Gathering Effective Requirements

Golden Horseshoe SAS Users Group

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Overview

- Introduction
- Planning to Gather Requirements
- Gathering Process
- What Not to Miss
- Summary

Introduction

- Objectives:

  – Encourage you to treat requirements gathering as a process.
  – Provide some starting points for you to work from.

- Basis for talk:

  – Gathering effective requirements is known to be critical to success.
  – Using a generic hypothetical example.
 – Defined IT project with IT deliverables.

Requirement Definitions

- Characteristic of performance or functionality that the end product must meet or exceed.

- Effective requirements are:
  - Complete
  - Specific
  - Separated into must have and optional.
  - Measureable
  - Prioritized
  - Achievable
  - Connected
 - Signed off by the client(s)

Requirement Categories

Functional

Tasks
Activities
Screens
Data Flow
Inputs
Outputs

Technical

Availability
Reliability
Performance
Backup
Recovery
Archive
Security

Functional Requirements

Final Deliverable

Business Process

Technical Requirements
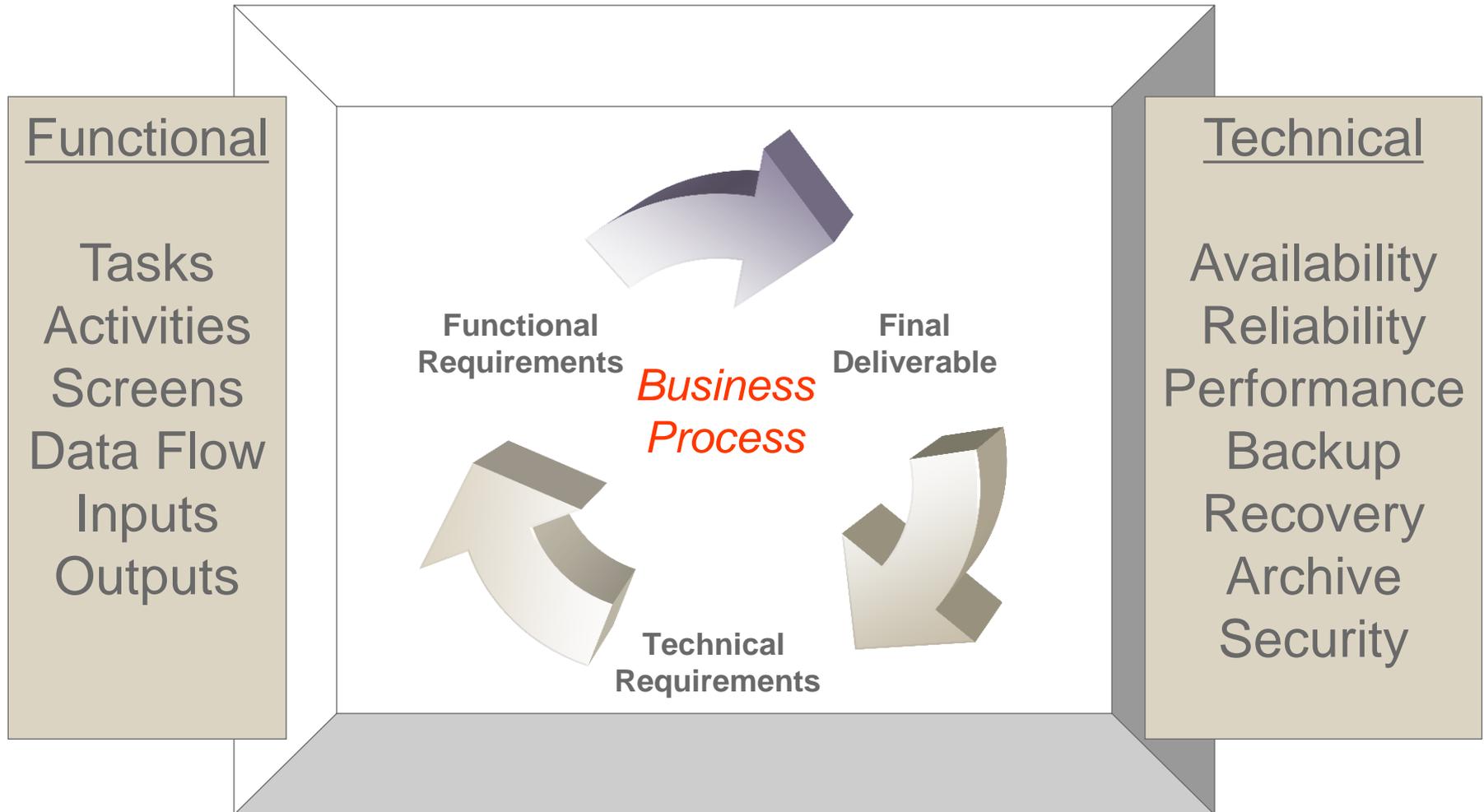
Process of Gathering Requirements
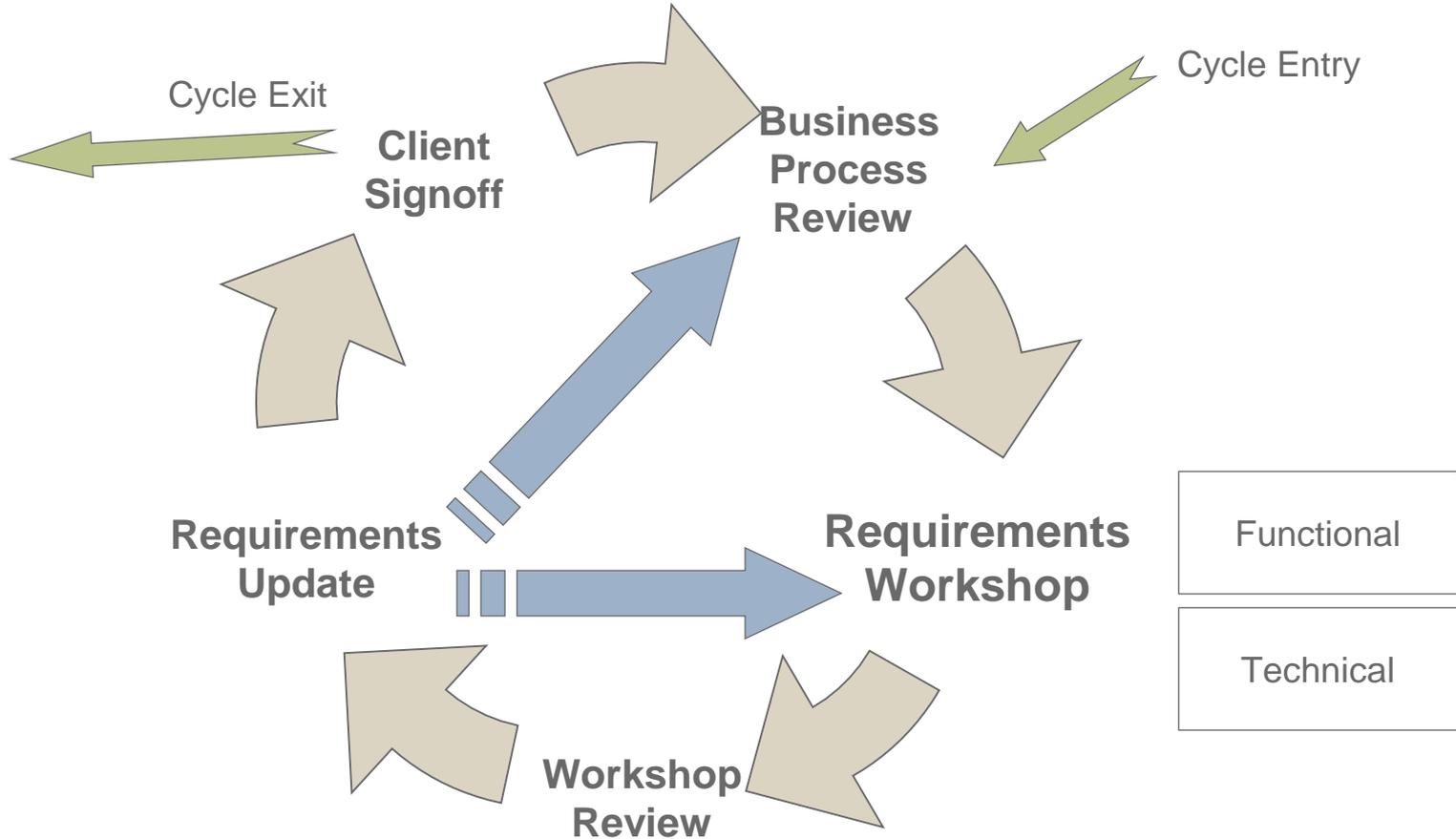
Requirements gathering is iterative and cyclical

Planning for Requirements Gathering

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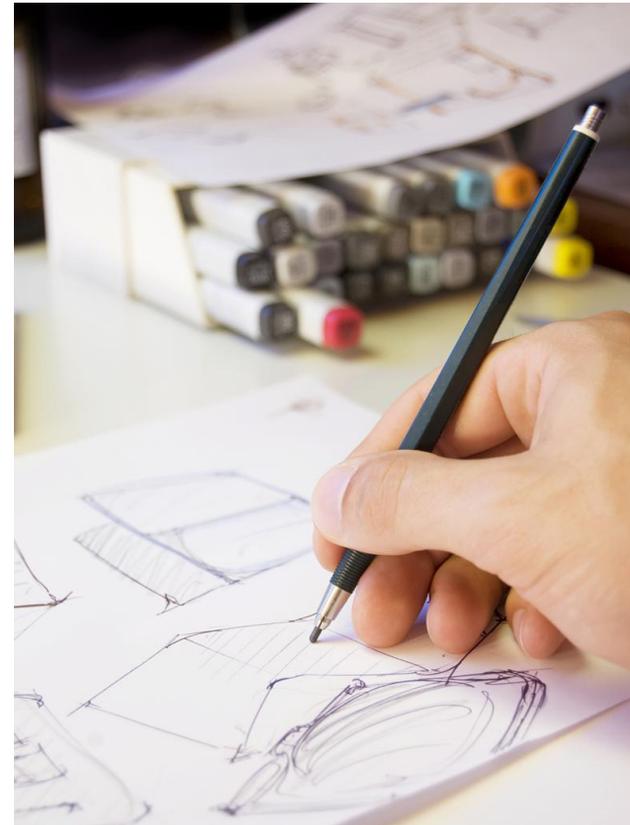
Planning for Requirements Gathering

Step 1: Review the Project Scope

- Business Process – What business outcome is needed?

- Stakeholders- Who are the stakeholders, and how many business areas do they represent?

- Is this independent development or modifications to an existing system?

- What are the constraints- time, project, etc?

- What is the development method – waterfall, iterative?

- Who is sponsoring the project?

We are estimating the time needed for requirements gathering, the number of different stakeholder groups, and any possible areas of disagreement.

Planning for Requirements Gathering

Step 2: Identify the Interfaces and Constraints

- Where are the interactions?
  - What systems are providing inputs?
  - What systems require outputs?

- What are the constraints?
  - Infrastructure standards, guidelines
  - Architectural standards in products and tools

Can we identify some of the boundaries?
Are some of the requirements pre-determined?

Planning for Requirements Gathering

Step 3: Plan the execution of the process

- Ensure client resources are available and committed.
  - Look for strong subject matter experts
  - Look for diversity
  - Plan to engage groups separately if needed

- Ensure activities are time boxed and allow for review times

- Clearly identify deliverables and their formats.

- Plan follow up time

Create a plan that matches the development method, ensures that the resources understand the full commitment, and sets an expectation for the deliverables and dates.

Gathering Process

- Book short, specific workshops (2-3 hours max)
  - Facilitate
  - Have an agenda and templates
  - Have a parking lot for issues
  - Separate functional from technical
  - Discuss discovered constraints at the first workshop
  - Have the right equipment- projector, computer, flip chart
  - Stay on task and on schedule at each workshop

- Ensure that the business process is understood first
  - Identify process steps
  - Identify expected inputs, outcomes, measures, business rules
  - Plan to iterate as requirements gathering continues

Gathering Process- Example

- Fictitious Call Centre that receives customer inquiries
- Have been keeping track on paper
- Want an electronic data entry system

Example template- functional requirement

Requirement Name:			Date:	
Business Function:				
Description:				
Rationale:				
Business Source:		Tester:		
Acceptance Measure:				
Dependencies/ Interfaces		Requirement Type:	Must have Preferred	
Additional Business Rules:				

Example:

| Requirement Name:	Call record		Date:	09/23/11
Business Function:	Record customer phone inquiries - Initial contact record			
Description:	Electronic form that collects data as listed in supporting spreadsheet CustomerInquiry.xls (Initial Call tab)			
Rationale:	Collect a consistent and complete set of data to support the follow up requirements			
Business Source:	Jane Smith		Tester:	George Doe
Acceptance Measure:	Form collects all required information in the correct format.			
Dependencies/ Interfaces:	Uses current customer tables Uses electronic form development stds		Requirement Type:	**Must have**
Additional Business Rules:	Business Day: 8:00:00 AM to 9:00:00 PM- outside hours calls to be clearly identified. SLA to respond to messages within 24 hours			

Example data collection template:

Item	Meaning	Type	Length	Allowed Values

Data Model

Example:

Item	Meaning	Type	Len	Allowed Values
Customer	The identity of the person who is calling	Char	30	Any Char
Phone #	Contact Telephone Number	Char	13	International format
Email	Contact email address	Char	30	Valid email
Call Transcript	A free flow record of the customer inquiry	Char	Long	Type

CUST
CustID
LName
FName
Init
Addr1
Addr2
WkPhone
MbPhone
CEmail

CUST_INQ
CustID
SPhone
SEmail
InqText
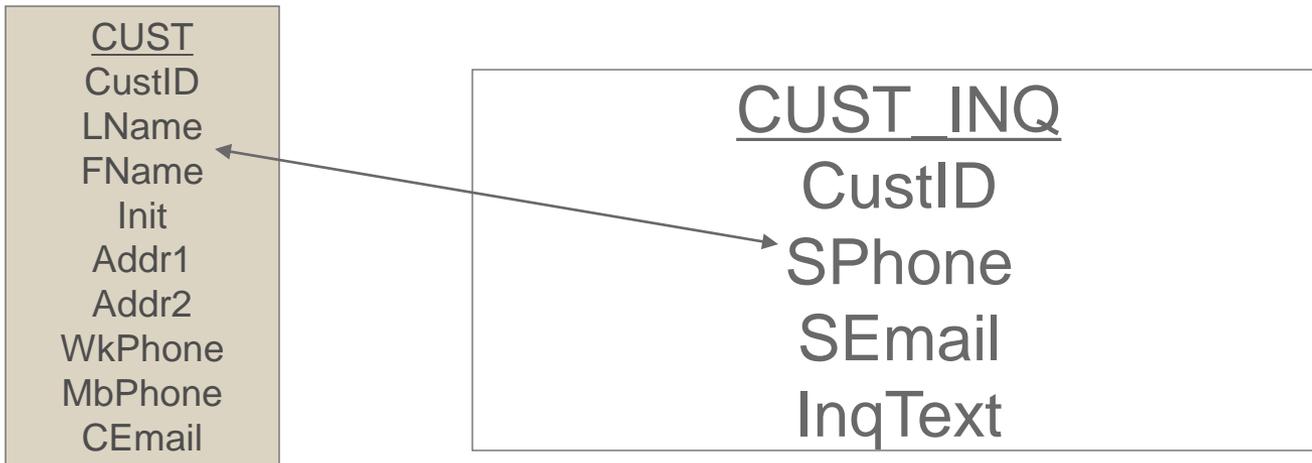
Example technical requirement template

Application Name:		Date:	
Business Function:			
Description:			
Availability:			
Reliability:			
Performance:			
Security:			
Archive:			
Recovery:			
Support Level:			

Example:

Application Name:	Customer Inquiry Record	Date:	10/14/11
Business Function:	Collect information from phone based customer inquiries that facilitates follow up calls.		
Description:	Web based system for data collection.		
Availability:	6 am to 6 pm Monday to Friday		
Reliability:	Always on – power outages excepted		
Performance:	3 second screen refresh after commit		
Security:	Internal use only		
Archive:	Daily 8 pm		
Recovery:	3 hours		
Support Level:	Work to completion		

# Ending the process

- Use the requirements documents to create a system test plan.
  - Provides an additional deliverable
  - Helps validate that requirements are effective.

- Have the clients sign off on the requirements.

What not to miss

Things that can and do slip through unnoticed to cause rework and more work.
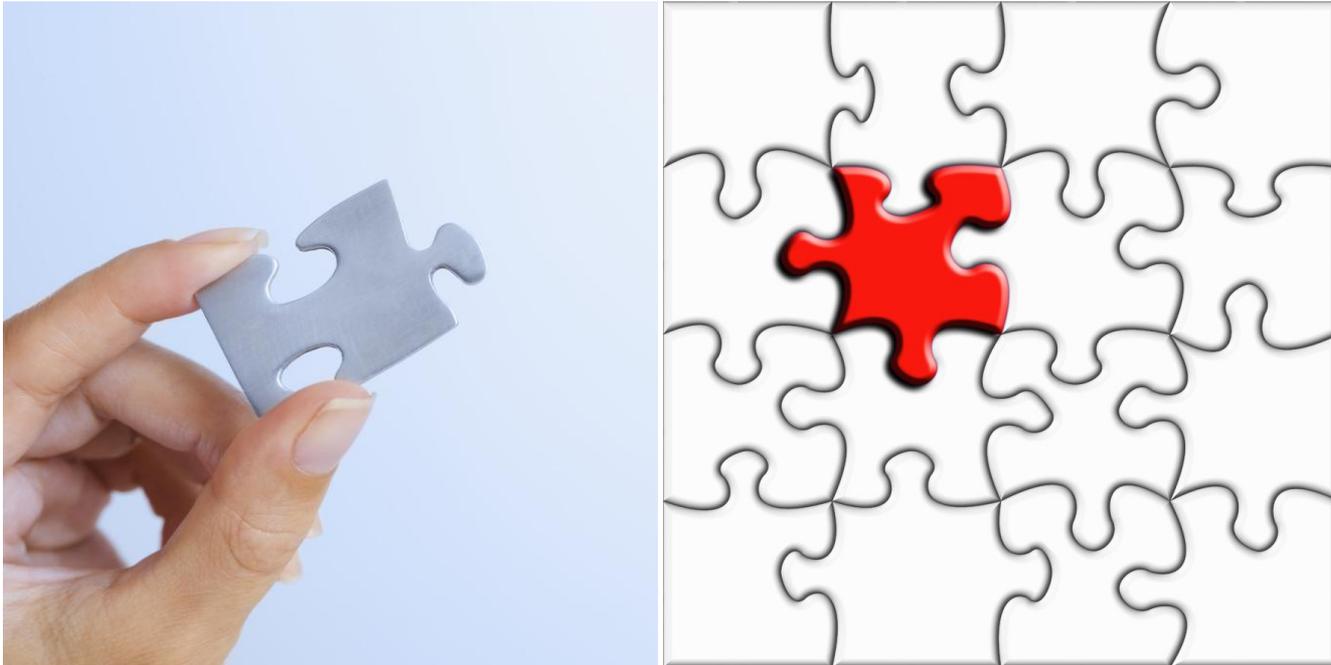
What not to miss

- Common terms that have uncommon meanings

- TIME
  - Exact definition in date time format
  - Week- starts when?
  - Month- starts when?
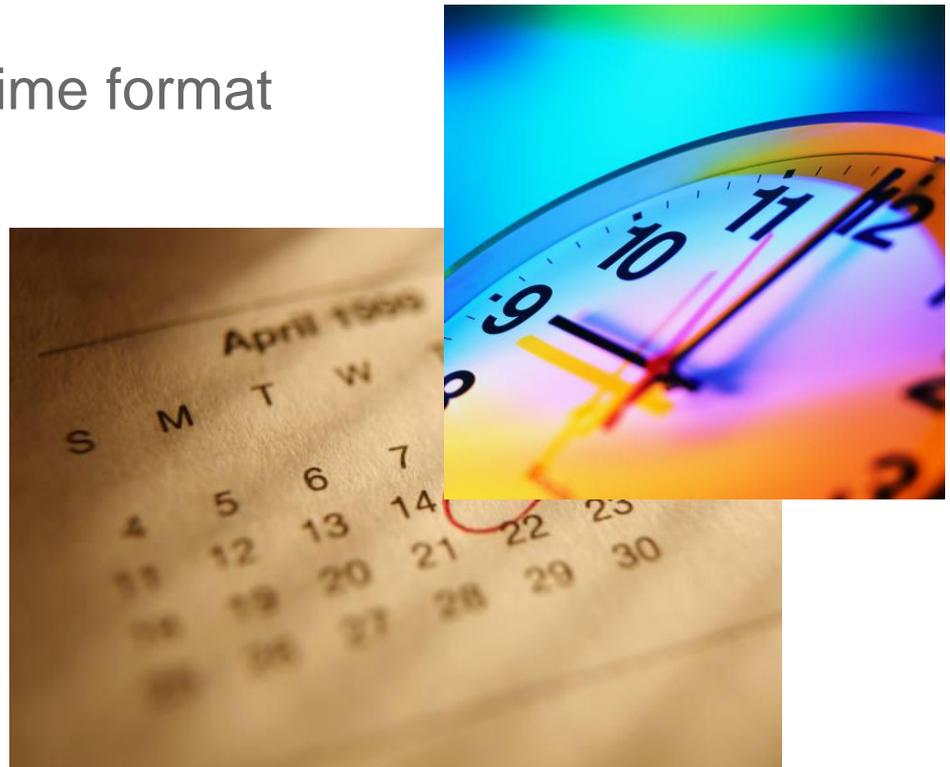
What not to miss

- Metadata Consistency
  - If it already has a name, stick with it
  - Pay attention to allowed values

- Definitions
  - Business language, complete sentences and validated with stakeholders.

- Historical Aspects of data
  - Data analysis concerns
  - Timestamps, order of events
  - Data warehouse needs

What not to miss

- Business Rules:
  - A rule of operation that is not apparent from the description of the process.
  - Can be very fluid and diverse
  - Often used to deal with exceptions
  - Supplements the definition of a business term.

- Examples:
  - We allow 5 contacts for a customer (except for our top 10 customers who are allowed as many as they wish)
  - We do not follow up customer complaints outside of business hours except by customer request.
  - We never ship direct to a retail customer by courier
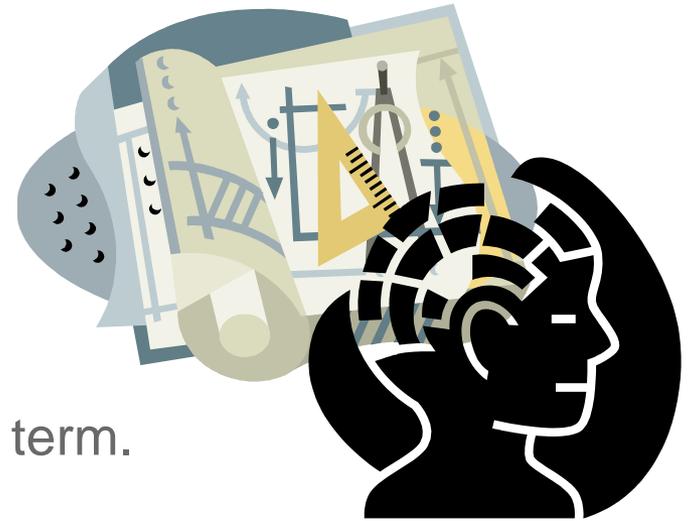
What not to miss

- Technical requirements
  - Establish early
  - Manage client expectations.

- Constraints
  - Discover Early
  - Check all types- organization, software, hardware, process

- Iteration and signoff
  - Need at least 2 review cycles
  - Follow up with folks who do not respond to review requests
  - Need signoff by clients and/or sponsors

What not to miss

- Requirements will change after signoff- manage actively

- Have a process that includes:
  - Document the change – reuse the templates
  - Assess the impact, especially
    - The need for rework
    - The need for different or additional resources
    - The benefit of the change
  - Have client signoff against the impact
  - Have a pre-determined freeze point
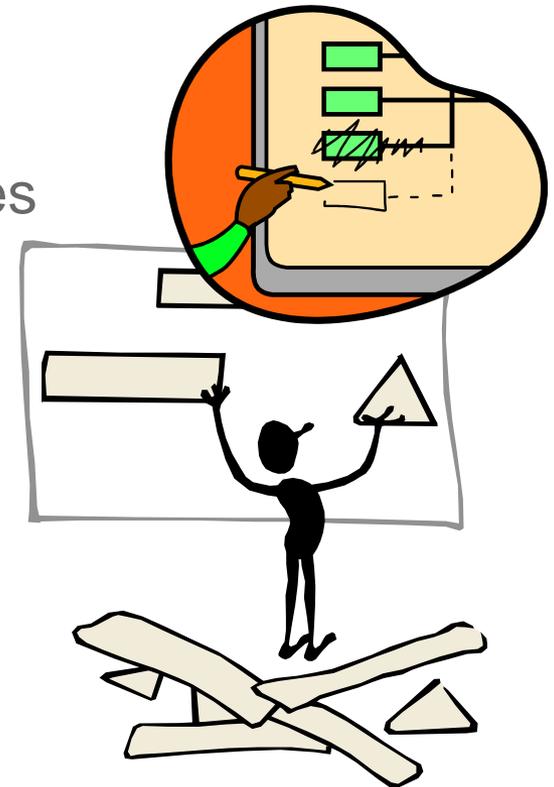
Summary

- Effective requirements :
  - Complete
  - Specific
  - Necessary/Optional
  - Measureable
  - Prioritized
  - Achievable
  - Connected
  - Signed off by the client(s)

- Gathering Tools include:
  - Templates
  - Base documents
  - Checklists
  - Workshops
  - Signoff
  - Change Process

Requirements gathering is an iterative and cyclical process
that should be planned, managed and controlled

Questions, Contact

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