

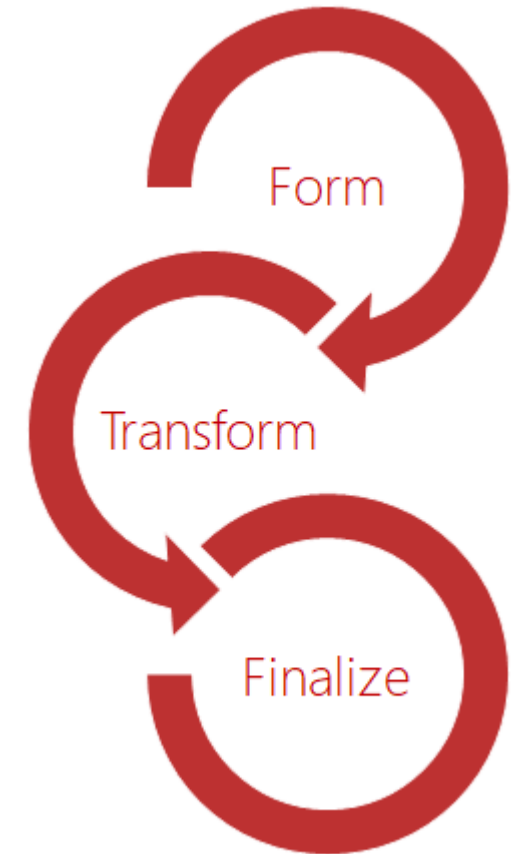
Fundamentals of Business Analysis

Overview of Requirements

This section is all about *forming* requirements.

Transforming will be next.

Finalizing will be after that.



Requirement (ruh-kwai-er-mint)

"A requirement is a **usable representation of a need**. Requirements focus on understanding what kind of value could be delivered if a requirement is fulfilled. The nature of the representation may be a document (or set of documents), but can vary widely depending on the circumstances."

Guide to the Business Analysis Body of Knowledge (BABOK), Version 3

“The system will enable an Administrator to run a report of all beverages sold over a given timeframe.”

Description	"The system will enable an Administrator to run a report of all beverages sold over a given timeframe."
Source	Solomon Alffson, Product Manager
Rationale	Needs beverage report in order to report metrics to senior product management.

Description

"The system will enable an Administrator to run a report of all beverages sold over a given timeframe."

Okay, but...

What should the report look like?

What columns should it have?

Do we need a list of every sales transaction?

Do we just need a list with summary details?

What does "over a given timeframe" mean?

?

?

?

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Attributes of Good Requirements

Concepts

1 Good requirements have certain attributes.

2 Bad requirements cause problems.

Attribute #1: Clear

If the requirement isn't clear, the interpretation is up to the reader.

Either they will not know what it means... (bad)

Or they will **think** they know what it means and be wrong. (worse)

Attribute #1: **Clear**

Combat vague requirements by...

- 1 Having a peer review your work
- 2 Conducting a walk-through

Do both on **every** project!

Attribute #2: Complete

The requirements contains all the information necessary for others to do their work.

Solution?

Same as before: peer review + walk-through

Attribute #3: **Applicable**

The requirement is applicable to the solution you are recommending.
The requirement is applicable to the organization's problem/goal.

If a requirement is not *applicable*, it should be "out of scope" of the project.

Solution? Peer review + walk-through

Attribute #4: Prioritized

The requirement has been given a priority by the sponsor.

Why? So the implementation and testing team can plan to get the important stuff done first.

Attribute #5: Implementable

The requirement can be tangibly realized in code or process.
The requirement is feasible.

Tip: Have the *development* team review your requirements.

Attribute #6: Testable

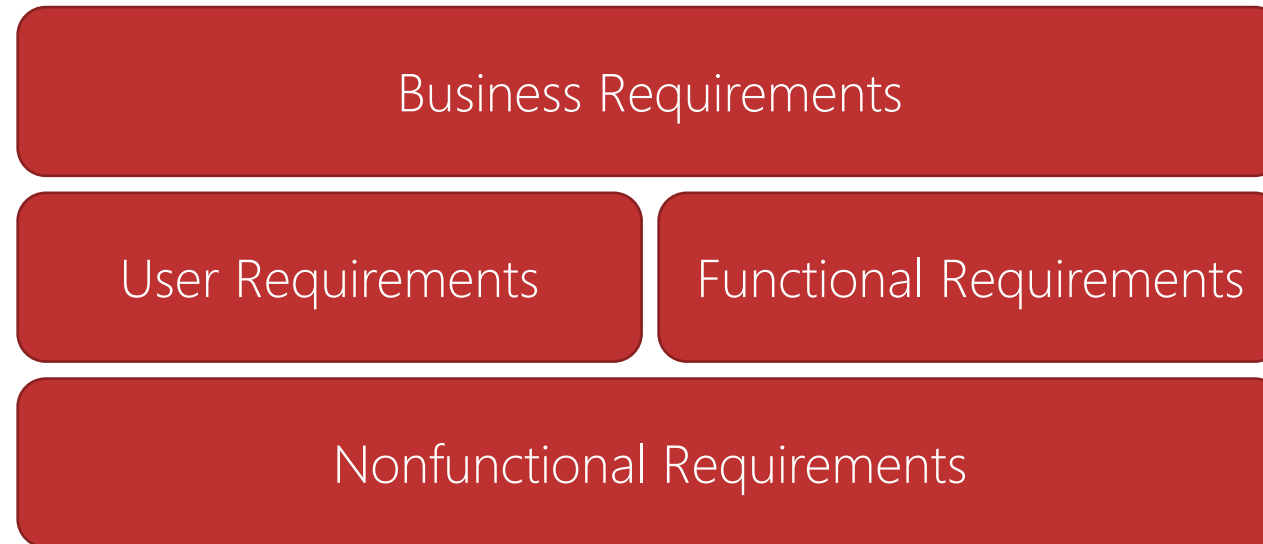
Testable: Can be tested / converted into a “test case.”

Tip: Have your *testing* team review your requirements.

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Business Requirements

We will deal with four types of requirement in this course.



Requirements **of the business** for the project.

They answer the question, "**Why** are we doing this project?"

Related to goals like...



Company: XYZ (sporting goods company)

Strategy:

- Launch sports beverage line
- Increase noncyclical revenues
- Cross-market sports beverages to existing clients
- Increase brand presence

Project

Enhance Sales Tracking System to support beverages

Management Expectation #1

System will cost less than \$500,000 for initial release, enabling the product line to achieve an ROI of at least 18%.

Management Expectation #2

System will enable a user to create summary reports of all beverages sold monthly, year-to-date and custom time ranges.

Management Expectation #3

System will enable a user to create product-level reports of individual beverages sold monthly, year-to-date and custom time ranges.

Management Expectation #1

System will cost less than \$500,000 for initial release, enabling the product line to achieve an ROI of at least 18%.

Req ID	Requirement	Rationale	Source
BR-1	System will cost less than \$500,000 for the initial release.	Will enable product line to achieve ROI of at least 18%.	Solomon Alffson, Product Manager

Management Expectation #2

System will enable a user to create summary reports of all beverages sold monthly, year-to-date and custom time ranges.

Req ID	Requirement	Rationale	Source
BR-1	System will cost less than \$500,000 for the initial release.	Will enable product line to achieve ROI of at least 18%.	Solomon Alffson, Product Manager
BR-2	System will enable a user to create summary reports of all beverages sold monthly.	Enables monthly tracking of sales, required to support revenue tracking.	Solomon Alffson, Product Manager

Management Expectation #2

System will enable a user to create summary reports of all beverages sold monthly, year-to-date and custom time ranges.

Req ID	Requirement	Rationale	Source
BR-1	System will cost less than \$500,000 for the initial release.	Will enable product line to achieve ROI of at least 18%.	Solomon Alffson, Product Manager
BR-2	System will enable a user to create summary reports of all beverages sold monthly.	Enables monthly tracking of sales, required to support revenue tracking.	Solomon Alffson, Product Manager
BR-3	System will enable a user to create summary reports of all beverages sold over the year to date.	Enables year-to-date tracking of sales, required to support revenue tracking.	Solomon Alffson, Product Manager

Req ID	Requirement	Rationale	Source
BR-4	System will enable a user to create summary reports of all beverages sold over a custom time range.	Enables inquiries from management to support revenue tracking over ad hoc time ranges.	Solomon Alffson, Product Manager
BR-5	System will enable a user to create product-level reports of individual beverages sold monthly.	Enables monthly tracking of sales, required to support revenue tracking.	Solomon Alffson, Product Manager
BR-6	System will enable a user to create product-level reports of individual beverages sold over the year to date.	Enables year-to-date tracking of sales, required to support revenue tracking.	Solomon Alffson, Product Manager
BR-7	System will enable a user to create product-level reports of individual beverages sold over a custom time range.	Enables inquiries from management to support revenue tracking over ad hoc time ranges.	Solomon Alffson, Product Manager

Requirements from the **business** perspective.

Derived from organization's **strategy**.

Provided by the project **sponsor** (usually).

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User Requirements

Requirements *for* users *by* users (usually).

Super important: Include the end users of the product when gathering requirements (when possible).

Watch out for confusion over terminology. In many organizations...

Our "business requirements" are *their* "project objectives."

Our "user requirements" are *their* "business requirements."

Req ID	Requirement	Rationale	Source	Parent
UR-1	The summary report will list each of the beverage products available for sale by the organization.	List of products is critical to understanding the report.	Martha Warren, Product Analyst	BR-2



BR-2:

"System will enable a user to create summary reports of all beverages sold monthly."

Req ID	Requirement	Rationale	Source	Parent
UR-1	The summary report will list each of the beverage products available for sale by the organization.	List of products is critical to understanding the report.	Martha Warren, Product Analyst	BR-2
UR-2	For each beverage listed, the summary report will display the unit cost of the beverage.	Unit cost makes it easier for management to compare beverages.	Martha Warren, Product Analyst	BR-2
UR-3	For each beverage listed, the summary report will display the total sales of the beverage over the given timeframe.	Total beverage sales is critical to understanding the report.	Martha Warren, Product Analyst	BR-2

User requirements are *for* users and usually *from* users.

There are typically many more user requirements than business requirements.

User requirements are derived from business requirements.

It is important to track the *parent* business requirement(s) that each user requirement belongs to.

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Functional Requirements

Describe functional needs of the product.

Business and user requirements describe **what** the product will do.
Functional requirements describe **how** the product will do it.

Derived from either business requirements or user requirements.
Make sure you aren't missing any user requirements.

Req ID	Requirement	Rationale	Source	Parent
FR-1	The report will list beverage names in title case.	Makes it easier to read for management and more professional-looking.	Martha Warren, Product Analyst	UR-1



UR-1:

"The summary report will list each of the beverage products available for sale by the organization."

Req ID	Requirement	Rationale	Source	Parent
FR-1	The report will list beverage names in title case.	Makes it easier to read for management and more professional-looking.	Martha Warren, Product Analyst	UR-1
FR-2	The report will list beverages in ascending alphabetical order.	Makes it easier to read for management.	Martha Warren, Product Analyst	UR-1
FR-3	The report will display the unit cost to two decimal points, representing dollars and cents.	Critical information for report.	Martha Warren, Product Analyst	UR-2



UR-2:

"For each beverage listed, the summary report will display the unit cost of the beverage."

Functional requirements describe **how** the system will behave.

They can have either business requirements or user requirements as their **parent**.

Together with business and user requirements, they describe the **functionality** of the product.

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Nonfunctional Requirements

Describe **qualities** required of the system.

Data Privacy

Safeguards for confidential data

System Availability

How much of the time the system has to be up

Disaster Recovery

How system behaves in case of disaster

System Performance

Requirements for speed of system

Legal/Compliance

Legal and regulatory requirements of system

Usability

Requirements for ease of use

Security

Authentication, authorization, physical security, etc.

Req ID	Requirement
BR-1	System will cost less than \$500,000 for the initial release.
BR-2	System will enable a user to create summary reports of all beverages sold monthly.
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BR-4	System will enable a user to create summary reports of all beverages sold over a custom time range.
BR-5	System will enable a user to create product-level reports of individual beverages sold monthly.
BR-6	System will enable a user to create product-level reports of individual beverages sold over the year to date.
BR-7	System will enable a user to create product-level reports of individual beverages sold over a custom time range.

Req ID	Category	Requirement	Rationale	Source	Parent
NF-1	Performance	The system will generate the report five or fewer seconds after the user submits the report creation request.	Users are expected to run many reports throughout the working day, and we don't want them to go crazy waiting for the report to be generated.	Martha Warren, Product Analyst	BR-2
NF-2	Security	The system will only allow entitled internal users to log on to the system.	The system accesses sensitive proprietary data, and access to it must be controlled.	Martha Warren, Product Analyst	BR-8
NF-3	Compliance	System must act in accordance with FDA rule US-FDA-2010-079.	Regulatory obligation.	US FDA via Solomon Alffson, Product Manager	BR-2

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NF-2	Security	The system will only allow entitled internal users to log on to the system.	The system accesses sensitive proprietary data, and access to it must be controlled.	Martha Warren, Product Analyst	BR-8
NF-3	Compliance	System must keep a record of all users accessing system reports, in accordance with FDA rule US-FDA-2010-079.	Regulatory obligation.	US FDA via Solomon Alffson, Product Manager	BR-2

Cover the organizational needs that *don't* relate to functions.

Super-important: It is up to **YOU**, the Business Analyst, to look for them.

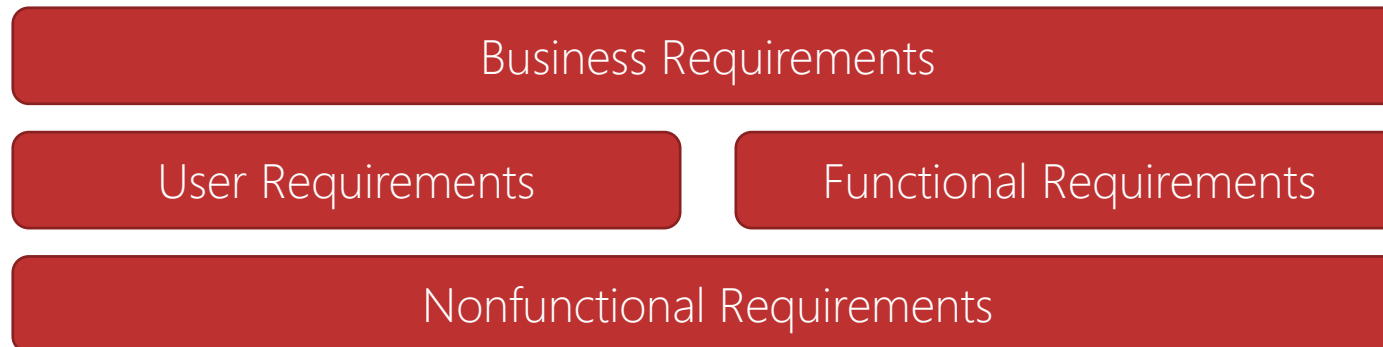
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Requirement Sources

Attributes of good requirements



Types of requirements



People sources

Your stakeholders
(we'll talk more about this shortly)

Documentary sources

Pre-existing requirements documentation
Standards documentation

Three Tips

- 1 Ensure the information is reliable and up-to-date.
- 2 Bring in an expert when necessary.
- 3 Make sure you keep a *stakeholder* as your requirement's source.
(And, yes, that can be the BA from some old project.)

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Gathering Requirements in One-on-One Interviews

Elicitation skills are key to Business Analyst success.

Challenges:

Communication is imprecise.

People don't know what they need.

You, as a Business Analyst, can help your stakeholders...
only if you understand their needs.

Find the right **stakeholders** to interview

Start with the **sponsor**

Define your **goals** for the interview

Set up the **meeting**

Choose the right setting/**environment**

Learn about your stakeholder: name, title, responsibilities

Introduce yourself and your goal/purpose for the meeting

Start at the high level

Try to understand them more deeply

Ask open-ended questions

If you don't understand something, say so

Recap what they say to ensure you understand

At the end, thank them

Ask them who else you need to speak with

Write up your **notes**

E-mail them to the stakeholder you interviewed for their input

Thank them again (it's nice!)

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Gathering Requirements in Group Interviews

Plan to take a *colleague* to take notes

Make an *agenda*

Try to make it a group *meeting*, not a group *conference call*

Pose questions to the **group**

Ask **open-ended** questions

Note-taker should **record** question, answer, source, rationale

Get the interviewee's **rationale**, if not offered

Keep the group (mostly) **on track**

Get **everyone** to talk

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Common Requirements Documents

Lots of types of documents... Wide variance in templates... Many differences in use across organizations.

Good points

They help you get started.

Single layout for the entire organization.

Bad point

Whatever the template, it's *never* perfect for *you*...

Created by Karl Wieggers. See processimpact.com for templates.

The **Vision & Scope** document is written first.
It contains the business requirements (and stuff).

The **Software Requirements Specification** is written second.
It contains all the other requirements (and other stuff).

The **Business Requirements Document** is written first.
It includes the business requirements (and sometimes user requirements).

The **Functional Requirements Document** is written second.
It includes the remaining requirements.

Not ideal: Better to have a single document.

Yes, there is a better way.

Have all your requirements in a single document.

We made one for you.

We usually just call it the “requirements document.”

Use our template (if you like).

It's available in the supplementary materials.

Can I ignore the templates and just use a spreadsheet?

That's fine with me. (Check with your boss.)

How can we most effectively use requirements management systems?

Learn the system.

Check out your vendor's training.

Check out online user groups.

Fundamentals of Business Analysis

Agile Requirements

Agile Manifesto

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

Requirements in Agile are developed during the sprint in the course of designing and developing the feature.

Documentation: **Just enough** to understand what is needed

Role	As a Blogger,
Requirement	I want to format blogs using HTML,
Rationale	So I can structure and format my posts effectively.

User Story

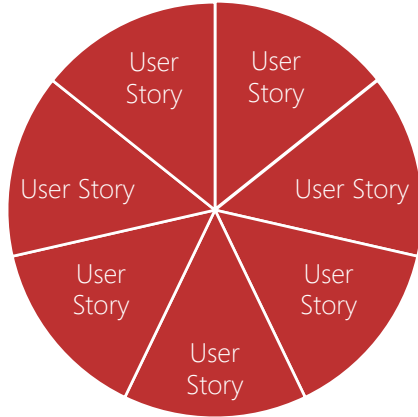
As a Blogger,

I want to format blogs using HTML,

So I can structure and format my posts effectively.

Acceptance Criteria

- I can apply bold, italic, and/or underlining to text
- I can use the keyboard shortcuts for the above (ctrl-B / ctrl-I / ctrl-U)
- I can create bulleted and numbered lists
- I can switch back and forth between text view and HTML view



Blogging functionality
E-mail integration
Reporting
... all need to be decomposed

— We'll talk about decomposition later in the course, don't worry 😊

Agile has lists of requirements instead of big documents.
Lists of requirements are called “backlogs.”

Product Backlog Running list of all requirements
Managed by Product Owner

Sprint Backlog List of requirements committed for a sprint
Managed by team

Agile is very simple (relative to other SDLCs), and so is the way it treats requirements.

However, it still creates a bunch of headaches, confusion, and inconsistencies for Business Analysts 😊

If you haven't checked out the *Guide to Agile Business Analysis*, do it!
(www.agileba.info)

Give yourself a pat on the back.



You're done with Section 4 on Forming Requirements!
(actually, you will be after the quiz)