers an in depth review of the entire DISCON Specialists Meta Model and the Mathematical Foundation from which it is derived. It also presents a clearly defined understanding of the scope and content of the DISCON Specialists Meta Model.

Course Objectives

The objective of this course is to give the attendees a good understanding of Method Engineering and the relevance of Meta Model Objects. It also serves to clearly identify the need to enforce levels of abstraction and to establish Method Engineering as a Business Discipline.

Training Approach

- Interactive Workshops
- Individual Exercises
- Exploration Exercises
- Formal Theory
- Progressive Learning Cycle
- Monitored Knowledge Transfer

Course Content - Meta Modelling

- Eight Dimensions of DISCON Specialists Architecture
 - Strategy
 - Object
 - Time
 - Locality
 - Organisation
 - Function
 - Data
 - Systems Operation
- Business Engineering Project Management with an Architectural Bias