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TDWI Requirements for Data-Driven Enterprises

Discovery, Analysis, and Management

COURSE OBJECTIVES

You will learn:

- ✓ ***How to deal with unique aspects of data-driven requirements***
- ✓ ***Ways to categorize requirements to maximize their completeness***
- ✓ ***Proactive approaches to requirements discovery***
- ✓ ***How to solicit requirements for data-driven initiatives***
- ✓ ***How to identify requirements for data-driven initiatives***
- ✓ ***Why requirements management is essential and how it is performed***
- ✓ ***How to analyze requirements***

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info@tdwi.org

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Module 1

Requirements for BI and Analytics

Requirements Challenges

Requirements for Transaction Systems

Sample Payroll System Business Requirements

- Collect employee time reports
- Calculate gross pay
- Withhold state and federal taxes
- Process benefits deductions and employer contributions
- Calculate net pay
- Pay employees by check or direct deposit
- Etc.

Sample Payroll System Information Requirements

- Add employee time report
- Calculate monthly gross from salaries
- Add W-4 form
- Process current period deductions
- Process current period contributions
- Maintain CYTD balance amounts
- Calculate current period net pay
- Print payroll checks
- Etc.

Requirements Challenges

Requirements for Transaction Systems

PURPOSE

Gathering business requirements for operational systems, also known as *online transaction processing (OLTP)* or *transaction* systems, is easier than gathering requirements for BI and analytics systems.

Requirements for operational systems describe capabilities, functions, and characteristics to serve as specifications for what is to be built. For operational capabilities, requirements must be *detailed and complete*.

EXAMPLES

Examples of traditional business-level requirements for a payroll system include:

- Collect employee time reports
- Calculate gross pay
- Withhold state and federal taxes
- Process benefits deductions and employer contributions
- Calculate net pay
- Pay employees by check or direct deposit

These translate into functional requirements such as:

- Add employee time report
- Calculate monthly gross from salaries
- Add W-4 form
- Process current period deductions
- Process current period contributions
- Maintain current year-to-date balance amounts

Later in this module, the difference between business requirements and information requirements will be defined.

ROLE OF THE SUBJECT MATTER EXPERT

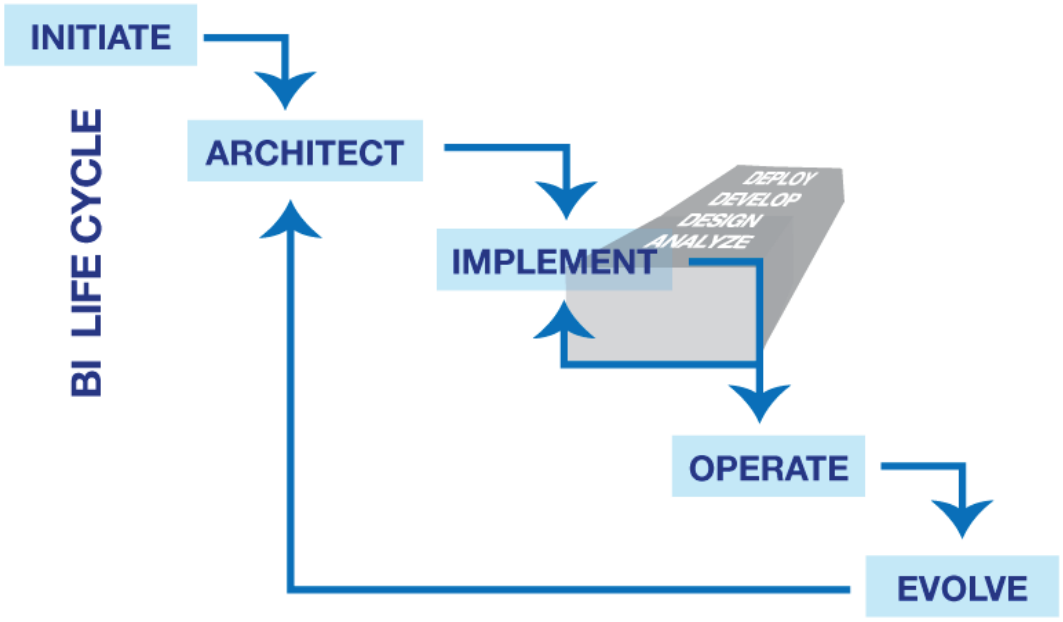
Business experts involved in specification of requirements for operational systems are deeply familiar with the business function to be supported. They understand the business activities, rules, procedures, and required system support. They are well equipped to answer detailed business questions posed by the requirements analyst.

ROLE OF THE ANALYST

The business analyst's role is to gather the needed system features in the form of requirements. These requirements address what needs to be provided as well as how things are performed from a business perspective.

The BI and Analytics Lifecycle

Stages of Development



The BI and Analytics Lifecycle

Stages of Development

INITIATION Every BI and analytics program begins with initiating activities that establish the charter, sponsorship, initial funding, and expectations.

ARCHITECTURE Definition of architecture typically follows initiation. Architecture identifies the components of solutions—data, information, technology, process, project, and organizational—and establishes standards and guidelines for implementation and operation.

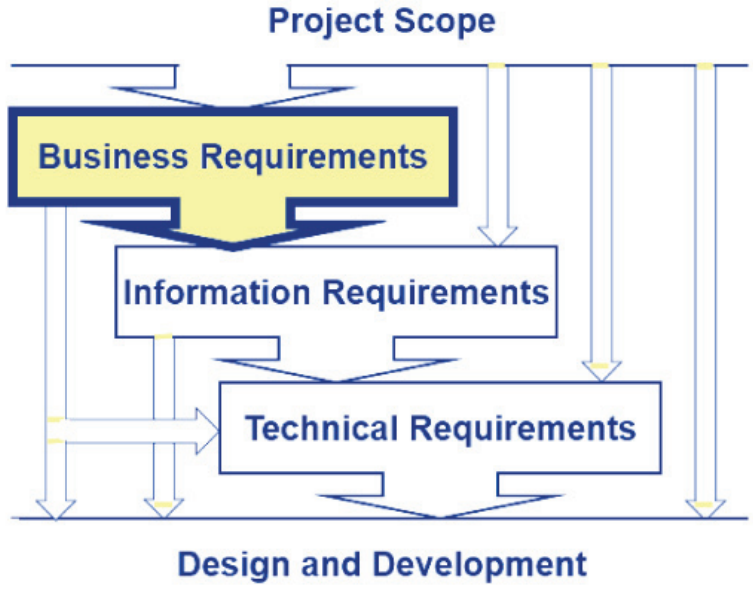
IMPLEMENTATION Implementation projects are the development activities of BI/DW programs. Typically executed iteratively as a series of small, short duration projects, this step delivers the databases, data warehouses, data transformation processes, data and information services, analytics applications, and technology deployments necessary to make BI a reality.

OPERATION Operation encompasses administration of and delivery of information services through BI/DW solutions. Day-to-day operation of the data warehouse and delivery of information and analytics services are abundant with opportunity to recognize and even anticipate change.

EVOLUTION Throughout the operational life of the BI program it is necessary to continuously align with changing business requirements. Recognizing need for change drives evolution, closing the lifecycle loop by returning to the architecture phase.

Kinds of Requirements

Business Requirements



BUSINESS REQUIREMENTS

- Business Value
- BI and Analytics Capabilities

Kinds of Requirements

Business Requirements

FROM BUSINESS TO TECHNICAL

Specifying requirements at three levels—business, information, and technical—provides a logical progression from what the business needs to what a system does. Every requirements gathering process should begin with business requirements, then define information requirements, and finally technical requirements.

Information requirements are driven from the businesses requirements, and technical requirements are driven from both business and information requirements.

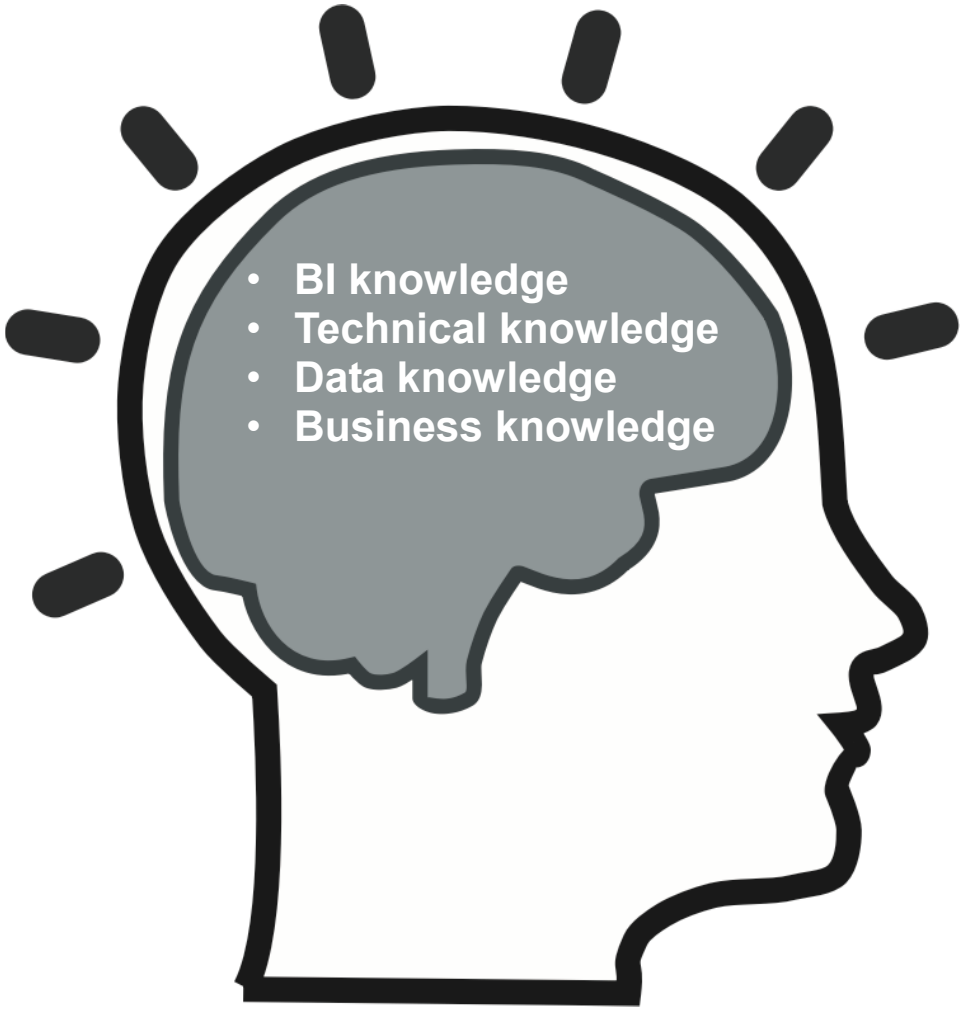
BUSINESS REQUIREMENTS

Business requirements itemize the needs and goals that the business and stakeholders have for a system. At the highest level, they address business capabilities and business value. Capabilities are expressed using verbs that are broad in scope, such as monitoring, planning, forecasting, etc. Capabilities fall into categories that will be described in Module 2.

Business requirements also specify the value of capabilities to stakeholders, business functions, or the organization as a whole. Specification of business value emphasizes the outcomes of the effort in business terms, supporting alignment of program objectives with business needs. Business value will be discussed further in Module 2.

Roles and Skills

Knowledge



Roles and Skills

Knowledge

COMPLEXITY

Requirements discovery is done by people. Thus getting the right requirements depends on getting the right people with the right knowledge and skills. It also depends on managing the processes such that those people can be productive—matching requirements techniques to the nature and needs of participants and using people in the right roles.

BI AND ANALYTICS KNOWLEDGE

It is understood that the analysts discovering requirements for an analytics initiative must have a solid understanding of business intelligence and analytics capabilities. This knowledge provides the foundation for a requirements discovery process rather than a requirements gathering process.

TECHNICAL KNOWLEDGE

Technical knowledge is also required. While the analysts pursuing the requirements need not be experts in every technology, they must at least be aware of the technology that exists within the enterprise—including its limitations—and technology that could potentially be acquired to satisfy business, information, and service level requirements.

DATA KNOWLEDGE

The analysts obtaining the requirements should also be aware of the data available both within and outside the enterprise that could be used to satisfy the needs. Included in this knowledge is a basic understanding of what it would take to migrate the data from its current state into one that can satisfy the requirements.

BUSINESS KNOWLEDGE

Business knowledge is important but often ignored. Businesspeople may not be aware of what can be done with business intelligence. The analyst must be able to bridge the gap between the business knowledge and the awareness of BI capabilities to arrive at the best set of requirements for delivering the needed outcomes. This knowledge also helps the analyst establish credibility when dealing with business people at various levels of the organization.

In preparation for any discussion with business representatives, the requirements analyst should be familiar with the industry and its direction, the enterprise and its direction, and the business area and its direction.

Program Requirements

Business Domains

Example: An Electric Utility's Domain Model

Program Requirements

Business Domains

BUSINESS DOMAINS

Program requirements describe high-level capabilities for specific business domains.

A *business domain* is a sphere of business activity or function—a broad classification of resources and activities that is planned, managed, executed, and monitored by the business. Modeling business domains extends the understanding of business context that is established by modeling drivers, goals, and strategies. It is particularly useful as a starting place to model subjects and metrics that align well with the business. It is also valuable throughout the modeling process to prevent losing sight of the "big picture."

Business domains can be divided into two major areas—those that embody the organization's line of business and those that deal with managing an organization's resources.

LINE-OF-BUSINESS DOMAINS

Line-of-business domains are those that are needed to fulfill the organization's primary mission. Typical examples include:

- Sales
- Marketing
- Customer service
- Research and development
- Manufacturing

RESOURCE MANAGEMENT DOMAINS

Resource management domains are those that are needed to manage the acquisition, maintenance, distribution, and disposal of enterprise resources. Typical examples include:

- Human resource management
- Financial management
- Inventory management
- Facilities management
- Information management

DEFINITIONS

One critical characteristic in establishing the domains is to define them so that they are mutually exclusive. This characteristic is necessary to avoid overlaps in ultimate systems development and to enable using them to establish relative priorities.

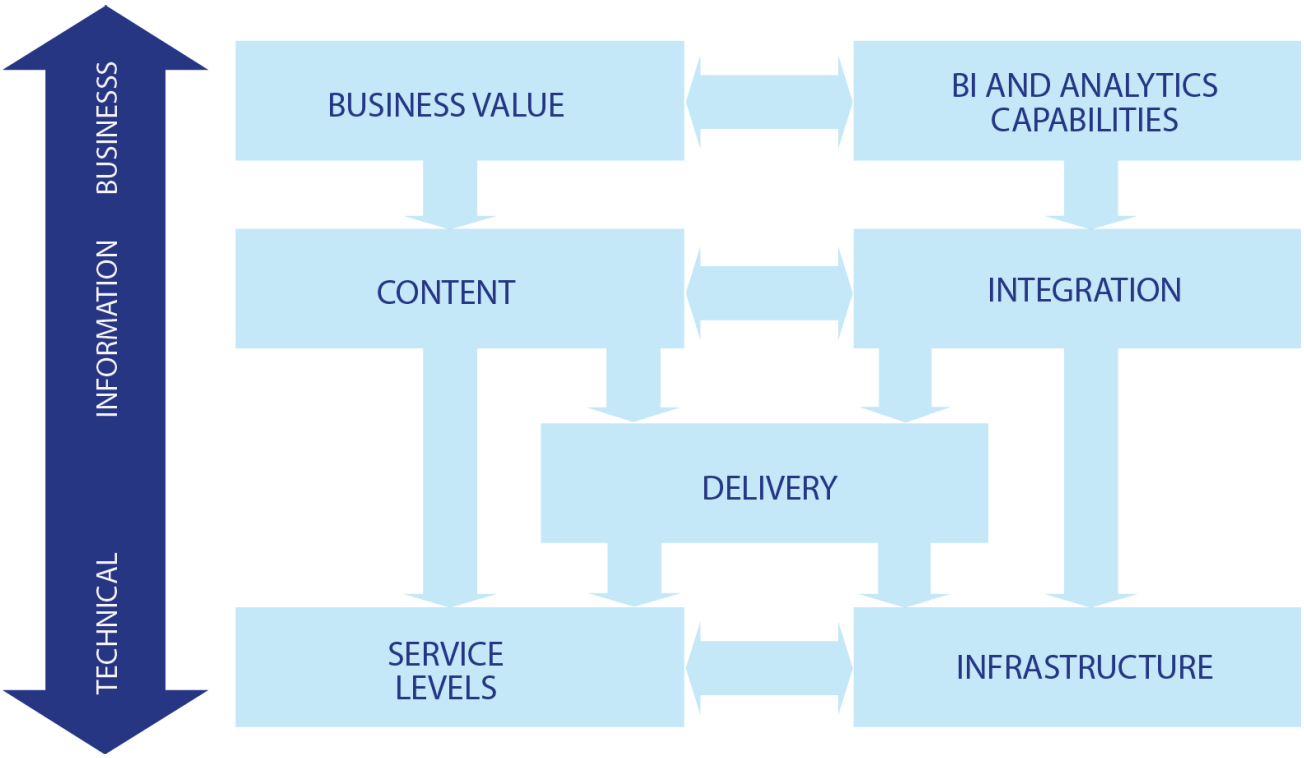
Transforming Data With Intelligence™

Module 2

Requirements Classifications

The Scope of BI and Analytics Requirements

An Overview



The Scope of BI and Analytics Requirements

An Overview

REQUIREMENTS FOR BI AND ANALYTICS

Business requirements, information requirements, and technical requirements are generic categories. They can be applied to information and software products of many kinds.

When working to specify requirements for BI and analytics, it is practical to further classify requirements into a structure that helps to ensure completeness of both the requirements discovery process and the resultant set of requirements.

This module presents one such structure that categorizes requirements into seven major groups under the three broad categories.

Business requirements address what the business needs to accomplish:

1. Business value
2. BI and analytics capabilities

Information requirements address the content to be provided to meet the business requirements:

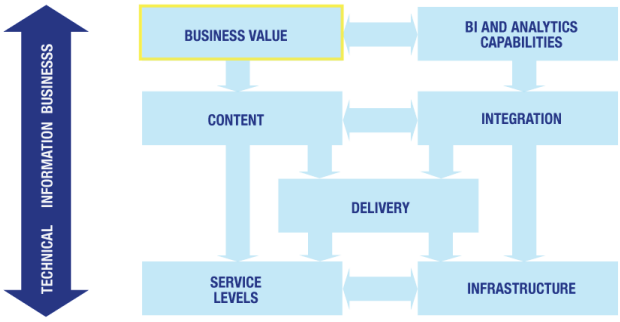
3. Content
4. Integration
5. Delivery

Technical requirements describe specific qualities that the system must have:

6. Service levels
7. Infrastructure

Business Requirements Classifications

Business Value Requirements



TYPES

- Cost and Value
- ROI / ROA
- Strategic Value
- Tactical Value
- Operational Value

EXAMPLES

- Improving customer service
- Improving safety
- Mitigating risk
- Optimizing product delivery

REQUIREMENTS DISCOVERY

- Focus on outcomes
- Recognize timing implications
- Recognize expectations

Business Requirements Classifications

Business Value Requirements

DEFINITION

Business value requirements describe the contributions business intelligence and analytics are expected to make.

TYPES

Business value requirements include:

- Improving customer service
- Improving safety
- Mitigating risk
- Optimizing product delivery

These can be expressed in terms of:

- Cost and value
- ROI and ROA
- Strategic value
- Tactical value
- Operational value

REQUIREMENTS DISCOVERY

The tendency during requirements gathering is to focus on outputs. For requirements discovery of the business value, it is important to also focus on the outcomes. Unlike traditional business value delivery, which often begins immediately following implementation, business value for analytics initiatives has a built-in delay.

Once the capabilities are implemented, there may be a delay until sufficient data is collected. Once the data is collected, it may take time before it is analyzed and incorporated into decisions and actions. Finally, even after the actions are taken, there may be a delay before results are seen. These characteristics should be explored to ensure that expectations reflect reality in terms of when the benefits will be realized.

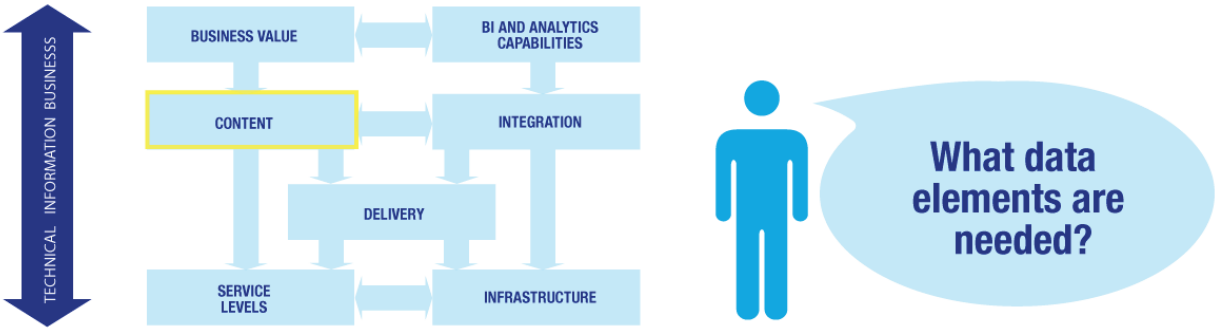
ANCILLARY REQUIREMENTS

Business value requirements often provide information related to other requirement classifications. They may identify:

- *BI and analytics capabilities*: capabilities needed to satisfy the expectations
- *Content*: information needed
- *Integration*: operations needed to bring the data together
- *Delivery*: presentation requirements
- *Service levels*: performance and timeliness needs
- *Infrastructure*: support and tools that may be needed

Information Requirements Classifications

Content Requirements



TYPES

- Raw data
- Derived data
- Combinations of data
- Hierarchical structures
- Quality

REQUIREMENTS DISCOVERY

- Get business questions
- Know what is available
- Explore data needed about qualifiers

Information Requirements Classifications

Content Requirements

DEFINITION

Information content requirements specify the information needed to satisfy the business requirements. These include the data elements, definitions, hierarchical structures, and quality that must be provided to answer business questions and support analyses for providing the anticipated business value.

TYPES

Information content requirement types include:

- Raw data elements needed
- Derived data elements needed
- Combinations of data elements needed
- Hierarchical structures
- Quality

REQUIREMENTS DISCOVERY

The easiest way to get to the information content requirements is to get the business representatives to provide questions they are trying to answer. These questions often yield *facts* (desired information) and *qualifiers* (business constraints for viewing the data).

For example, the question "How many printers did we sell each month last year in each of our regions?" yields the fact "number of printers" and qualifiers of "month" and "region." (It also provides information on the historical requirement—"previous year.")

The business questions, however, often don't provide information on the data elements needed about the qualifiers. To get to that information, multiple approaches are possible, including asking follow-up questions or using what's available.

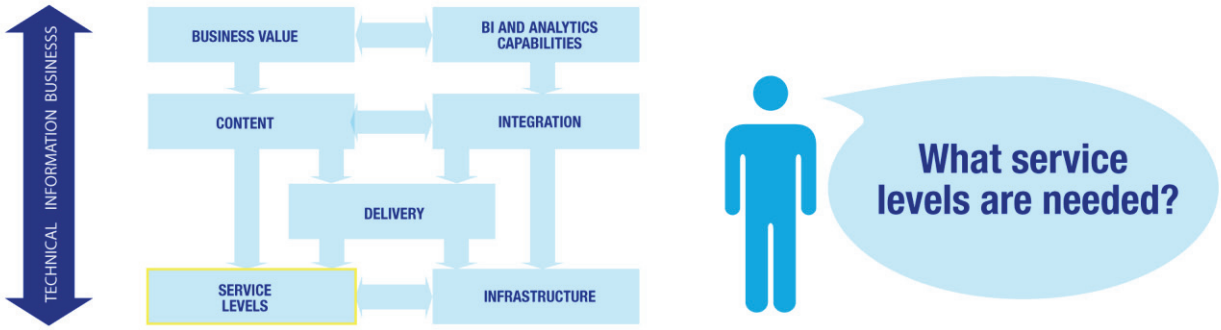
ANCILLARY REQUIREMENTS

Information requirements often provide information related to other requirement classifications. They may identify:

- *Business value*: limited additional requirements
- *BI and analytics capabilities*: limited additional requirements
- *Integration*: potential sources and operations needed to bring the data together
- *Delivery*: presentation requirements
- *Service levels*: minimal additional requirements
- *Infrastructure*: technology requirements for data profiling and unstructured data handling

Technical Requirements Classifications

Service Level Requirements



TYPES

- Performance
- Timeliness
- Capacity
- Security
- Privacy
- Availability
- Recoverability
- Mobility

REQUIREMENTS DISCOVERY

- Explore each service level type

Technical Requirements Classifications

Service Level Requirements

DEFINITION

Service level requirements specify the user expectations for the visible behavioral qualities of a system.

TYPES

Service level requirement types include:

- Performance
- Timeliness
- Capacity
- Security
- Privacy
- Availability
- Recoverability
- Mobility

REQUIREMENTS DISCOVERY

The service level requirements affect the user's perception of the product. Each of the service level types should be explored individually with an understanding of the practical limitations of the existing infrastructure.

ANCILLARY REQUIREMENTS

Service level requirements often provide information related to other requirement classifications. They may identify:

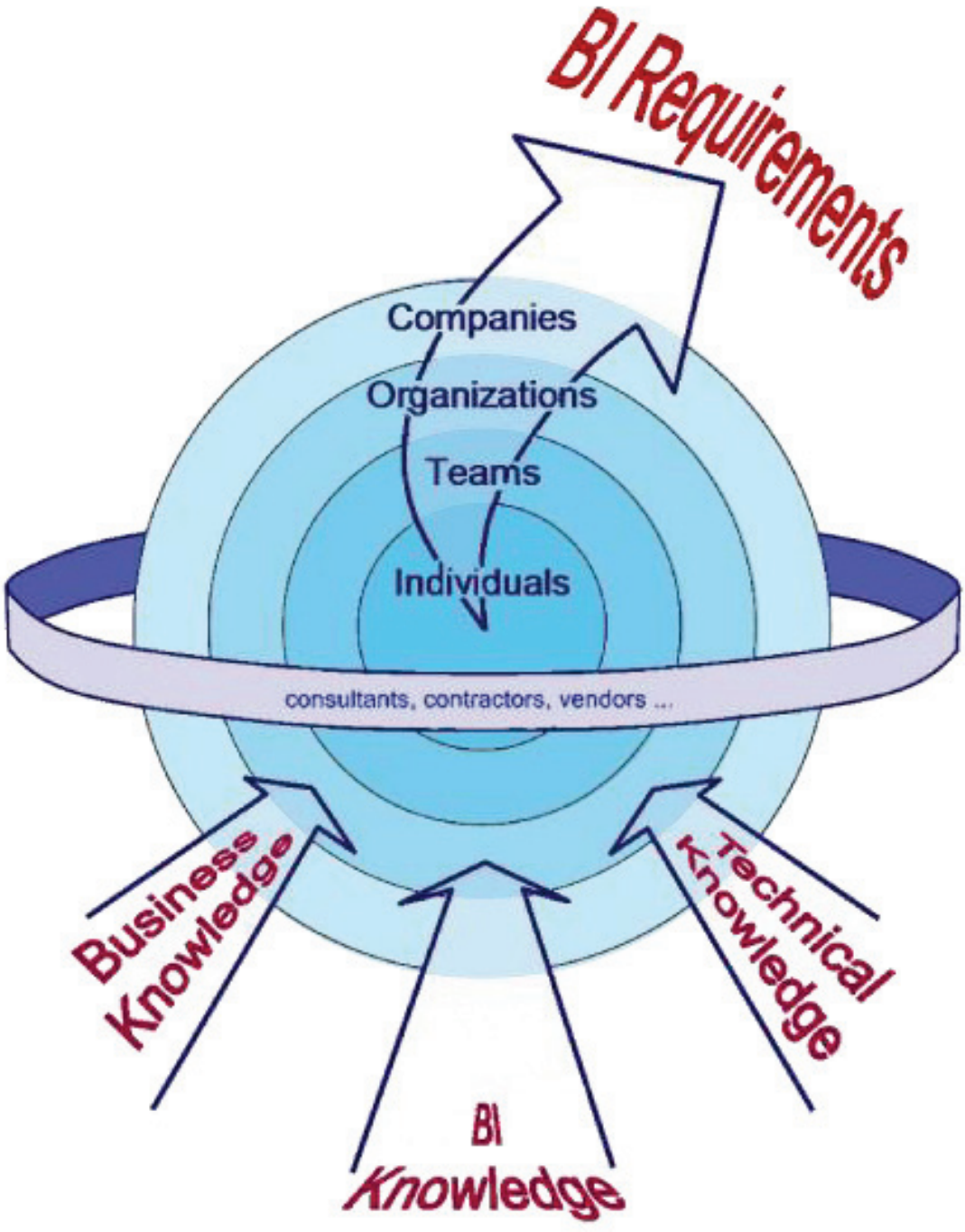
- *Business value*: limited additional requirements
- *BI and analytics capabilities*: limited additional requirements
- *Content*: limited additional requirements
- *Integration*: limited additional requirements
- *Delivery*: limited additional requirements
- *Infrastructure*: infrastructure enhancement requirements to meet the desired service levels

Module 3

Requirements Discovery Techniques

Requirements as a Human Process

People and Requirements Discovery



Requirements as a Human Process

People and Requirements Discovery

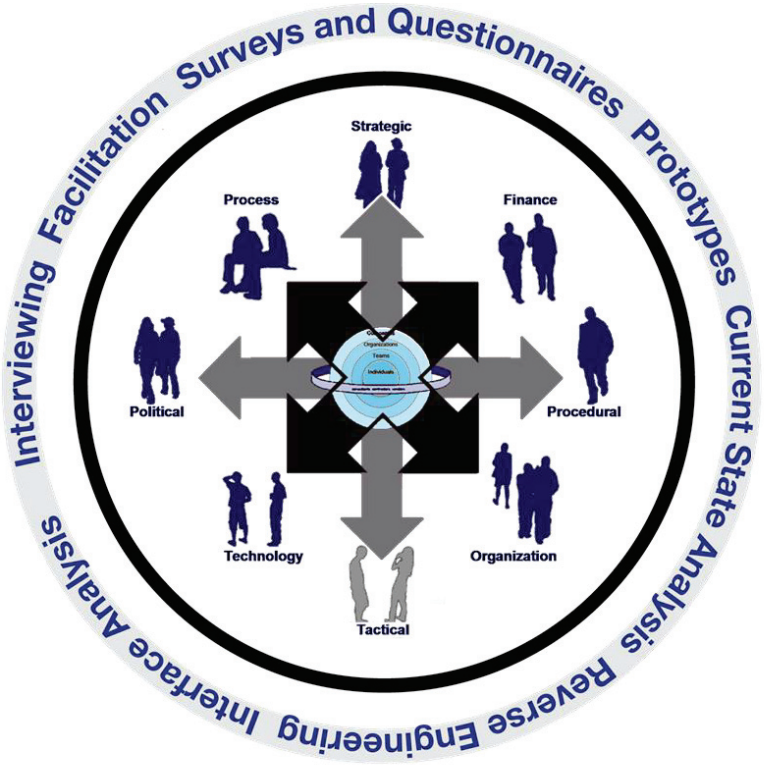
INDIVIDUALS AND GROUPS

Requirements definition is something that is done by people. Thus, getting the right requirements depends on getting the right people with the right knowledge and skills. It also depends on managing the processes such that those people can be productive—matching requirements techniques to the nature and needs of participants and using people in the right roles.

The challenges of requirements discovery are many—complexity, uncertainty, need for innovation, need for speed, existing system influence, number of stakeholders, stakeholder participation, conflict, politics, geographic and logistic challenges, and more. Meeting the challenges begins by recognizing the people-dependencies and paying attention to human factors.

Techniques

An Overview



Techniques

An Overview

HOW TO FIND REQUIREMENTS

The facing page lists common techniques that can be used to elicit or discover requirements. A typical requirements discovery effort uses more than one of these techniques but it is unlikely that one project will use all of them.

Each technique is described in greater depth in the following pages. Discussion of why, how, and when to use each technique helps to match techniques to the characteristics of a project.

Module 4

Requirements Discovery

Requirements Discovery Context

Setting the Scope

Requirements Discovery Context

Setting the Scope

PURPOSE AND BOUNDARIES

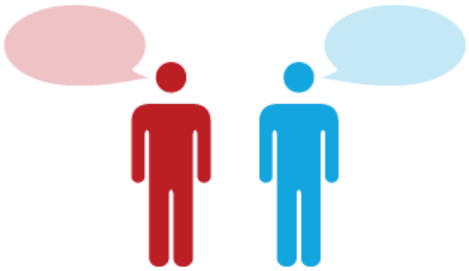
Determining scope is an essential first step for BI requirements discovery. Without well-defined purpose and clear boundaries, requirements become especially elusive. A variation of the "Business in BI" framework described earlier in the course is useful to define the scope.

In this variation we'll work with two dimensions—management and motivation. For any combination of management function and motivation, identify the business capabilities that are needed.

The facing page illustrates a list of business capabilities that readily extends to more granular BI requirements, as you'll see later in this module. For scoping purposes, don't be concerned with how to inform, inquire, analyze, track, and so on. Simply recognize the requirement for business capability to do so.

Key Questions

Surveying the Landscape



- What are the expected goals of your area?
- What are you working to accomplish?
- How do you measure results?
- What are the critical success factors of your job?
- How do you identify opportunities and problems?
- What business dimensions are central to your analysis and decision making? (products, customers, etc.)
- What are your current sources of information?

Key Questions

Surveying the Landscape

BIG PICTURE QUESTIONS

The facing page illustrates a list of "big picture" questions that help both interviewer and interviewee get in the right frame of mind to explore and describe real BI requirements. Breaking away from "just another report" thinking means that you need to step back far enough to view information in context of how it is used. These questions set the stage by using concepts such as:

- Goals
- Measurement
- Success factors
- Opportunities
- Problems
- Analysis
- Decision making
- Vision
- Future

Business Requirements Products

Business Value Products

Business Requirements Products

Business Value Products

BUSINESS OUTCOMES

The ultimate business value product is the set of benefits to be derived from the outcomes. The value may be expressed in tangible form (e.g., savings, revenue, or profit to be realized) or intangible form (e.g., customer service improvement).

VALUE TIMING

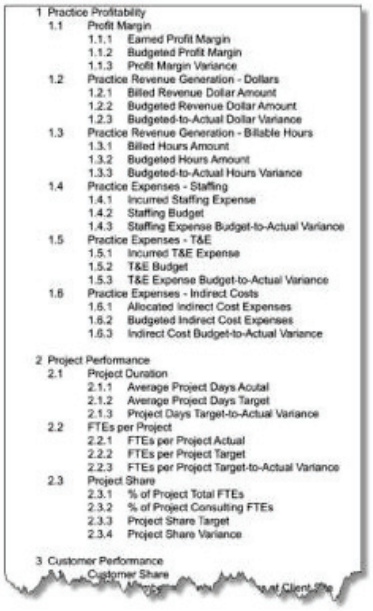
The business value often does not come immediately from the analytics requirements. The steps needed to realize the value—as well as the time they will take—need to be explicitly stated.

HUMAN INTERVENTION

With the exception of automated prescriptive analytics capabilities, people need to use the data products to enable the business outcomes to be realized.

Information Requirements Products

Content Products



Data: indicators, metrics, measures, drill downs

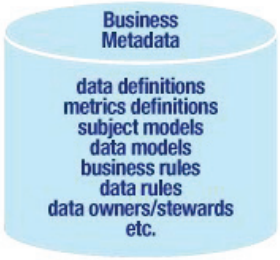
Conformity and Consistency: standard dimensions, standard measures

Visual Elements: charts, graphs, etc.

Timing: currency, frequency, history

Processing: acquisition, calculation, derivation, aggregation, etc.

Verification: balancing, controls, audits



Information Requirements Products

Content Products

DATA PROFILING RESULTS

The data profiling results provide information on the content of the data sources.

BUSINESS QUESTIONS

One source of data content requirements is the set of business questions that need to be answered. These questions become the foundation for the fact/qualifier matrix (described in *Module 5: Requirements Analysis and Management*) and subsequent data models and data structures.

KEY PERFORMANCE INDICATORS

KPIs are at the heart of performance scorecards and dashboards. The indicators themselves, as well as the data that contributes to them, are data content products.

METADATA

Business metadata documenting the meaning of the data being delivered and its lineage.

PRODUCT BREAKDOWN STRUCTURE

Defining a product breakdown structure (PBS) is effective in creating a framework for specification of content requirements. It is not sufficiently detailed to specify actual requirements. It does, however, identify the areas in which information requirements exist.

As you drill into the PBS seeking information requirements, a checklist is a useful tool to ask the right questions and ensure that you have considered all of the design elements for each product. A basic information requirements checklist for typical BI and analytics products includes:

- *Data*: indicators, metrics, measures, drill downs
- *Conformity and Consistency*: standard dimensions, standard measures
- *Visual Elements*: charts, graphs, etc.
- *Timing*: currency, frequency, history
- *Processing*: acquisition, calculation, derivation, aggregation, etc.
- *Verification*: balancing, controls, audits

Technical Requirements Products

Service Level Products

Technical Requirements Products

Service Level Products

SERVICE LEVEL OBJECTIVES

The technical requirements establish targets for each of the service level components of interest.

SERVICE LEVEL AGREEMENT

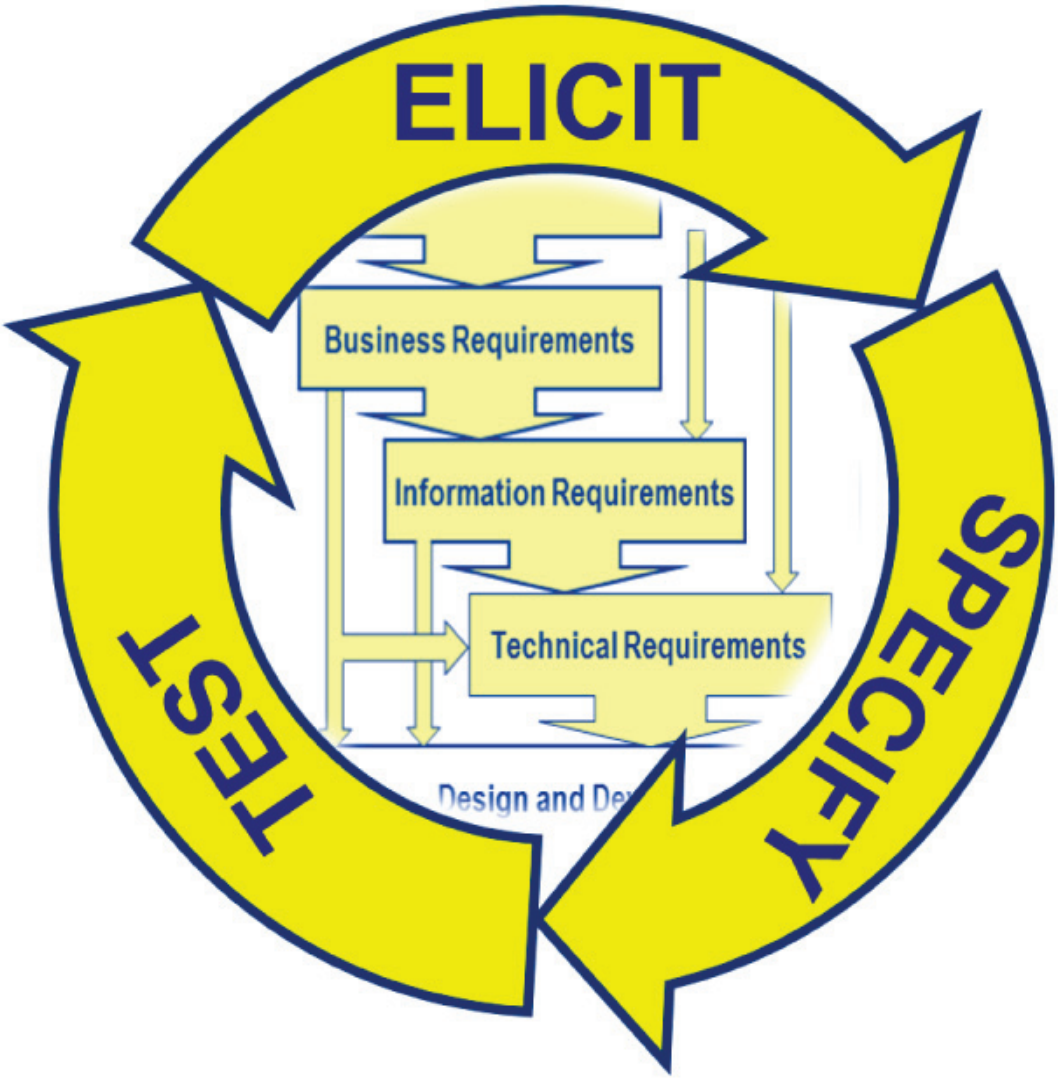
Service level agreements are sometimes used to establish both the demand and the performance levels to be provided.

Module 5

Requirements Analysis and Management

Requirements as a Systems Process

Systems and Requirements Discovery



Requirements as a Systems Process

Systems and Requirements Discovery

THREE STAGES

Discovering requirements is more than a task. It is a process commonly described as elicit, specify, and test (EST). Alternative terms for the three-step process include elicit-model-test (EMT) and elicit-define-test (EDT). Regardless of the terminology that you choose, the three steps are important to recognize and to apply.

ELICIT REQUIREMENTS

Requirements elicitation is the activity of obtaining the requirements for a developing system from the stakeholders. Steve McConnell says "the most difficult part of requirements discovery is not documenting what the users 'want'; it is the effort of helping users figure out what they 'need' that can be successfully provided …" (*Software Project Survival Guide,* McConnell, Microsoft Press, 1998). McConnell's statement captures the essence of eliciting requirements—finding what is *needed*.

SPECIFY REQUIREMENTS

Requirements specification (or documentation, or modeling) is the act of recording a description of each requirement. Each requirement describes a necessary attribute of a system—a capability or characteristic that the system must have to provide utility and value to its users. A well-specified requirement includes:

- *What*: A descriptive statement of the requirement that describes a system capability, characteristic, function, feature, or quality
- *Why*: The rationale for the requirement describing the purpose or value to be achieved
- *Who*: The source of the requirement and the stakeholders who will benefit

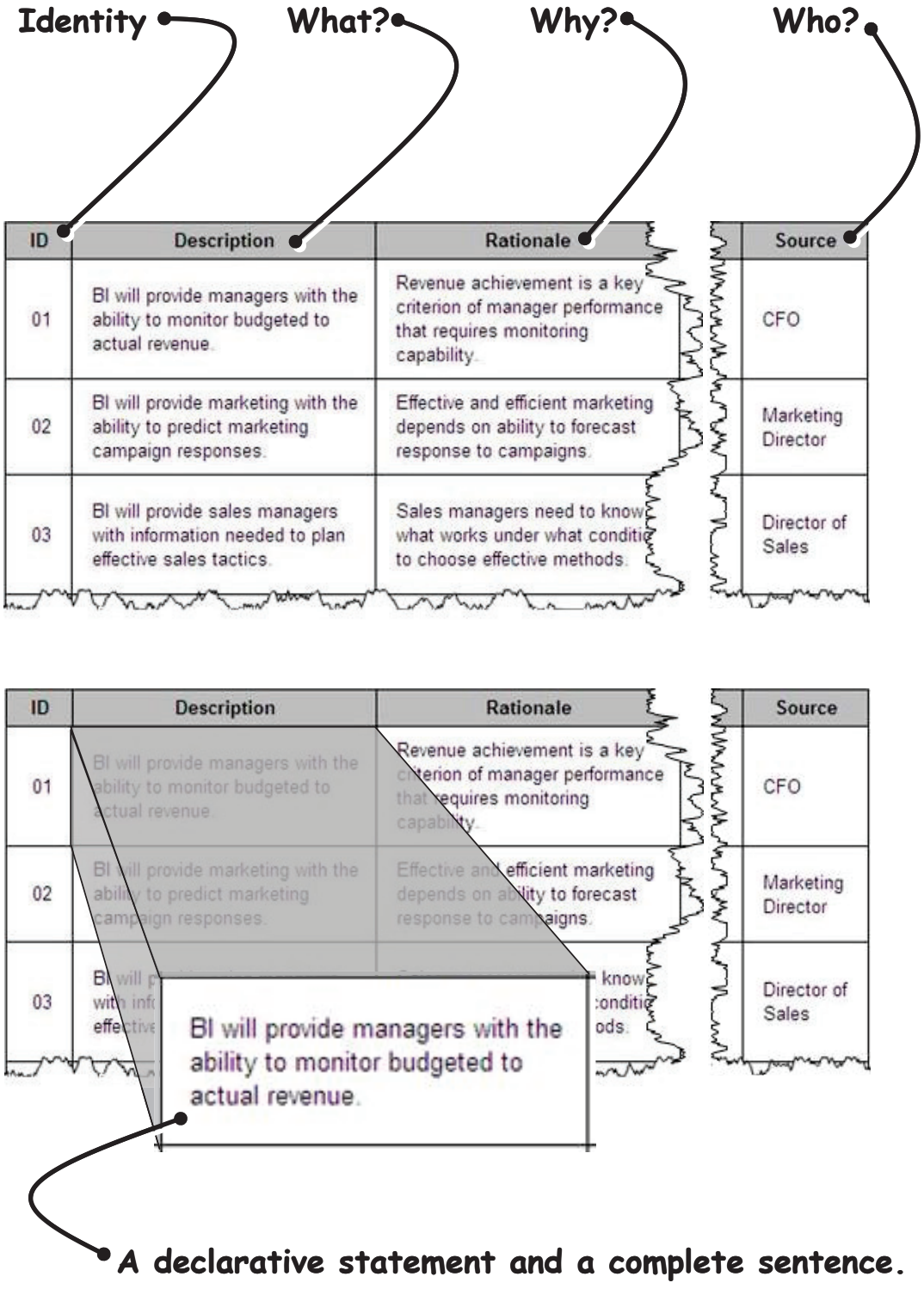
Whether recorded as text (for "specify" and "document") or as diagrams (for "model"), describing requirements is an important and separate step from eliciting requirements.

TEST REQUIREMENTS

Requirements testing is the third and final step of the process. Each requirement must be evaluated to ensure that it is clear, unambiguous, complete, consistent, necessary, and feasible.

Collecting Requirements

Capturing Requirements



Collecting Requirements

Capturing Requirements

SPECIFY, MODEL, OR DOCUMENT?

There are many ways to capture and record requirements. It is that variety that causes the diffusion of language about requirements gathering—EST, EMT, or EDT. Note that the differences are entirely about the way in which requirements are recorded: *specify*, *model*, or *document*. Debate about which is the right way is pointless. There is no single best way to record requirements. The correct answer is to use a method and format that works for you and your requirements team.

SOME GUIDELINES

Regardless of the form in which you choose to record requirements, some guidelines will help to achieve well-written requirements statements. Some of the guidelines found among widely accepted best practices for requirements discovery:

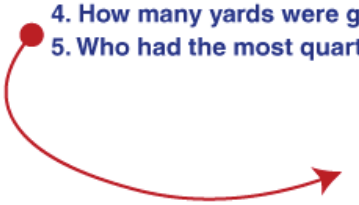
- Write in complete sentences, not fragments.
- Use simple sentences. Avoid compound and complex sentences that are strung together with conjunctions.
- Write declarative statements using words such as “is” and “will.” For example:
  - *The budget variance report **will** drill down to detail transactions.*
  - *Budget to actual revenue data **is** available as summary with drill-down to detail.*
- Write in business language, avoiding technical jargon.
- Confirm that each statement is concise and free of excess or unnecessary words.
- Confirm that each statement is clear and free of language that is ambiguous or subject to interpretation.
- Reinforce text requirements statements with examples, diagrams, sample data, and so on, whenever practical.

Analyzing Requirements

Fact/Qualifier Matrix

BUSINESS QUESTIONS (all for the last three seasons)

1. How many points did our football team score per game by player and position?
2. What is the pass completion rate for each of our quarterbacks for the season?
3. What is the number of yards each of our players gained per game and how were they gained?
4. How many yards were gained offensively each game, and how did that vary for home vs. away games?
5. Who had the most quarterback sacks in each game?



Qualifiers ↓ / Facts →	Points Scored	Pass Completion Rate	Yards Gained	Number of Sacks
Player	1	2	3	5
Position	1	2		
Season		2		
Play Type			3	
Game	1		3,4	5
Venue			4	

Analyzing Requirements

Fact/Qualifier Matrix

REQUIREMENTS ANALYSIS

Elicited requirements must typically be refined and expanded until they specify enough detail to serve as the basis for solution development projects. Analysis techniques vary according to the type of requirement and the form of the intended solution product. The next several pages provide examples of requirements analysis techniques.

FACT/QUALIFIER MATRIX

Solutions that call for the development of data marts often begin with the documentation of business questions. These are then dissected to identify the *facts* and *qualifiers*, with the facts representing the information the business stakeholders have requested and the qualifiers being the business constraints (dimensions) by which they want to view them.

A fact/qualifier matrix is created to relate the facts and qualifiers so that the needed content, integration, and delivery requirements can be identified.

FACT ANALYSIS

Due to the number of stakeholders providing requirements, opportunities exist to merge some of them. Some examples:

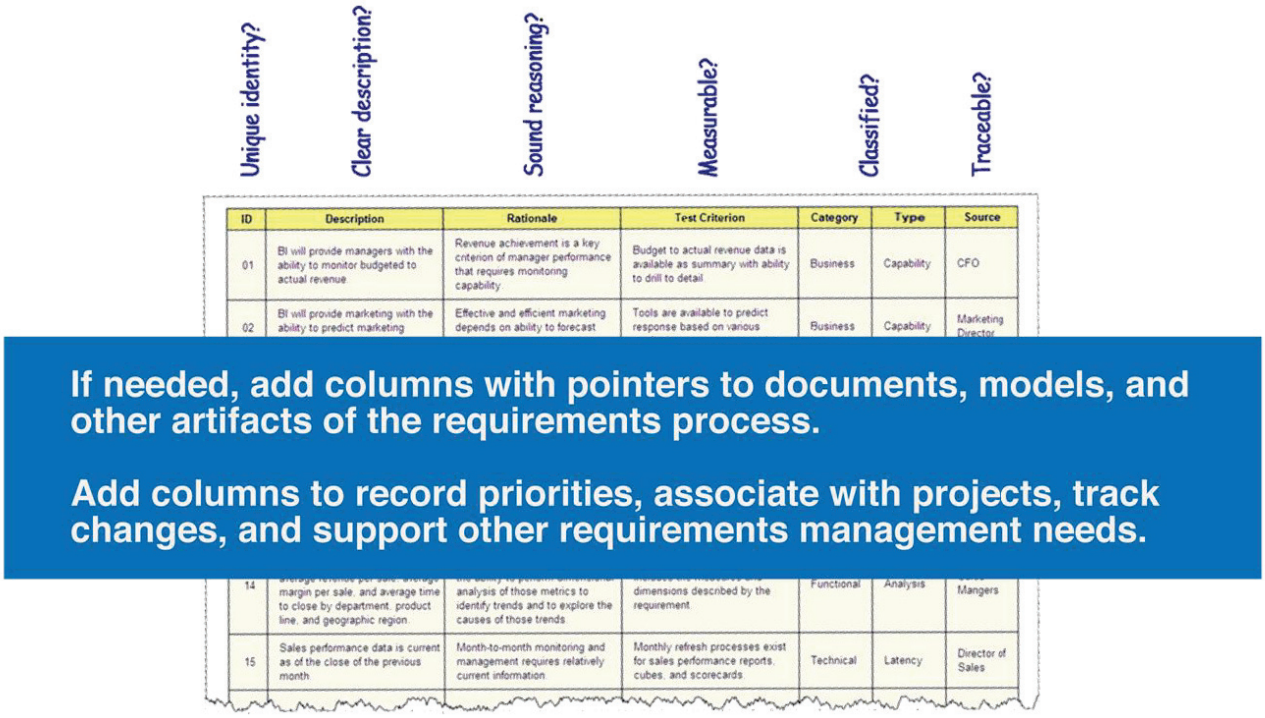
- There are multiple regional managers and each requests a sales summary by the region he or she is managing.
- There are multiple product managers and each requests the number of customers using the product.

The tendency would be to simply add “region” and “product” respectively as qualifiers. Before doing this, however, business rules need to be analyzed to understand the potential impact of overlaps. For example, if the same customer is using multiple products, how is the customer count to be determined?

There are other similar situations. The common thread is that before merging requirements, the governing business rules need to be understood to ensure that the resulting data content conforms to the rules and definitions.

Documenting and Modeling Requirements

Specifications and Models



Documenting and Modeling Requirements

Specifications and Models

EXTENDING THE DEFINITIONS

Adapt the data structure presented earlier in this module for defining requirements to meet your specific needs. Simple text statements are frequently not enough. It is difficult to achieve precision in an imprecise language. Adding columns to describe specific attributes of requirements helps to achieve precision.

PRACTICAL CONSIDERATIONS

Avoid the temptation to add columns to your requirements template simply because you can think of them. Each column that you include should have a clear purpose—to identify, describe, measure, classify, link to external documents, for example.

Ideally you'll have only a very few optional columns, with most data mandatory for all requirements. A high proportion of optional data columns leads to a high level of uncertainty about when a requirement is fully defined.

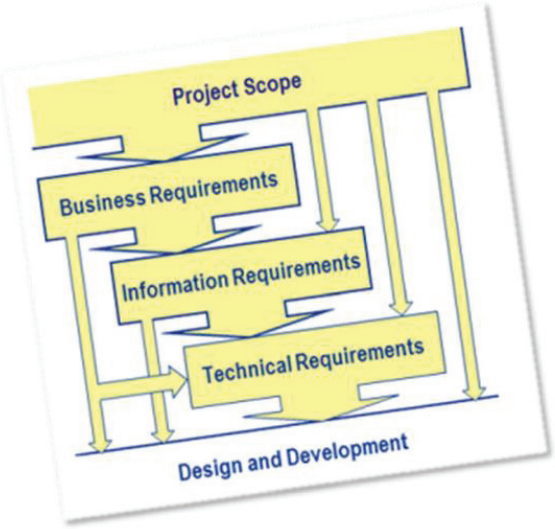
Remember also to fit the template to the nature of the project. A four-month project using spiral methodology defines requirements more thoroughly than a four-week project using agile methodology. The four-month project will likely have a more robust requirements template with more requirements data to be collected.

MODELS

As previously mentioned, some of your requirements may be represented as models. Be sure these follow standards and conventions so that they are readable and usable by developers who will use them to design and implement solutions.

Testing Requirements

Walk-Through



REVIEW or WALK-THROUGH

CLEAR?
COMPLETE?
CORRECT?
CONSISTENT?

Testing Requirements

Walk-Through

RELATIONSHIPS OF TESTING AND REQUIREMENTS

Requirements and testing are related in two distinct ways:

- Requirements can and should be tested—a topic discussed briefly below and in greater depth later in the course.
- Requirements provide a foundation for some kinds of systems and software testing—a topic discussed briefly in the remainder of this module.

WHY TEST REQUIREMENTS?

If requirements are the initial step before design, then it follows that good requirements are essential to good design (and that poor requirements result in poor design). Testing to confirm that requirements are clear, complete, correct, and consistent avoids errors of designing solutions that don't match with real needs.

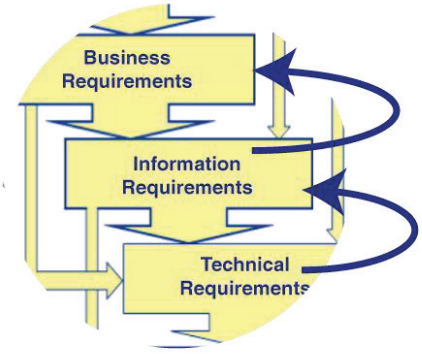
Remember the earlier statement that thoughtful action saves time, money, waste, rework, effort, frustration, and embarrassment. Testing is an important part of that thoughtful action.

Managing Requirements

Managing Scope

Expanding Scope

Compressing Scope



Creeping Scope

Managing Requirements

Managing Scope

EXPANSION

It is common when gathering requirements to find that discussion of one business need leads quite naturally to related topics and needs. Sometimes the adjacent topics fall within the scope defined for the effort and sometimes they do not.

Be careful not to cry "OUT OF SCOPE!" each time a new subject arises. That is the fast track to unhappy and disengaged stakeholders. Besides, it is often difficult to know whether a new topic is in scope until it has been explored.

COMPRESSION

Sometimes it is necessary to compress scope—to classify as out of scope some less critical items to keep within schedule and budget constraints. This approach is common with rapid and agile development methods. In these instances, don't lose the requirements. Simply tag them as out of scope for the current project. They are likely to resurface within the scope of a future project.

SCOPE CREEP AND CONTAINMENT

Expanding scope can easily become creeping scope—gradual and unintended expansion of project size and complexity. Compressed scope risks loss and rework unless out-of-scope requirements continue to be tracked. Both of these circumstances can be managed by adding one or more columns to your requirements management document. Depending on your particular needs, consider columns for:

- In-Scope-Indicator: where the values recorded are *yes, no,* or *undecided.*
- In-Scope-Project: where the values recorded are project names or identifiers to track one set of requirements across a series of projects.
- In-Scope-Date: where the values recorded are dates by which a project needs to satisfy the requirement.

