Analyzing Business Data Requirements

3 Days | Virtual and Face-to-Face

Missing a critical piece of data or incorrectly defining a data element contributes to the majority of maintenance problems and results in systems that do not reflect or support the business needs. Business users often fail to articulate their business data needs because they are so inherent in their work that it is difficult to uniquely identify each data requirement. A business analyst, skilled in data elicitation and definition, can save the business significant time and cost for any project.

Even if your organization has a data administrator or data warehouse team who is responsible for documenting and managing the organization's information needs, every project uses a subset of that enterprise information in its own unique way. Business analysts must understand the importance of data in all their projects and include data requirements in their business requirements. Failing to document which data elements need to be used in a calculation, or displayed on a report, leaves the developer the responsibility of choosing the correct pieces of business data from hundreds if not thousands of available fields. These missing requirements often lead to expensive and lengthy project delays during the testing phase.

This course teaches students an in-depth approach to data modeling: identifying and defining all necessary data components using both textual templates and an entity relationship diagram. This course teaches business analysis techniques for eliciting, analyzing, and documenting data requirements to both new and experienced practitioners. Students will be given data templates with a suggested documentation structure for defining Business Data Requirements.

This course supports and expands on the techniques in the IIBA *BABOK® Guide*. Facilitator-led workshops require students to practice the techniques as they learn. Students are encouraged to bring their own projects to class.

Learning Objectives

- Identify core data requirements beginning with project initiation.
- Identify relationships between data elements and understand their impact on the business
- Develop excellent data requirements at an appropriate level of detail
- Detail business data requirements (using a data dictionary and data model)
- Detail complex data-related business rules
- Use data requirements to verify and communicate a more complete understanding of the business domain
- Assist with the transition of business data to database design
- Utilize easy normalization techniques (without all the mathematical theory)
- Validate data requirements with activity (process or use case) requirements

Intended Audience

This course is designed for business analysts, project managers, systems analysts, data administrators, database administrators, or any other project team member practicing business analysis. This course may also be appropriate for individuals who manage or mentor business analysts.

Prerequisites

We recommend that students first attend our Essential Skills for Business Analysis class or have experience in project scope definition, gathering requirements from subject matter experts, and understand how business requirements fit into the entire systems development effort.

Learning Topics

Topic
Introduction
• What is business data and how do data requirements support your project solution? • What is the difference between business data and database design? • Review the 7 characteristics of "excellent" requirements.
Entities and Attributes
• Review project initiation and scope analysis to identify initial business data needs. • Understand the basic building blocks of the business data: entities, attributes, and relationships. • Learn to define entities and attributes with business goals in mind. Utilize suggested naming guidelines for consistency and readability. • Identify critical metadata for each entity including entity unique identifiers • Identify critical metadata for each attribute, establishing its data type, valid values and other attribute characteristics. • Break complex attributes down into unique business facts • Workshop: ○ Using a case study, identify and detail entities and attributes.
Entity Relationships and Diagramming Conventions

• Learn how business data requirements are displayed in an entity relationship diagram.
• Analyze the business rules of data by identifying key relationships between entities.
• Learn relationship cardinalities and understand their impact on your solution functionality.
• Review common diagram notations for data related business rules.
• Learn to implement relationships between entities with foreign keys
• Workshop:
  ○ Identify and detail entity relationships.
  ○ Create a logical entity relationship diagram that accurately reflects the business domain.
  ○ Implement relationships via foreign key migration

Detailing the Data Requirements

- Learn methods for addressing multi-valued data elements
- Detail complex data business rules (such as many to many relationships). Identify additional attributes needed to describe these complex business relationships
- Workshop:
  - Resolve multi-valued data elements and many-to-many relationships in the case study
  - Refine and update the entity relationship diagram to reflect newly discovered data requirements.

Other Data Analysis Techniques

- Review other key data analysis needs
  - Data mapping to support re-use of existing data
  - Data interfaces between systems, both external and internal
  - Data migration and conversion
- Workshop:
  - Perform gap analysis between existing physical data structures and identified business data needs
  - Develop an approach for addressing the identified gaps
- Workshop:
  - Practice eliciting requirements for a data conversion effort

Validating Data Requirements

- Review quality criteria for data requirements
- Discuss ways to validate a data model
- Utilize a completeness checklist to help ensure a high-quality data model
- Plan for maintenance and re-use of data requirements
- Learn how business data transitions into a database design

Workshop - Identify and document complete data requirements for a new case study (Student's projects may be used for this workshop.)

- Beginning with a new case study or the student's own project:
  - Identify and document entities
  - Identify and document attributes
  - Identify and document data related business rules

Course Summary

- Course retrospective
- Develop a Post Class "Go Do It!" Plan with next steps for the student's current project

Appendix - Data Normalization

- What is data normalization and why is it important?
- What are the rules of normalization?

BA Certified

This class is a part of the **B2T Training Business Analyst Certification Program**. For more information on the program, please see our Certification page.