

# Clariteq Workshops for Business Analysts

## **Workflow Process Modeling**

***Defining, Mapping, and Analyzing Business Processes***

**2 days**

Business processes matter, because business processes are how value is delivered. Understanding how to work with business processes is now a core skill for business analysts, process and application architects, functional area managers, and even corporate executives. But too often, material on the topic either floats around in generalities and familiar case studies, or descends rapidly into technical details and incomprehensible models. This workshop is different – in a practical way, it shows how to discover and scope a business process, clarify its context, model its workflow with progressive detail, assess it, and design a new process. Everything is backed up with real-world examples, and clear, repeatable guidelines. *Our most popular workshop!*

## **Data Modeling**

***A Business-Oriented Approach to Entity-Relationship Modeling***

**2 days**

Data modeling is critical to the design of quality databases, but is also essential to other requirements techniques such as workflow modeling and requirements modeling (use cases and services) because it ensures a common understanding of the things – the entities – that processes and applications deal with. This workshop introduces entity-relationship modeling from a non-technical perspective, provides tips and guidelines for the analyst, and explores contextual, conceptual, and detailed modeling techniques that maximize user involvement.

## **Requirements Modeling**

***Proven Techniques for Use Cases and Business Services***

**2 days**

Use cases have offered great promise as a requirements definition technique, but many analysts get disappointing results. That's because published methods are often inconsistent, complex, or focused on internal design. This unique workshop clears up the confusion. It shows how to employ use cases to discover external requirements – how users wish to interact with an application – and how to use service specifications to define internal requirements – the validation, rules, and data manipulation performed behind the scenes. Better yet, it shows in concrete terms how the two perspectives interact, and demonstrates synergies with data modeling and business process workflow modeling.

## **Advanced Data Modeling**

***Communication, Consistency, and Complexity***

**2 or 3 days**

After gaining some practical experience, data modelers encounter situations such as the enforcement of complex business rules, handling recurring patterns, satisfying regulatory requirements to capture complex changes and corrections, dealing with existing databases or packaged applications, integrating with dimensional modeling, and other issues not covered in basic data modeling classes. This hands-on workshop provides approaches for many advanced data modeling situations, as well as techniques for improving communication between data modelers and subject matter experts.

## **Facilitation & Presentation Skills**

***Session Techniques for Business Analysts***

**2 days**

The primary approach for discovering and validating business requirements has shifted from one-on-one interviews to facilitated workshops. Just as important for business analysts as gathering information in a facilitated session are skills in presenting that information for validation and to inform a wider audience. While there are many general-purpose courses available on these topics, there is very little available that is specifically designed for the needs of the business analyst. This unique workshop will provide specific methods and techniques in both skills – facilitation and presentation.

## **Now available! Business Analysis Overview**

***Model-Driven Techniques for Processes, Applications, and Data***

**2 days**

Essential content from Clariteq's Process, Requirements, and Data Modeling workshops.

# Clariteq Workshops for Business Analysts

## Workflow Process Modeling

*Defining, Mapping, and Analyzing Business Processes*

2 days

### **Description:**

Whether a new application is purchased or custom-developed, it's almost certain that improved or redesigned business processes will be involved. This workshop will give business analysts a solid exposure to the modeling and analysis of a process workflow, the key phases and techniques, and the issues that must be addressed. With initiatives like enterprise application implementation and e-commerce driving the redesign of business processes, these skills can make a real difference to a project's success.

The workshop complements the techniques covered in our *Data Modeling* and *Requirements Modeling* workshops, and integrates proven analysis techniques with developments from fields such as business process management and quality management. First, participants will learn the key factors to consider when dealing with business processes, and then how to specify the scope and goals of a business process, model the current workflow, assess it, and apply three critical process redesign techniques.

Key principles are illustrated throughout with workshop exercises and discussions. Business professionals with responsibility for improving their processes and business analysts needing solid techniques will both benefit from this workshop.

### **Objectives:**

On workshop completion, participants will be able to:

- Describe the key factors that differentiate process and functional approaches
- Employ a variety of techniques to keep stakeholders involved, and promote "process orientation"
- Identify a "true" business process, and specify its boundaries and goals
- Model process workflow at progressive levels of detail using Swimlane Diagrams
- Stop process modeling at the appropriate point, and move on to other techniques or phases
- Conduct a structured assessment of a business process
- Develop a process redesign while avoiding common (and serious!) pitfalls

### **Prerequisites:**

None. However, business analysts who expect to do extensive workflow modeling will find that some understanding of information systems concepts may be helpful in establishing context.

### **Target Audience:**

Business analysts who are responsible for requirements specification or are involved in business process re-design or improvement; business managers and content experts who will participate in process re-design or process-oriented application development efforts.

### **Course Topics:**

- Thinking in process terms – concepts, terminology, principles, and techniques
- A three-phase approach to completing a process-oriented project
- Framing the process - discovering a business process, and clarifying its purpose and scope
- Initial assessment of the "as-is" process and goal-setting for the "to-be" process
- Modeling process workflow – practical tips and techniques for using swimlane diagrams
- Controlling detail – three levels of workflow model (handoff, milestone, and task)
- Applying workflow modeling to the as-is process – facilitating a workflow session
- Final assessment of the as-is process – a framework for assessment, relation to redesign
- Characterizing the to-be process – generating creative improvements and assessing them
- Creating the new workflow – turning the to-be characteristics into a workflow model
- When to stop – making the transition to use cases and application requirements
- Wrap-up – summary, tips, and resources

# Clariteq Workshops for Business Analysts

## Data Modeling

### A Business-Oriented Approach to Entity-Relationship Modeling

2 days

#### Description:

Data modeling was originally developed as a tool for improving database design, but has become a fundamental analysis technique in modern application development, whether the analyst is primarily concerned with data structures, application logic, the user interface, or business processes.

A key driver is that applying data modeling early in requirements definition allows analysts and clients to develop a common understanding of the business entities (e.g., Customer, Order, Product, Part, etc.) that business processes and information systems deal with, their interrelationships, and the rules that govern them. This eliminates the problems of inconsistent terminology and conflicting assumptions that otherwise plague application development.

This workshop introduces entity-relationship modeling from a non-technical perspective, thoroughly covering the basic components of a data model - entities, relationships, attributes, and identifiers. In addition to showing how and when to use these components in developing a data model, it includes many tips, quality checklists, and common pitfalls. Just as important, it contains far more advice on the *process* of developing a data model than other courses, including specific methods for getting subject matter experts involved and maintaining their commitment.

#### Objectives:

On workshop completion, participants will be able to:

- Use entity-relationship modeling to depict facts and rules about business entities at different levels of detail, including conceptual (overview) and logical (detailed) models
- Use top-down and bottom-up approaches to initiating development of a data model
- Recognize the four basic patterns in data modeling, and when to use them
- Effectively use definitions and assertions (“rules”) as part of data modeling
- Use an intuitive approach to data normalization within an entity-relationship model
- Apply various techniques for discovering and meeting additional requirements
- Read a data model, and communicate with specialists using the appropriate terminology

#### Prerequisites:

An understanding of information systems concepts.

#### Target Audience:

Business analysts and application developers responsible for the analysis and design of any component of an application, including the database, application logic, or the user interface. Also, business professionals and managers needing to understand how this technique can uncover and resolve inconsistency in business terminology, policy, and rules.

#### Course Topics:

- Overview of data modeling: terminology, types of models, and key concepts
- The essential data model components - entities, relationships, attributes, and identifiers
- A three-phase approach to completing a data model
- Initiating a conceptual data model using a bottom-up approach
- Four common errors in identifying entities, and how to avoid them
- Eliminating confusion and misunderstanding with well-structured entity definitions
- Four entity types, and rules and guidelines for dealing with them
- Adding detail and rigor - evolving the conceptual model into a logical data model
- Patterns for common situations - multi-valued attributes, redundant data, and reference data
- The world's simplest guide to normalization
- Primary and foreign keys in logical data models
- Meaningless primary keys – rationale and limitations
- Specifying assertions and constraints – rules that can't be shown on the E-R diagram
- Drawing the Entity-Relationship Diagram for maximum readability
- Techniques for discovering, assessing, and meeting new requirements
- Wrap-up – summaries and resources

# Clariteq Workshops for Business Analysts

## Requirements Modeling

*Proven Techniques for Use Cases and Business Services*

2 days

### **Description:**

This highly participative workshop introduces proven techniques for discovering, documenting, and verifying application requirements. In three-tier architecture terms, it covers both the Presentation Services (User Interface) and Business Services (Logic and Rules) layers.

The workshop uses an “outward-looking” form of use cases to define *external* (Presentation Services) requirements – that is, how a user wishes to interact with a system. To define *internal* (Business Services) requirements – the validation, rules, and data updates performed “behind” the user interface – a variety of techniques are covered, including event analysis, state transition diagramming, and service specification. Important synergies between these techniques are demonstrated, as well as making use of the analysts’s other main techniques – data modeling and process modeling.

This unique class bridges the gap between two common extremes. At one end are simplistic, easily understood prototyping or list-based approaches that are too imprecise and incomplete for all but the simplest applications. At the other extreme are techniques that are so complex they are indecipherable to most users and analysts, and thus produce results that are just as undependable .

### **Objectives:**

On workshop completion, participants will be able to:

- Use a variety of techniques to identify a system’s use cases and business services.
- Discover and document “external” application requirements, especially UI behavior
- Discover and document “internal” application requirements, particularly logic and rules
- Understand how use cases and services fit with process models and data models
- Create and apply a set of use case scenarios that exercise and demonstrate the use cases

### **Prerequisites:**

None, although some understanding of multi-tier information systems concepts, and data modeling in particular, will be helpful.

### **Target Audience:**

Business analysts, systems analysts, and developers responsible for defining application requirements, or documenting legacy/custom/package application behavior in a structured way. Also, technical resources (programmers, UI designers, DBAs) interested in requirements definition, project leaders needing to understand current analysis techniques, and content experts with a significant role to play in specifying requirements.

### **Course Topics:**

- Application requirements definition – goals, issues, and approaches that work in real life
- Use cases and services (“application logic”) - terms, concepts, and interrelationships
- Discovering use cases and services at the right granularity - a multi-pronged method
- Documenting use cases with progressive detail and precision – a phased approach
- Documenting “out of context” use cases – dealing with recurring and reusable elements
- Discovering process scenarios and use case scenarios – making the use cases real
- Developing use case and use case scenario dialogues – refining use cases and requirements
- Service specification – invocation, validation, rules, and updates
- State transition analysis – relating events, entity states, and business rules
- Wrap-up – summary, “what’s next?,” and resources

# Clariteq Workshops for Business Analysts

## Advanced Data Modeling:

*Communication, Consistency, and Complexity*

2 or 3 days

### **Description:**

After gaining some practical experience, data modelers encounter situations such as the enforcement of complex business rules, handling recurring patterns, dealing with existing databases or packaged applications, and other issues not covered in introductory data modeling classes. This highly participative workshop provides approaches for many difficult data modeling situations, as well as techniques for improving communication between data modelers and subject matter experts. Topics will be covered with a discussion of the issue, a review of guidelines and examples, a workshop exercise, and a group solution and debriefing.

Three main themes will be explored:

1. The technical side of data modeling - getting better at modeling difficult situations
2. The human side of data modeling - improving processes and communication skills
3. Developing and using data models in new ways

### **Objectives:**

On workshop completion, participants will be able to spot various advanced situations (listed below in “Course Outline/Topics”) as they arise in their own modeling assignments, and deal with them efficiently and effectively.

### **Prerequisites:**

Practical experience with data modeling, for instance, *Data Modeling* and/or six months or more of applying the techniques

### **Target Audience:**

Business analysts, application developers, data modeling specialists, database administrators, and anyone else with substantial data modeling experience who needs additional skills.

### **Course Topics:**

- Recapping the basics: conventions, basic structures, and “the four Ds of data modeling”
- Dealing with reference data and the “category vs. types vs. instances” problem
- Vector modeling – entity or attribute?
- Using multi-way associations and relationship constraints to handle complex rules
- Advanced normal forms - resolving circular relationships and cyclic dependencies
- Modeling time, history, corrections, and time-dependent business rules
- Analytic data structures – building star schema or dimensional models from ER models
- Roles, generalization (subtyping,) and aggregation – when to use them, and when not to
- Implementing lists, trees, and networks with recursive relationships:
- Modeling difficult rules by combining subtyping and recursion
- Preparing and delivering a data model review presentation

# Clariteq Workshops for Business Analysts

## Facilitation & Presentation Skills

### Session Techniques for Business Analysts

2 days

#### **Description:**

Carrying out any type of business analysis requires a mix of one-on-one interviews and facilitated workshops, so skills in gathering, presenting, and validating information in group sessions have become essential for business analysts. This is the case whether the job at hand is a situation analysis, process mapping, requirements discovery, or any other initiative that requires input from multiple participants.

A facilitated workshop involves a facilitator/analyst leading a group of business and IT professionals through a task-based plan, using specific techniques, for developing a product such as a project charter, high level requirements statement, workflow model, or fact model. Facilitated sessions have been proven to increase the quality and reduce the development and implementation time for new processes and systems, whether internally developed or purchased. They also enhance the participation and commitment of process participants and system users, which is vital in a time of substantial change.

Unlike general purpose “manage your meetings” or “effective presentations” courses, this workshop was developed expressly for business analysts, process and application architects, and project leaders. The focus is on relevant topics, such as proven agendas, techniques, and questions for business modeling and requirements definition sessions. Just as important, it provides specific methods for presenting the products and findings of those sessions, which can easily become irrelevant or overwhelming to a business audience. During the workshop, participants will follow a case study through the initial phases of a typical development project.

#### **Objectives:**

On workshop completion, participants will be able to:

- Conduct pre-session interviews with sponsors and participants and get off to a good start
- Develop the objectives and plan for a facilitated modeling or analysis session
- Use facilitated sessions to carry out analysis techniques such as process or use case modeling
- Prepare and deliver a presentation of potentially complex models
- Draw on a variety of facilitative techniques for handling difficult situations such as aggressive, monopolizing, or unresponsive participants

#### **Prerequisites:**

An understanding of business process and information systems concepts, business modeling, and requirements definition techniques.

#### **Target Audience:**

Business analysts who will be using facilitated sessions for business modeling, situation analysis, and requirements specification; application or process architects, project leaders, and other professionals involved with initiatives such as business transformation, process improvement, or application provisioning that require session skills; subject matter experts who will participate extensively in facilitated sessions.

#### **Course Outline:**

- Working with groups – principles of facilitation and presentation
- Pre-session interviews – interviewing guidelines, what to ask, what to listen for
- Preparing for the session – objectives, agenda, participant guidelines, and facilities
- Introducing the session – getting involvement, focus, and momentum
- Conducting the session – initiating, sustaining, and completing analysis tasks
- Dealing with tough situations – dominators, philosophers, clams, aggressors, and others
- Planning a review presentation – using “rhetorical context” and storyboarding
- Developing the presentation – essential techniques for presenting technical material
- Delivering the presentation – what to do before, during, and after
- After the session – the “core team” session: debriefing, consolidation, and preparation
- Advice from the pros – summaries, resources, and “Top 10” lists for success or failure

# Clariteq Workshops for Business Analysts

## Business Analysis Overview

*Model-Driven Techniques for Processes, Applications, and Data*

2 days

### **Description:**

Being a business analyst is not easy, and many common requirements definition methods don't make it any easier. At one extreme are simplistic list-based approaches that are too imprecise, incomplete, and inconsistent for all but the simplest applications. At the other extreme is a knot of complex techniques that are indecipherable to most users and analysts, and thus produce results that are equally undependable.

What is needed are techniques that are repeatable by analysts, understandable and relevant to business subject matter experts, and useful to designers and developers. They should also divide the problem space into a reasonable number of perspectives, offer well-defined, progressive levels of detail, play well together, and be practical enough that you can achieve good results within your natural lifetime!

That's a tall order, but it's possible. This intensive, two-day workshop shows how to discover, document, and verify requirements using a small number of business-friendly yet powerful modeling techniques – workflow models, use cases, service specifications, and data models. Each addresses one fundamental aspect of the problem space:

- What the business processes are, how they work now, and how they should work
- How the application should behave in support of the process and people working in it
- What the application should do in terms of validation, rules, functions, and record-keeping
- What data structures will support the process, the application, and the reporting requirements

The material is drawn from Clariteq's core offerings for business analysts – Workflow Process Modeling, Data Modeling, and Requirements Modeling.

Instead of textbook theory about what should work or what might work, this workshop covers what really works. You'll get clear methods, templates, guidelines, and tips to help you get quality results and maximize the involvement of business subject matter experts. That's because this workshop was developed by practitioners, for practitioners. The techniques have been developed, refined, and proven over years of real-world project experience. They've been used to support in-house development, offshore development, and package selection and implementation. Surprisingly, they've even been popular with Agile teams, because they support "just enough" modeling to get into the ballpark and then let iterative development take over.

### **Prerequisites:**

None, although some understanding of information systems concepts will be helpful.

### **Target Audience:**

Business analysts, systems analysts, and developers needing an introduction or refresher in modern, model-driven requirements specification techniques. Also, technical resources (programmers, UI designers, DBAs) interested in requirements definition, and project leaders, architects, and methodologists needing to understand current business analysis techniques.

### **Course Outline:**

- Requirements definition – goals, issues, and an integrating framework
- Project charter – the essence of communicating a project's scope and objectives
- Process discovery and workflow modeling – identifying, scoping, and mapping processes
- Data modeling – creating a common language and "world view"
- Service specification – capturing business rules, data updates, and other internal behaviors
- Use cases – discovering user expectations about a system's external behavior
- Wrap-up – summary, guidelines, and notes on integrating the techniques