enterpriseagility

Business Vision Delivered

10 Principles of Smart Requirements Gathering

BAMM

BUSINESS ANALYSIS MATURITY MODEL

IIBA Chicagoland Chapter SPONSOR

David Heidt | IIBA Chicagoland Chapter President

CBAP™

IIBA® Chicagoland Chapter

Who/What is IIBA

IIBA® International Institute of Business Analysis

IIBA® was formed in 2003 and is the independent non-profit professional association serving the growing field of business analysis.

IIBA International Institute of Business Analysis

Vision	The world's leading association for Business Analysis professionals
Mission	Develop and maintain standards for the practice of business analysis and for the certification of its practitioners

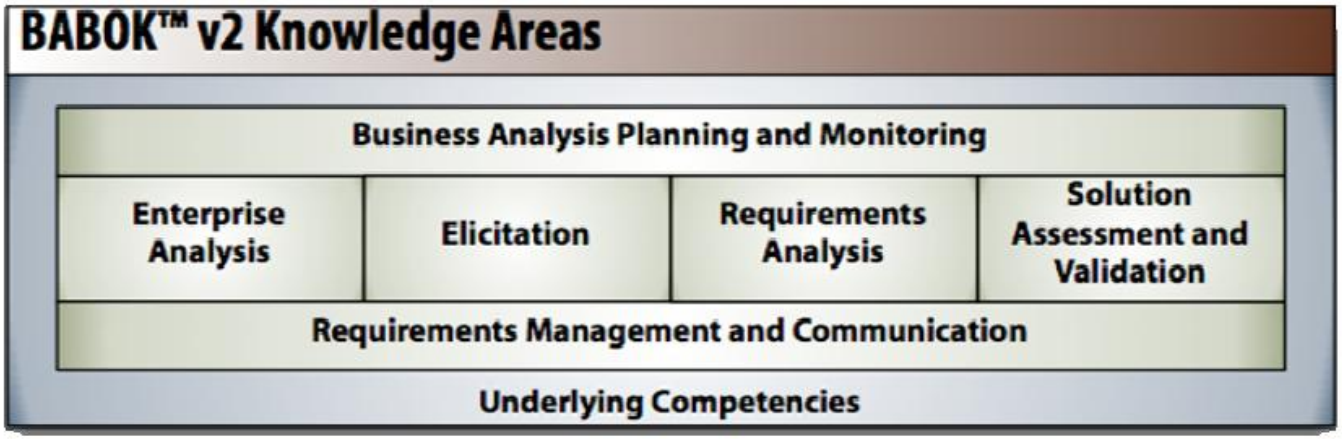
IIBA Strategic Goals

- Creating and developing awareness and **recognition** of the value and contribution of the Business Analyst
- Defining the Business Analysis Body of Knowledge® (**BABOK®**)
- Providing a forum for **knowledge sharing** and contribution to the business analysis profession
- Publicly recognizing and **certifying** qualified practitioners through an internationally acknowledged certification program

Facts and Figures

- Administrative office located in Toronto, Ontario, Canada.
- Launched in October 2003 with 23 founding members from two countries.
- Developed and maintains the *Business Analysis Body of Knowledge® (BABOK®) Guide* which outlines the generally accepted standards and practices for this profession. Version 2 was published in 2009.
- Members worldwide: over 18,000.
- Chapters: 89 in over 60 countries worldwide with 59 chapters in progress.
- Certified Business Analysis Professionals™ (CBAP®) worldwide: 1000+.

Business Analysis Body of Knowledge



- Identifies currently accepted practices
- Recognizes business analysis is not synonymous with software requirements
- Defined and enhanced by the professionals who apply it
- Captures the sum of the knowledge required for the practice of business analysis as a profession

- It is NOT a methodology nor does it prescribe or favor a methodology
- It is NOT a "how to" business analysis instruction manual

Industry Accredited Business Analyst Certification

IIBA® International Institute of Business Analysis

- While many professions had professional designations, Business Analysts did not.
- Many education providers offer “certificate” programs to their students, but these are not professional “certifications”.
- IIBA decided that Business Analysis Professionals needed a certification program to ensure their skills would be recognized, valued, and understood.

CBAP®
CCBA™

IIBA awards certification designations to candidates who have successfully demonstrated their expertise in the business analysis field.

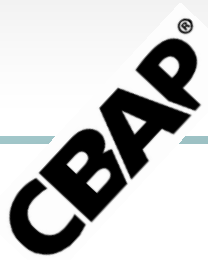
This includes hands-on work experience and passing an exam for one of the two certifications.

Two IIBA Certifications

Certification of Competency in Business Analysis

The CCBA™ certification is for ***experienced business analysts*** who have acquired core BA skills.

CCBA™ recipients are recognized for the investment they have already made in their business analysis careers.



Certified Business Analysis Professional

A CBAP® recipient is an ***elite member of the business analysis community***.

A recognized expert in identifying the business needs of an organization in order to determine business solutions.

CBAP® recipients are senior BAs who have the skill and expertise to perform business analysis work on projects of various sizes and complexities.

These certification programs has been carefully designed to be in compliance with the International Standards Organization (ISO) 17024 standard for certifying the competence of personnel. The program is also intended to achieve ISO approval.

Requirements to apply for the CCBA and CBAP

CCBA™

- Minimum 3750 hours of BA work experience aligned with the *BABOK® Guide* in the last seven years
- Minimum 900 hours in two of the six knowledge areas or 500 hours in four of the six knowledge areas
- Minimum 21 hours of Professional Development in the past four years
- Minimum high school education or equivalent
- Two references from a career manager, client or CBAP® recipient
- Signed Code of Conduct

CBAP®

- Minimum 7500 hours of BA work experience aligned with the *BABOK® Guide* in the last 10 years
- Minimum 900 hours in four of the six knowledge areas
- Minimum 21 hours of Professional Development in the past four years
- Two references from a career manager, client or CBAP® recipient
- Signed Code of Conduct

For more information, refer to the CBAP and CCBA Handbooks in your supplied reading material.

Marketplace Drivers for BA Role Change

- Increasing number of complex, difficult to understand, legacy systems.
- Subject matter expertise (SME) attrition.
- Virtualization and outsourcing.
- Many BA training vendors.
- March towards establishing the BA as a professional (IIBA and ABPMP).
- New technology capabilities (i.e. BPMSs and BREs).

The Elusive Business Analyst

What's the difference between a Business Analyst and UFO?

People recognize a UFO when they see one...

Mixed Identities

PROGRAMMER ANALYST

SYSTEMS ANALYST

SUBJECT MATTER EXPERT

APPLICATION ENGINEER

SOFTWARE SPECIALIST

BUSINESS ANALYST

"A business what?"

1985 1990 1995

Early Influencers on the BA Role

- RDBs, Easy-to-Use Tools
- C++ et al
  - New development paradigm distracted programmers.
  - Traditional 3G programmers (i.e. COBOL, PL-1) dropped out ➔ BAs.
- IT's Value From Tools to Process Automation
- The rise of SDLCs
- Thought leadership in new approaches to development (UML, three amigos)

EMERGING BUSINESS ANALYST

Common Issues with Business Analysis

- Issues with Partners/Collaborators:
  - Different interfaces to the business side.
  - Inconsistent artifacts.
  - Variety of tools and techniques.
- Issues within the BA practice as a whole:
  - Difficulty moving around resources.
  - Hard to train new resources.
  - Variations make oversight complex.
- *Quality* and *Speed to Market* Issues
  - Defects found downstream in the lifecycle
  - Incomplete and missing requirements
  - Burdens placed on roles downstream in the lifecycle

Requirements are…

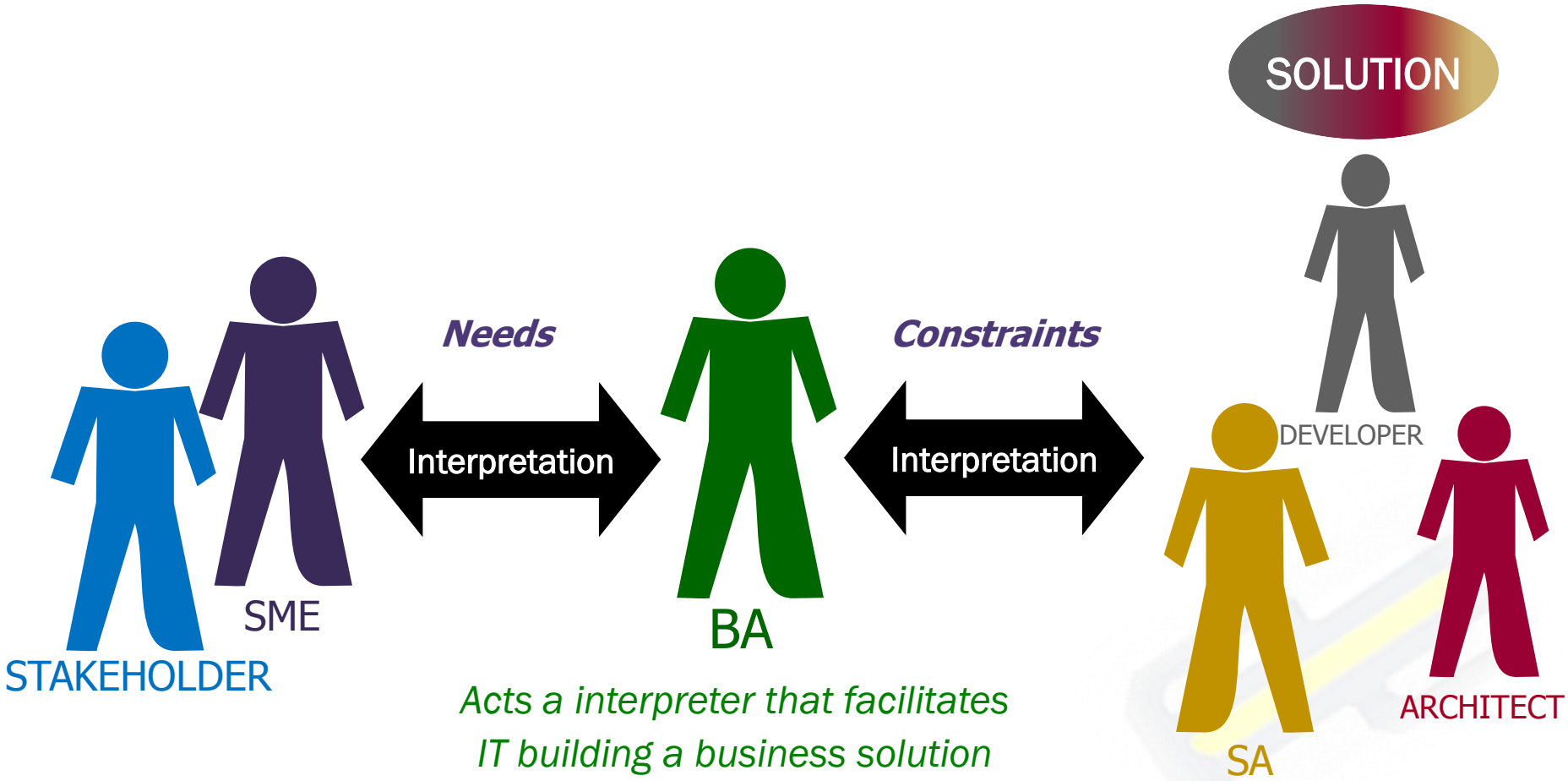
- Too difficult and time-consuming to create
- Too hard to use
- Inadequate
- Unnecessary
- Essential

The Requirements Problem

Traditional Approach

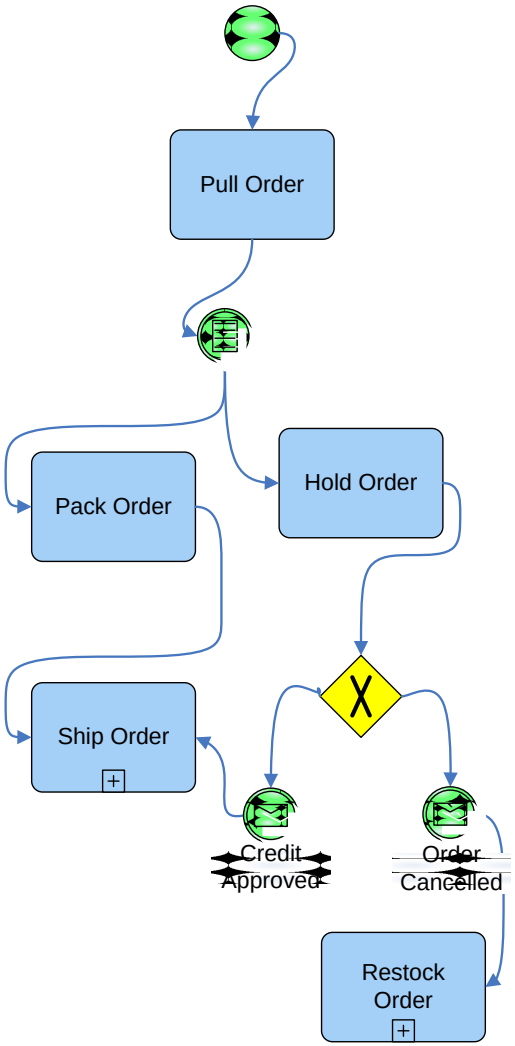
- Develop two lists:
  1. Things the system must do
  2. Constraints imposed by it or on it
- The traditional way of doing requirements is not wrong – it just doesn't go far enough.

Role of the Conventional Business Analyst



Acts a interpreter that facilitates
IT building a business solution

Where do they go?



```
PROCEDURE DIVISION.
CREATE-REORDER-FILE.
    OPEN I-O STOCK-FILE.
    OPEN INPUT MANF-FILE.
    OPEN OUTPUT ORDER-FILE.
    READ STOCK-FILE NEXT RECORD
        AT END SET END-OF-FILE TO TRUE END-
    READ.
    PERFORM UNTIL END-OF-FILE
        IF (QTY-IN-STOCK-FB NOT GREATER
    THAN REORDER-LEVEL- FB) AND (NOT-ON-
    ORDER) PERFORM CREATE-REORDER-
        RECORD
        PERFORM UPDATE-STOCK- RECORD
        END-IF
        READ STOCK-FILE NEXT RECORD
        AT END SET END-OF-FILE TO TRUE
        END-READ
    END-PERFORM
```

Problem with the Status Quo

- Business creates requirements, then…
- IT builds something that “satisfies” requirements, but…
- Business can’t look at the solution that IT implements and see if it is what they specified, so…
- Business asks IT what the solution that IT built actually does.

KEY: Fundamentally, this age-old cycle is incompatible with business agility!

Business/IT Divide: How we got here

- Two independent root causes:
  - With IT, drift has occurred from:

    delivering silo applications and manual work

    to:

    delivering highly automated processes
  - BAs are have been unable to specify detailed business behavior that is void of technical details.

Reality Check: This Costs Us!

Rework Cost

Labor Cost

Opportunity Cost

Completeness

How and **when** do you decide which set of artifacts will be produced for each project or iteration?

How does your organization determine when the following are completed: a feature; a project; a product rollout; a stategic initiative?

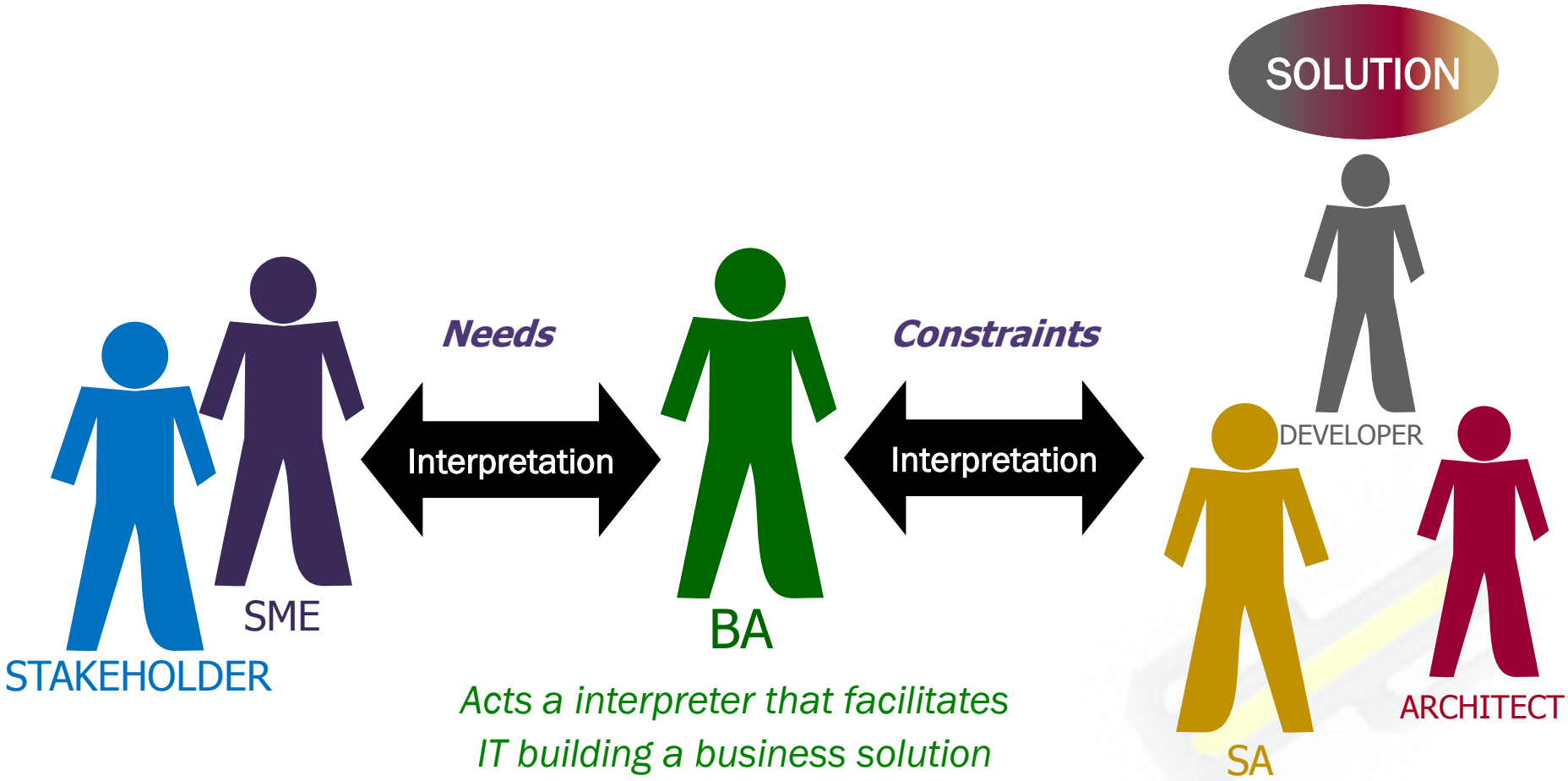
Requirements Validation – In Practice

- Good faith effort to read all the documentation
- Ultimately there will be sign-off

  - **Best Case:** they thoroughly understand and agree
  - **Worst Case:** they don't have time to invest and are willing to take your word for it

  - **At the End of the Day:** Sign-off happens because projects can't proceed until this happens.

Role of the Conventional Business Analyst



Acts a interpreter that facilitates
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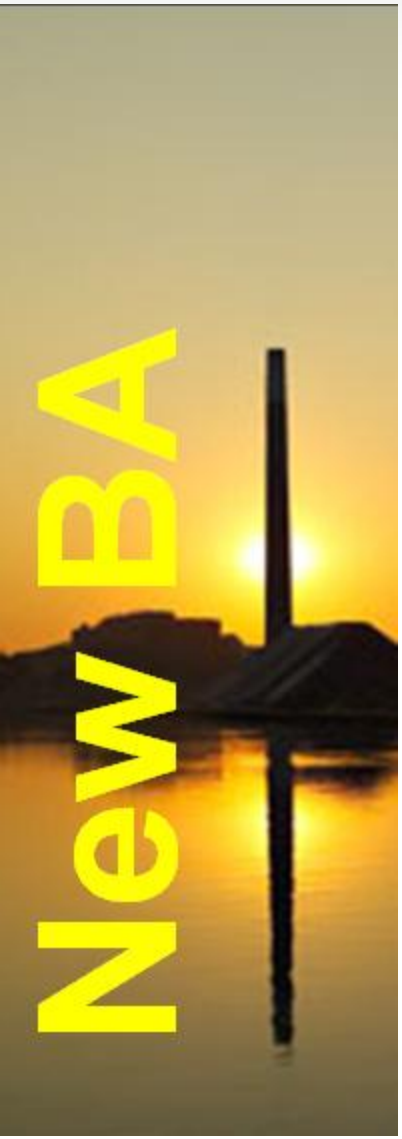
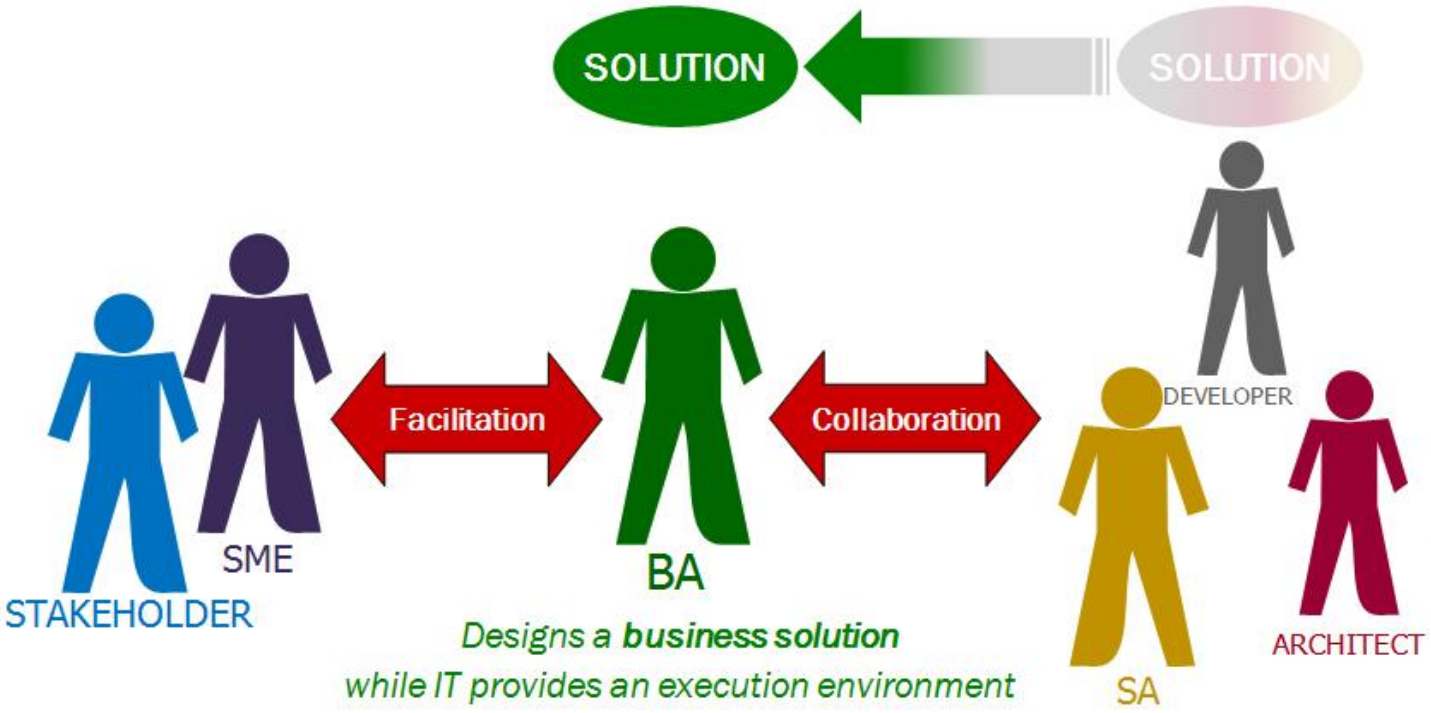


BA's Evolving Role



Evolving the BA's Role

BUSINESS ANALYSIS PRACTICE

IT ORGANIZATION

BUSINESS
SMEs / STAKEHOLDERS

REQUIREMENTS

SOLUTION SPECIFICATIONS

TECHNICAL SPECIFICATIONS

BUSINESS ANALYST

ARCHITECT DEVELOPER

The BA delivers requirementsthat have been evolved into solution-specifications that is "conceptually executable".

IT is responsible for transforming the conceptual solution into an implementation while preserving correspondence to the original concepts.

Requirements vs. Solution Specification

- Our “Requirements” effort requires two outcomes:
  1. **Requirements:** Goals and Constraints.
  2. **Solution Specification:** A description of the actual behavior that meets the goals and constraints.

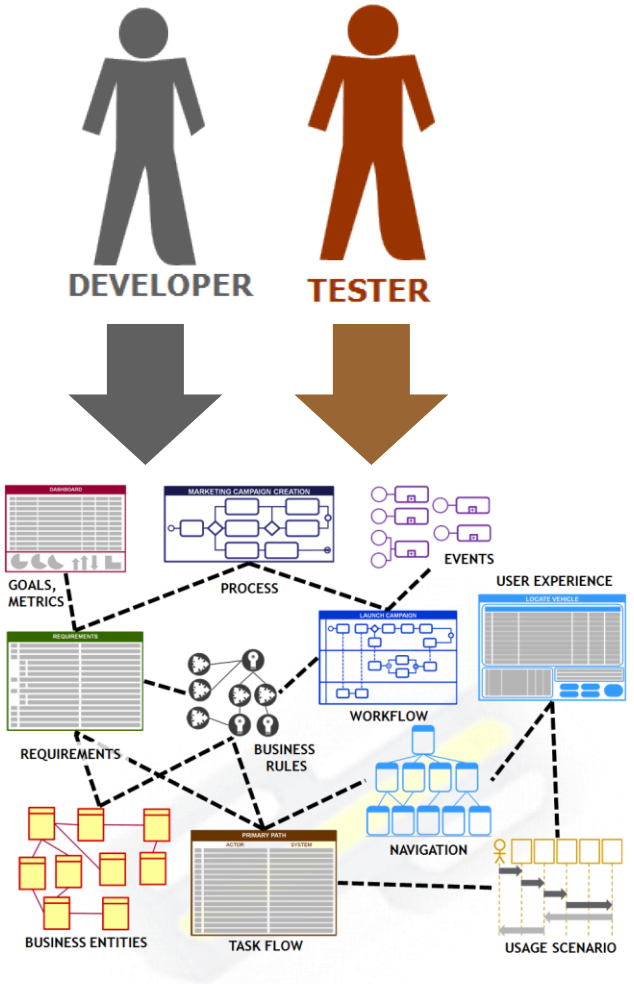
- Traditional requirements often stop at requirements or only hint at specification.
- Completeness requires both.

Goals of Specification

- Specify the business behavior of the proposed system or changes to existing system.
- Two types of business behavior:
  - Visible behavior that will be implemented in a User Interface.
  - Behavior not visible to the immediate user but critical for the correct functioning of the system.

Goals of Specification CONTINUED

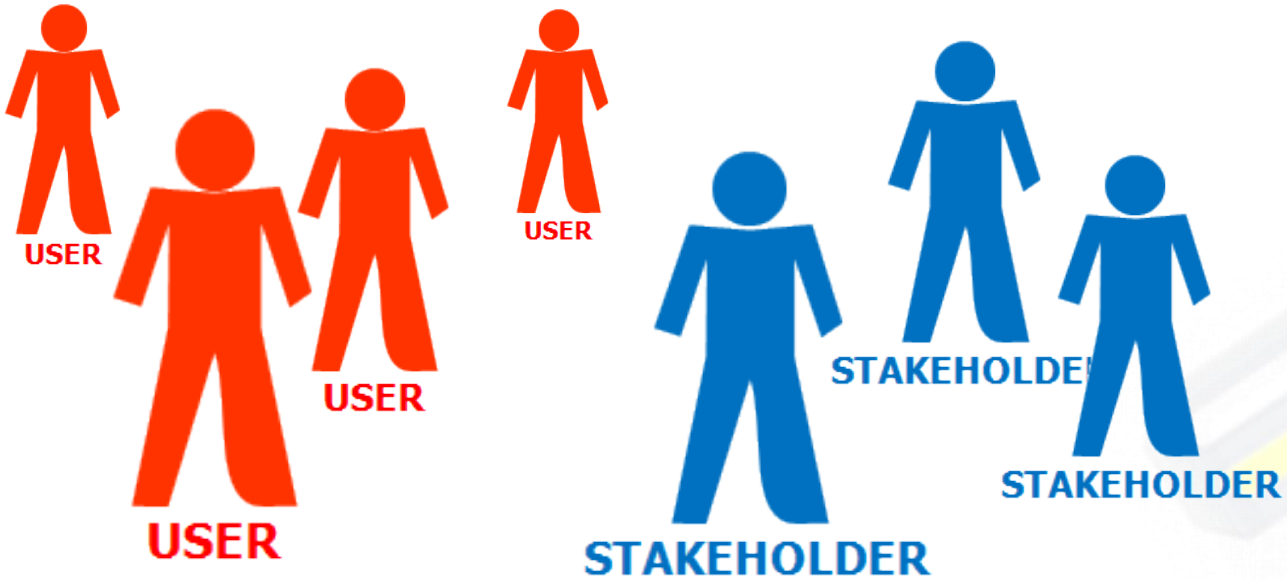
- Technology agnostic → Why?
  - Technology choices are the province of IT.
  - Details of look and feel can be a distraction if considered too early in the specification process.
- Detailed enough to be testable:
  - Specification when fully detailed will determine most of the test cases.
  - Implementation team will work from the same specification without interpretation arguments.



Bottom line:

Validating the Business Analyst's Work Upfront

- Once a solution is described it can be validated.
- Two validation goals for solution:
  1. It meets the requirements.
  2. Judged "workable" by stakeholders and potential users.



Following in the Footsteps of Others

Max Ortiz / The Detroit News;Toyota

Boeing Photo

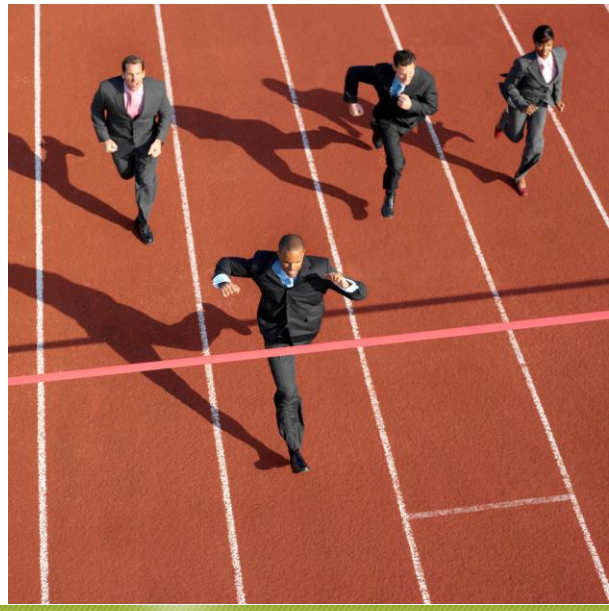
Approaches to Quality

- Design-centric
  - Design quality into the process to avoid rework
  - Inter-related artifacts with built-in cross validation
  - Lean and six sigma
- Agile
  - Mostly at the technical level
    - Pair Programming (primarily XP)
    - Automated Testing
    - Test Driven Development
    - Continuous integration
    - Refactoring

These aren't mutually exclusive

Business Specification's Payback

- Reduced Rework
  - IT time used to: extract business logic from existing implementations, translate business specifications into IT implementation
  - Rework involved in fixing inconsistencies in business requirements

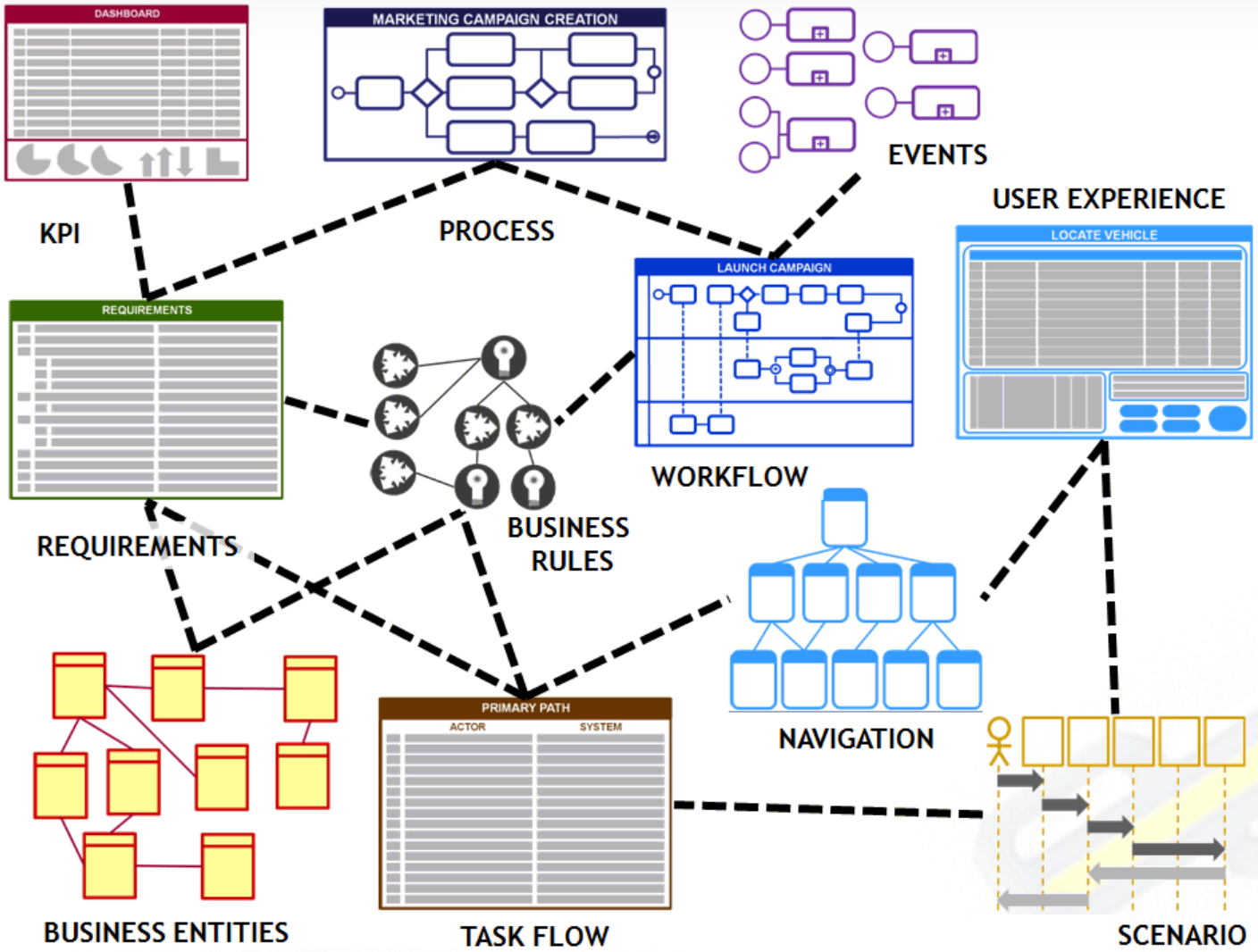


- Increased Business Agility
  - Allows business innovation to happen at the speed that business experts can conceptualize those changes
  - Empowers business

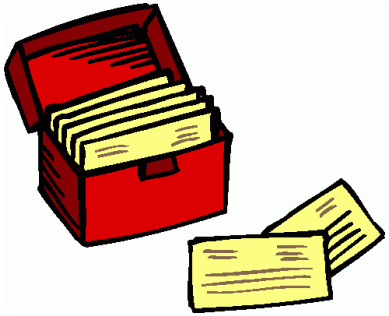
Key Benefits of Evolving the BA Role

- Standard set of analytic elements
  - Provides standardized skills for BAs promoting BA flexibility.
- Defined patterns for analysis
  - Eliminates the need to “invent” approaches providing process predictability
- Opens an opportunity for the BA role to contribute more direct business value
  - Helps draw attention to areas where improvement have direct business value.

BIG PICTURE OF A SOLUTION SPECIFICATION



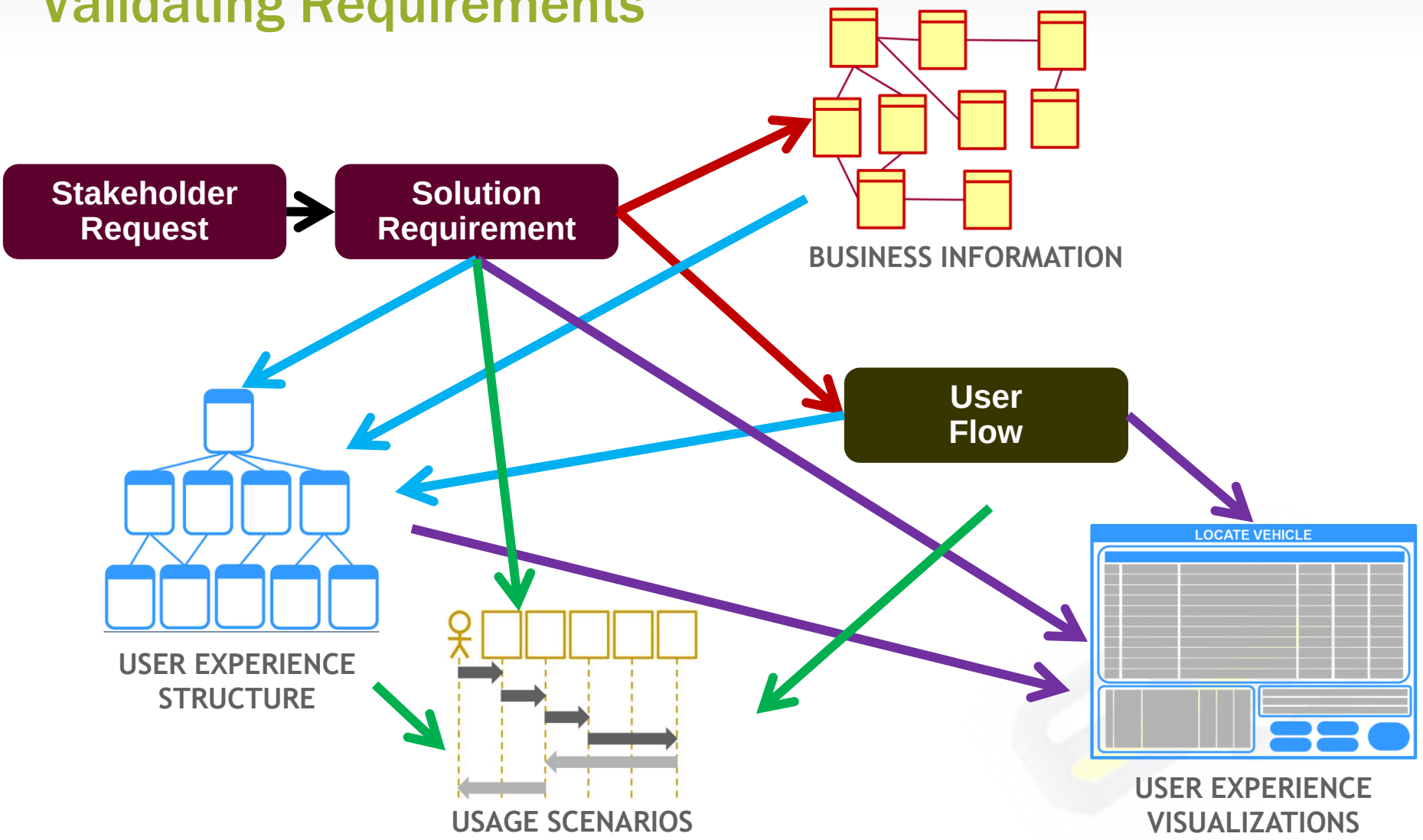
This is a conceptual example
Not all relationships are shown.



Representing Business Behavior & Knowledge

- BUSINESS PROCESS DESIGN
- WORKFLOW DESIGN
- TASKFLOW DESIGN
- USER EXPERIENCE
- BUSINESS RULE DESIGN
- CONTENT DESIGN
- CONFIGURATION DEFINITION

Validating Requirements



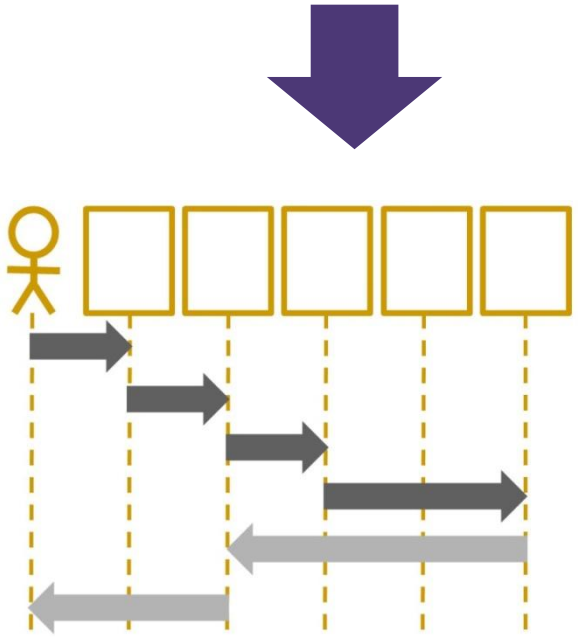
Use Cases vs. Usage Scenarios

		COMPARISON	
		User Flows	Usage Scenario
ASPECT	SCOPE	General.	
	FOCUS	One business function.	
	CONTENT	Contains a main path alternate and exception paths.	
	TRACING	May be realized by multiple usage scenarios.	

Usage Scenarios

- Captures the business behavior realized by the interaction between an actor and the system for a given set of circumstances.
  - User Behaviors
  - Actions defined in the UX
  - System Services
  - …

Scenario: Pickup a Vehicle Counter
Actors: Rental Customer **Steps:** 1. *Follow Signs for "Existing Reservations"* 2. ….



Diagrams… documents…

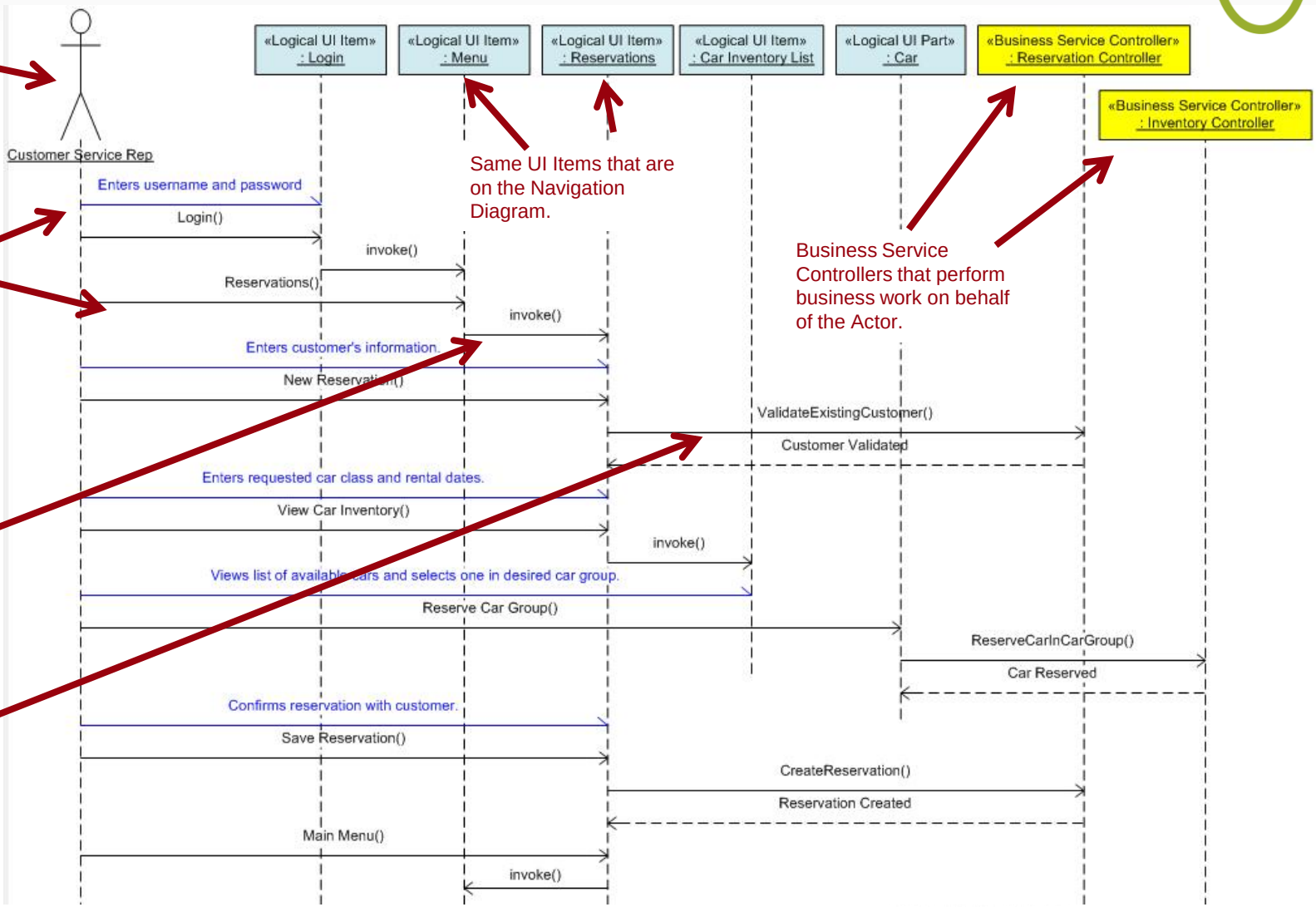
Usage Scenario Modeled in UML

The "Customer Service Rep" actor, the same one used in the userflow.

Ad hoc work performed by the Actor not done using the system

User action invoked by the Actor. This action lives on the "Main Menu" UI Item screen and will navigate the Actor to the "Reservations" UI Item through an invoke action.

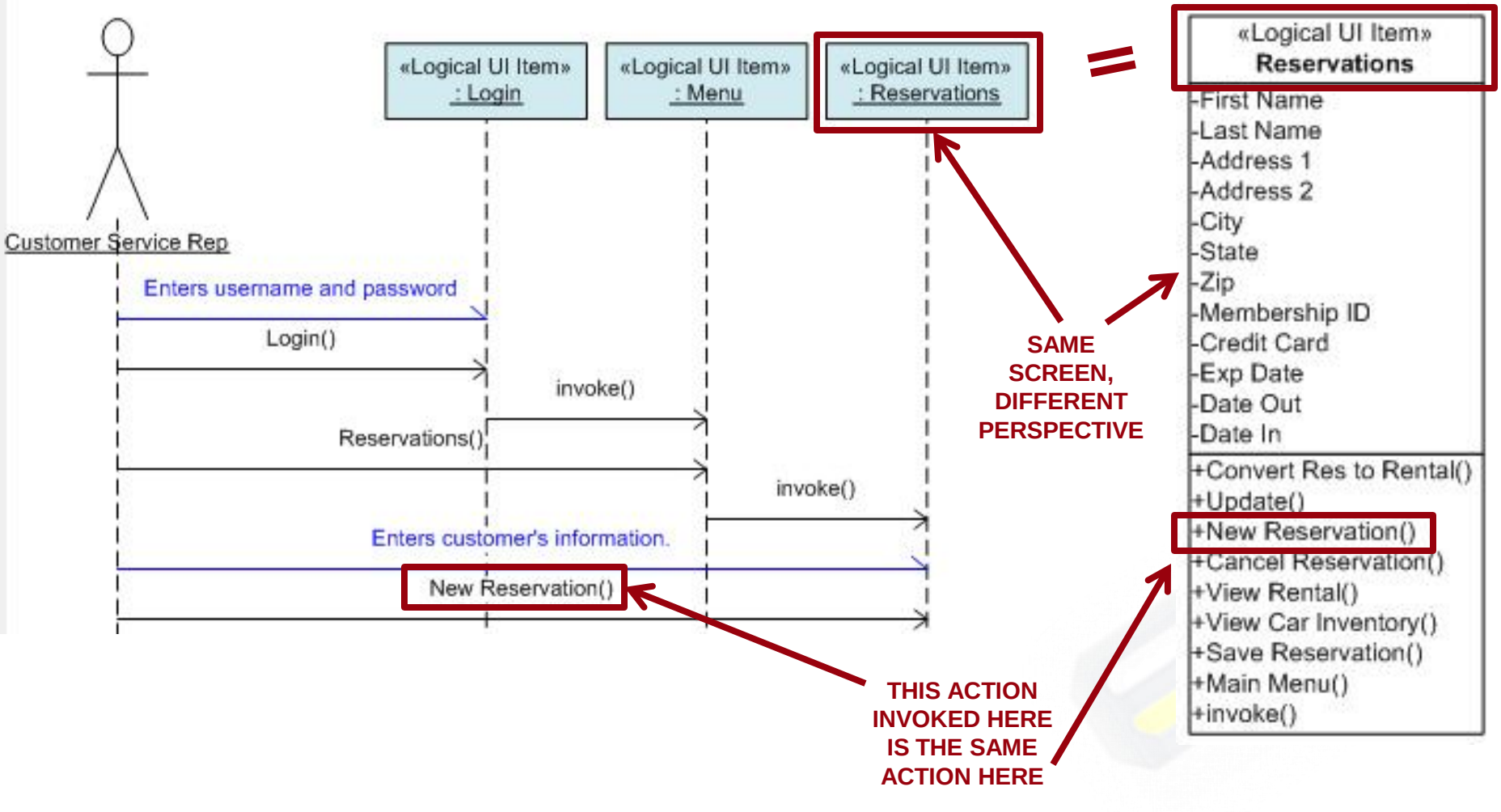
An invoked business service of a Business Service, in this case "ValidateExisting Customer".



Same UI Items that are on the Navigation Diagram.

Business Service Controllers that perform business work on behalf of the Actor.

Navigation Linking with Usage Scenarios



Value of Usage Scenarios

- Usage Scenarios illustrate the proposed solution.
  - They give specific examples of how things should work.
  - Stakeholders get a better picture of what they're getting.
  - IT gets a better understanding of what they need to build.
- Usage Scenarios easily map to test cases.
  - Clarify traceability.
  - Leads to improved testing and quality.

BA BoK Futures...

- Intersection with Business Architecture
- Requirements Types
- Project Archetypes
- Business Meta-model Concepts

Stakeholder Requests

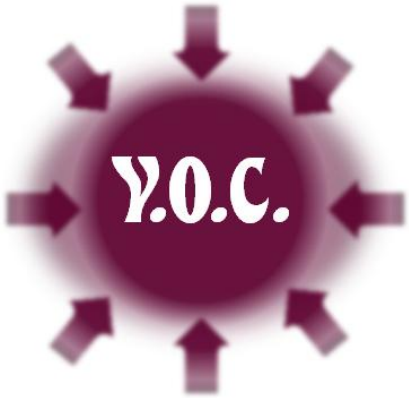
"We want the customer to have a pleasant rental experience."

"Customers should be able to reserve a car within 3 minutes."

"Loyalty program must be included in new system."

"Need ability to view customer's rental history for last year."

"Must be able to assign a marketing promotion to a rental contract."



Characteristics of a Quality Requirement

Hmm, am I well-formed?

Requirement

Let's see, I...

- ☑ Unitary
- ☑ Complete
- ☑ Verifiable
- ☑ Unambiguous
- ☑ Traceable

I am! I am! I am well-formed!

Requirement

IF YOUR REQUIREMENTS CAN'T BRAG LIKE THIS, THEY NEED TO GO BACK TO THE DRAWING BOARD.

Source: IEEE

The Line Item Requirement

- Few organizations can successfully manage requirements using Line Item Requirements.
  - Too little context
  - Too many requirements
  - Hard to validate

Other Stakeholder Requests

Flows

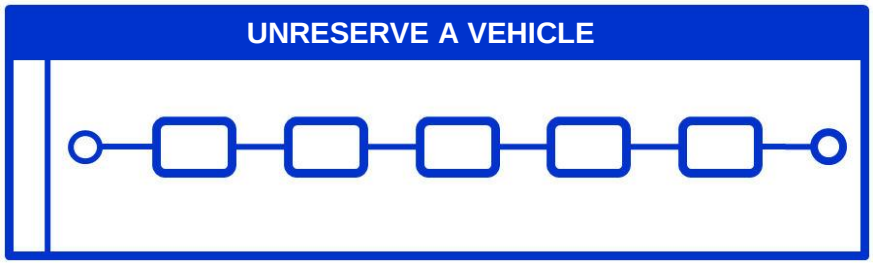
- SRs may be expressed as:
  - Sample scenarios
  - Usage stories
  - Process flow

CUSTOMER RESERVATION PROCEDURE

1. Upon reaching the Reservation Page, customer enters the dates of reservation and the pickup location.
2. The system parses the pickup location and if it is unable to determine the location, displays the available rental locations list for the customer to choose.
3. Customer specifies the car class desired.
4. Customer submits the reservation request.
5. The system determines if a car of specified car class is available for the requested dates at the requested…

OUT OF CAR CLASS INVENTORY SCENARIO
When the rental agent cannot assign a vehicle whose car class matches the customer's requested car class, he or she must attempt to find a vehicle in the next car class higher unless a car of the same car class can be transferred from a neighboring rental location.

If no car classes from a higher car class are available, agent should offer a lower car class with a U-Rent inconvenience coupon.



The Limitations of Stakeholder Requirements

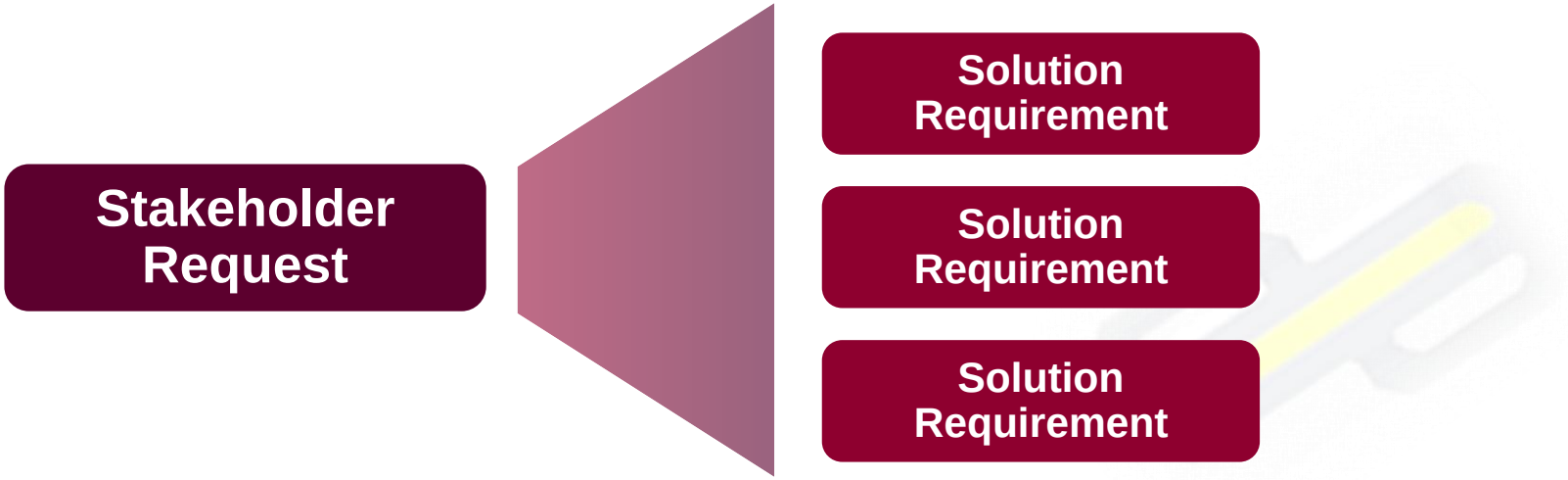
What issues do you find when you start to work with Stakeholder Requirements?

Refactoring

- Involves analyzing Stakeholder Requests and expressing them into one or more Solution Requirements.
- A Solution Requirement is expressed in its simplest form. (Cannot be broken down further) and provides value when defining a solution.
- Focus:
  - Restating the requirement in more precise terms
  - Removing extraneous verbiage
  - Breaking a statement with multiple requirements into distinct requirements
  - Finding and eliminating duplicates

Solution Requirement

- Solution Requirements are:
  - Singular targeted statements that directly relate to a some part of solution.
  - Functional Solution Requirements are often referred to as *Features.*



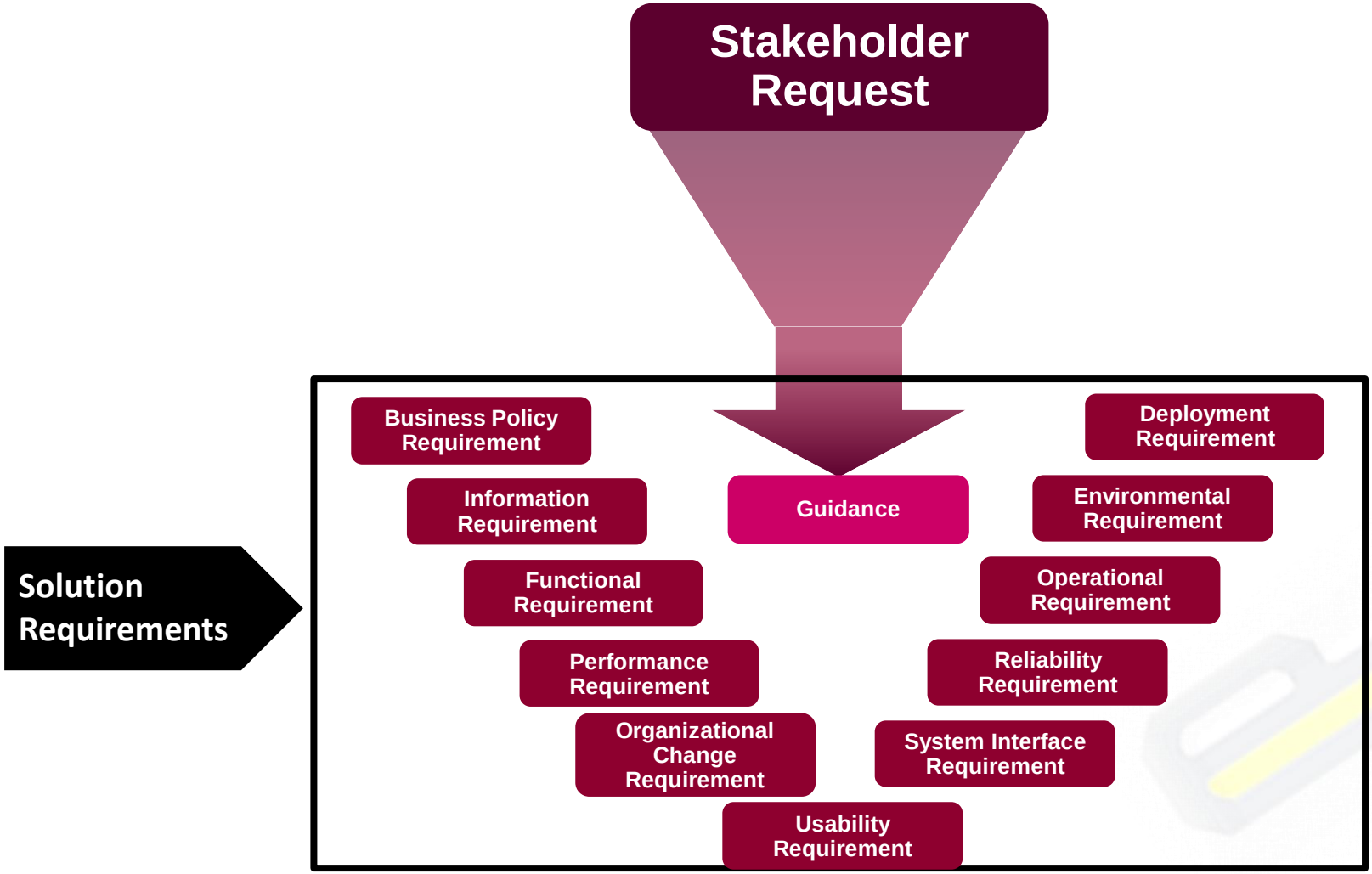
Requirement Categorization Discussion

What does it mean to place a requirement in one of your requirement categories?

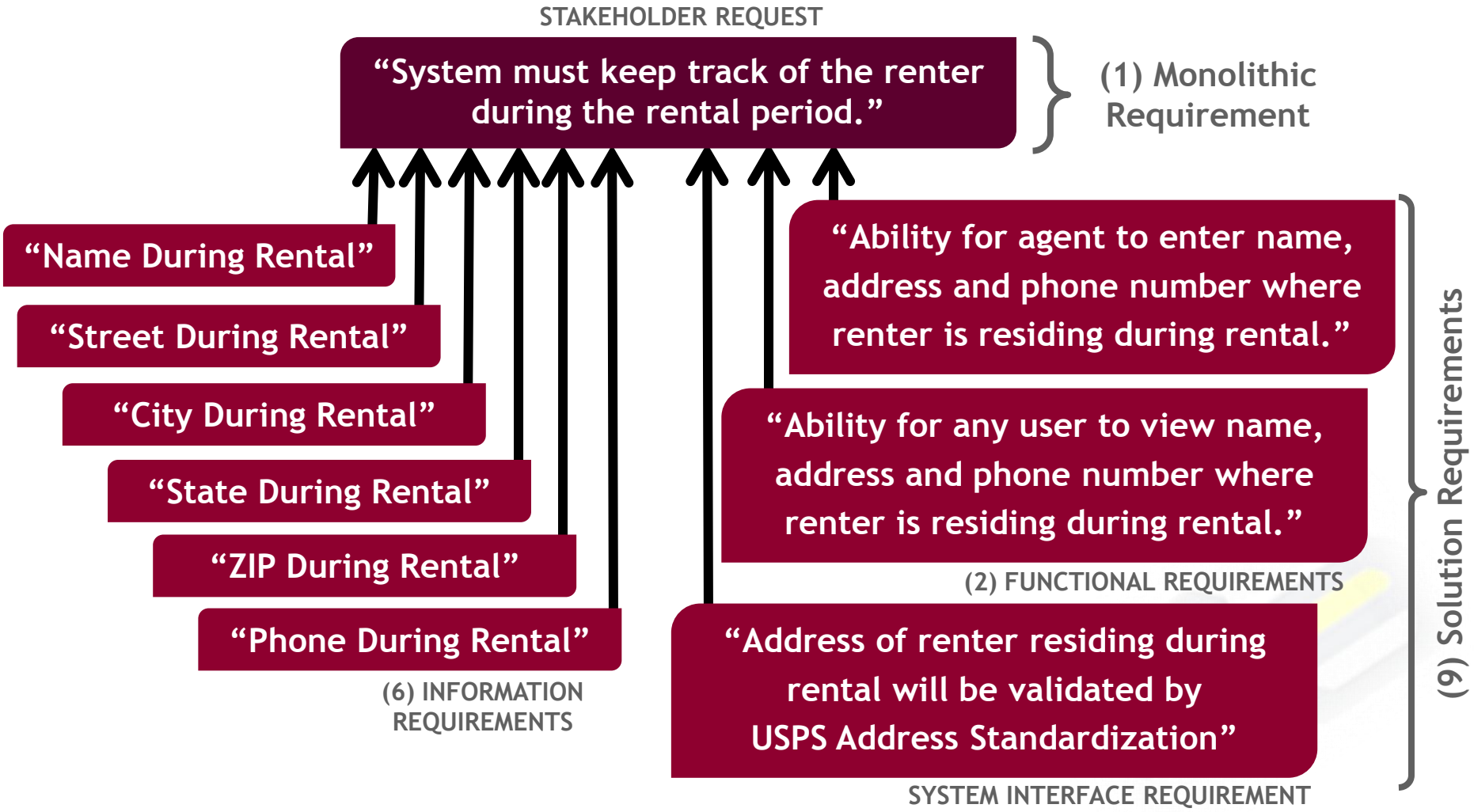
How do you categorize your requirements?

What is the value of categorizing a requirement?

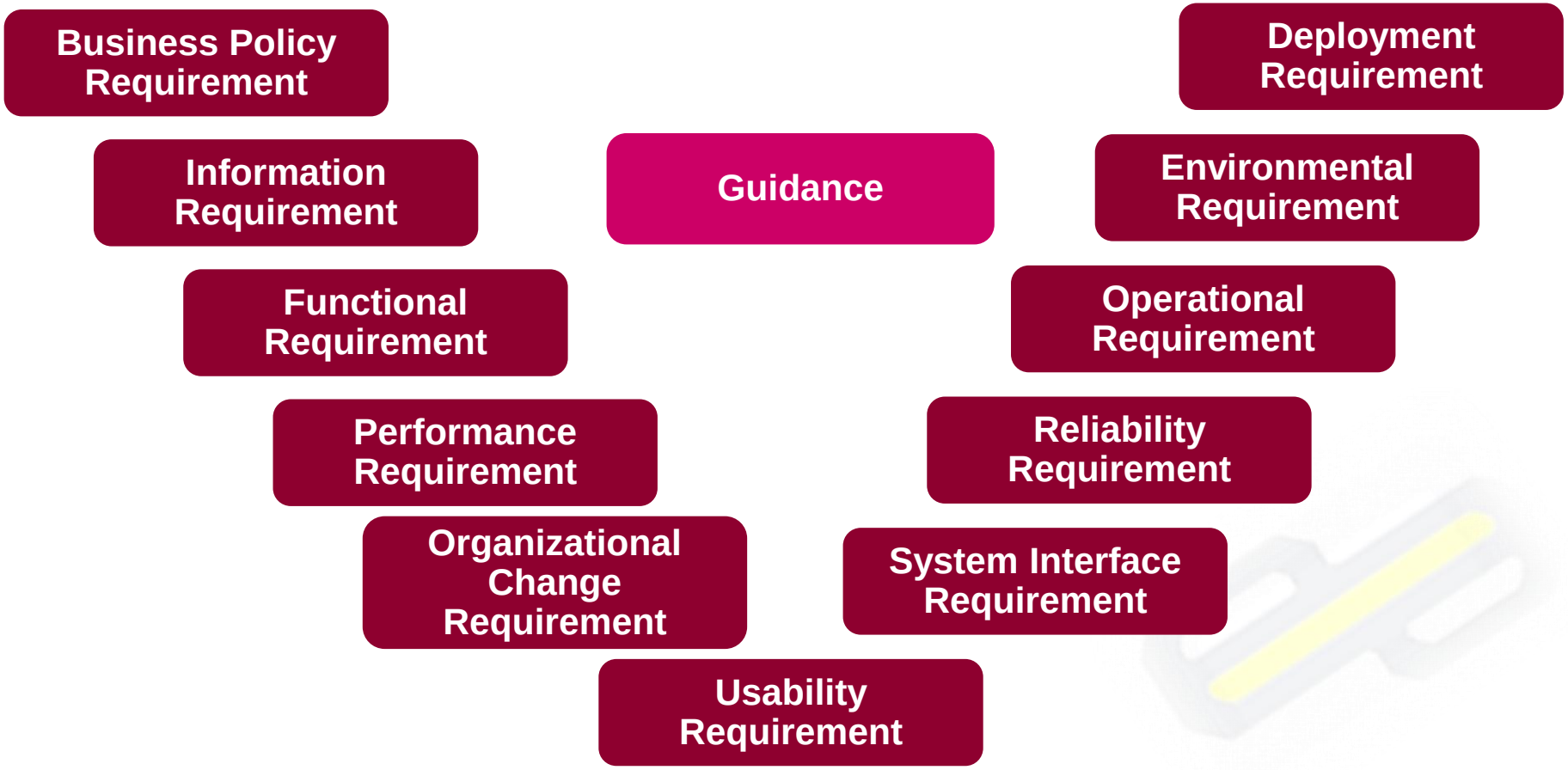
Tracing From Stakeholder Requests



Breaking out Requirements



Requirements Types Defined



Refactoring: Analysis Ad Nauseam?

- We've discussed how to break down a Stakeholder Request into to more manageable and well-defined statements.
- The number of requirements categories to make use of can vary by project.

Don't apply a great technique to a problem that doesn't need it.

What's the Value?

How does the categorization of requirements help IT Engineers / Designers?

How does refactoring help Business Stakeholders / SMEs?

How does refactoring and categorization help the Business Analyst?

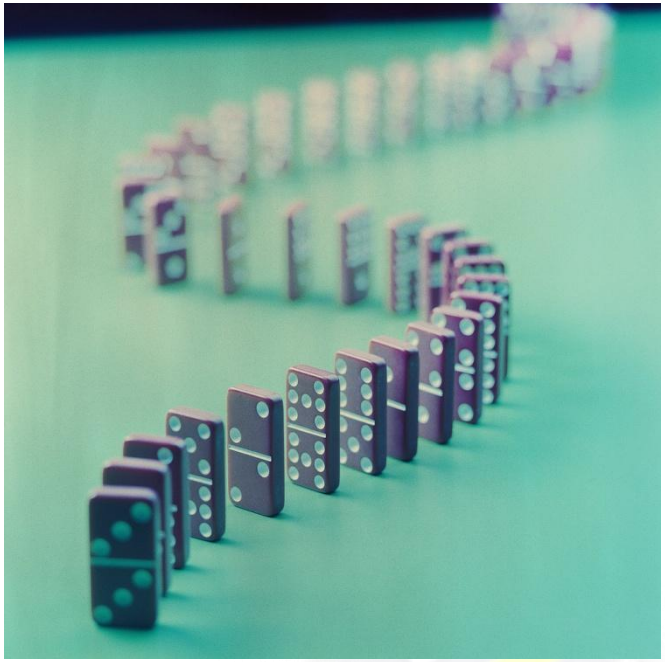
Traceability

- Ability to link requirements:
  - Back to Stakeholders' motivations and/or external mandates
  - Forward to corresponding design artifacts, code, and test cases that achieve these.

Usually accomplished in the form of a matrix or tree created for the verification and validation of the project.

Requirements and Traceability

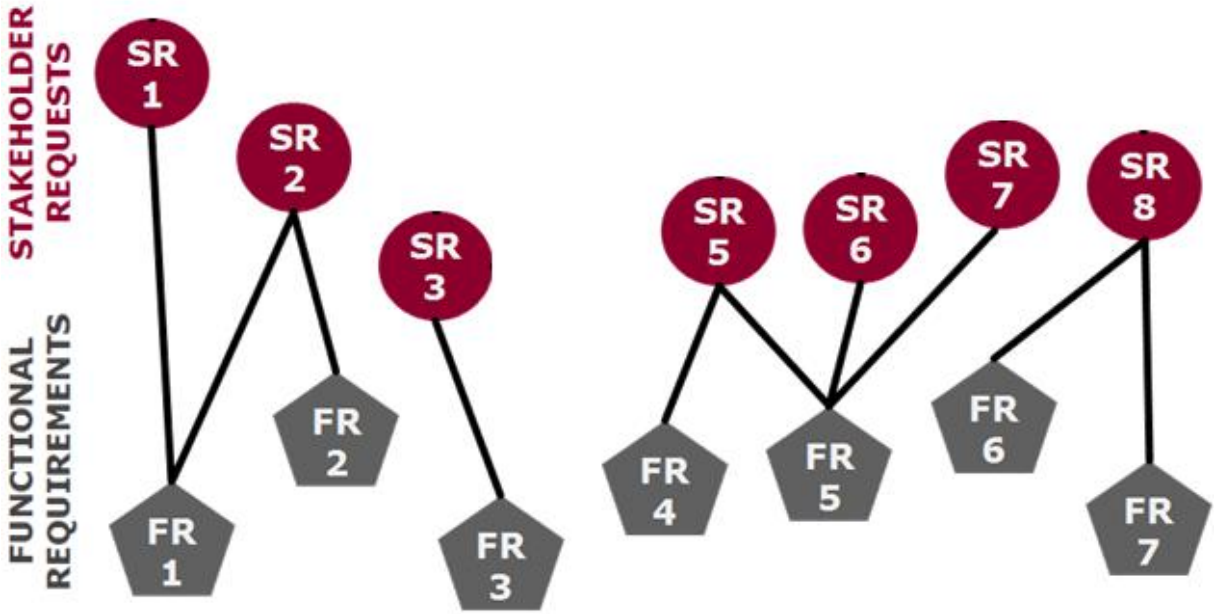
- Why do we do it?
- Why is it important?
  - What doesn't it buy us?



Requirements Traceability:
The Primary Connection

Map requirements onto narrower statements that map directly to implementable elements of the automation solution.

DOWN



Map requirements to the processes that are impacted.

UP

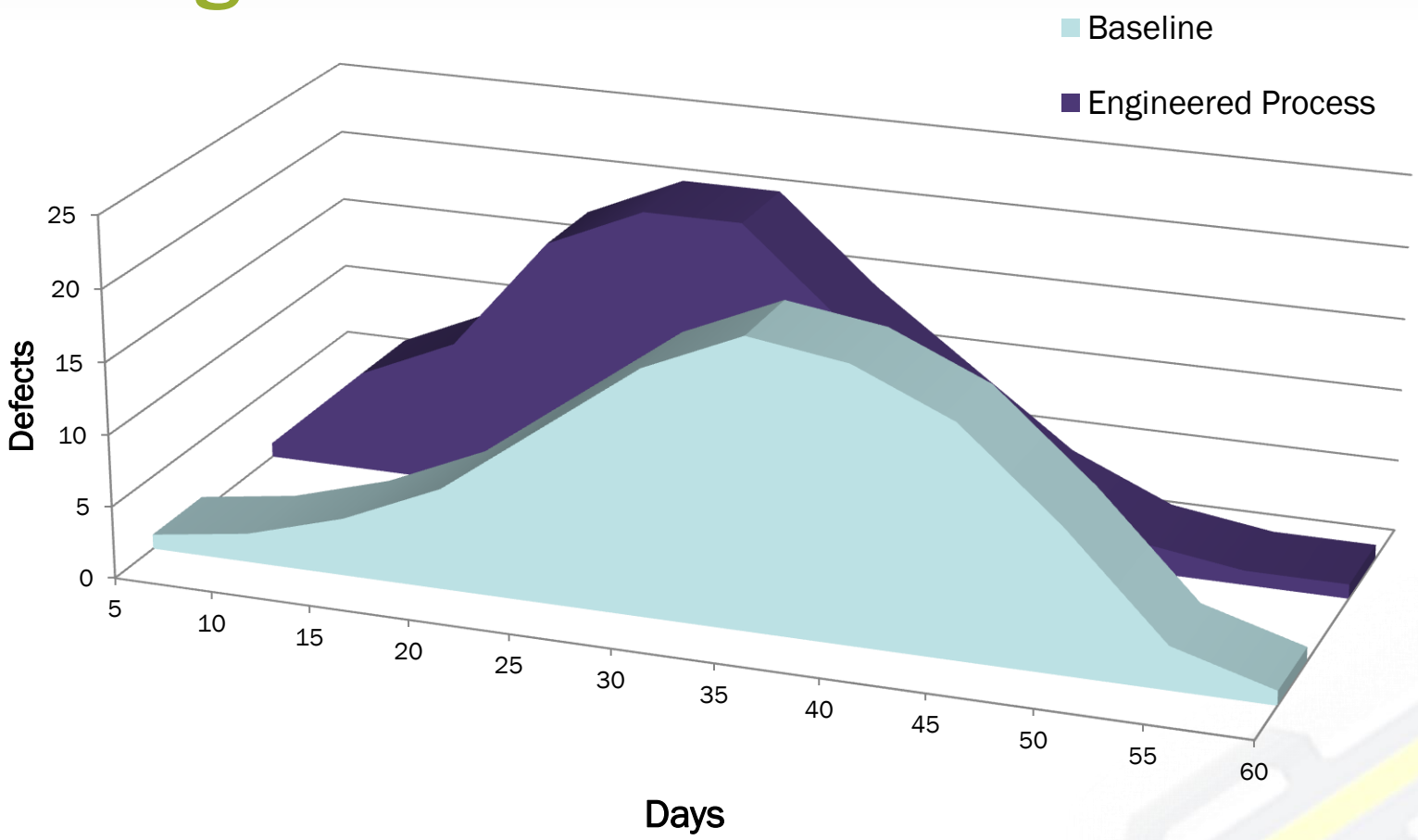
Refactoring Requirements

Does your organization use traceability schemes for managing requirements?

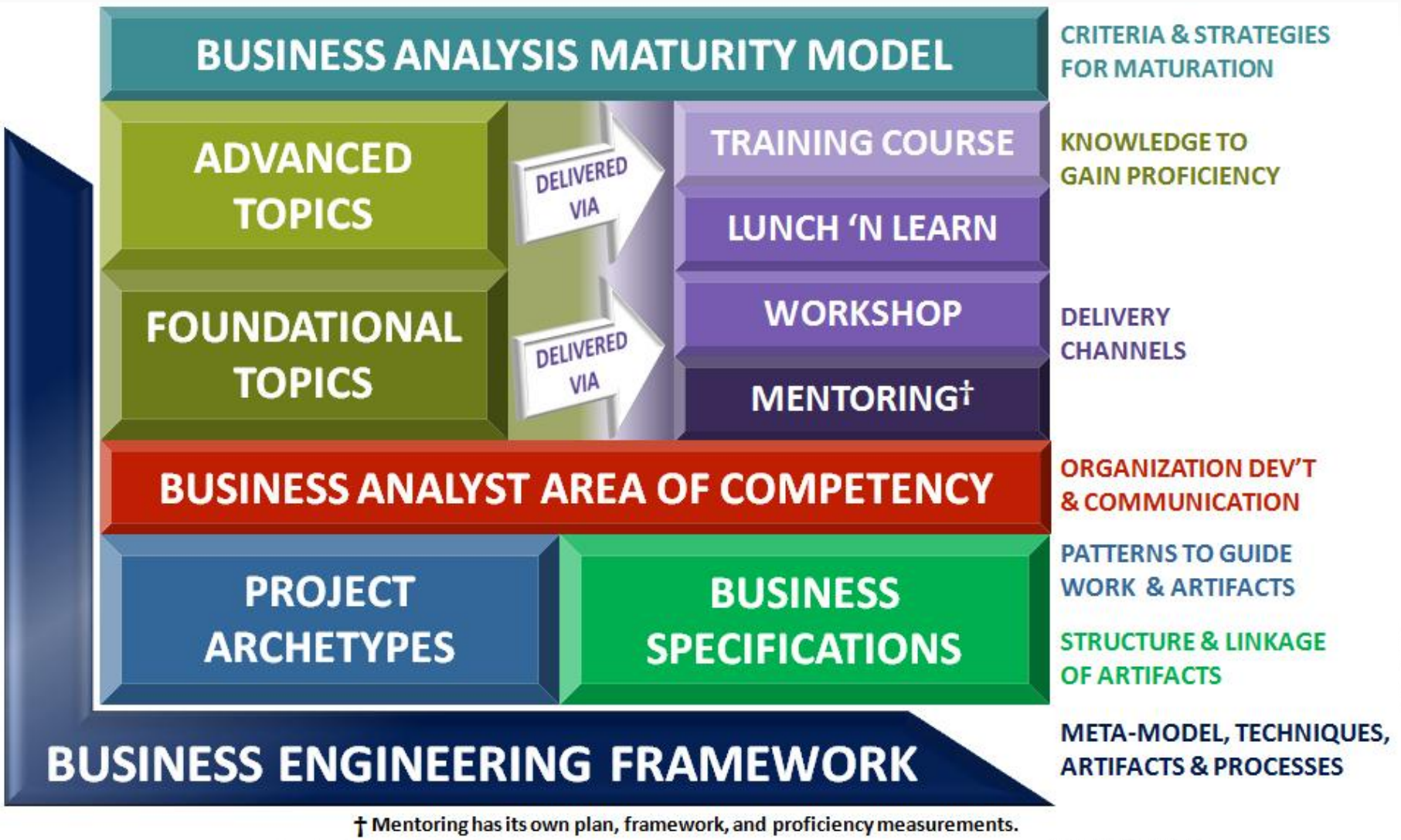
When do we have enough requirements?

What are the pitfalls of doing too much traceability?

Shifting the Curve



INCREASING BUSINESS ANALYSIS PROFICIENCY



† Mentoring has its own plan, framework, and proficiency measurements.

Thank You!

Questions?

More Information at
www.enterprise-agility.com