PXL – IT
42TIN1280 Software Analysis - Introduction

Week 02 – semester 01

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Content

- The essential software requirement

- What are requirements?

- Levels and types of requirements

- Best practices: international standards – ISO

- SMART Requirements

- Best practices: JIRA - EPICS - USER STORIES

- Requirements development and management

- Brief history of requirements methods & modeling

- **The role of the analyst + recap case**

- Questions & Answers

The role of the analyst, requirements engineer

What is Business Analysis?

Wikipedia Definition of Business Analysis

Business analysis is a research discipline of identifying business needs and determining solutions to business problems

http://www.wikipedia.org

IIBA Definition of Agile Business Analysis

Agile business analysis is about increasing the delivery of business value to the stakeholders of the project or product being developed.

http://www.iiba.org/BABOK-Guide/Agile-Extension-to-the-BABOK-Guide-IIBA.aspx

IIBA BABOK

IIBA D...

Business analysis is the set... among stakeholders in order to underst... of an organization, and to recommend solutions t... achieve its goals.

AIBA Definition of Business Analysis

...effective Business Analysis capability will drive successful project execution and organisational performance improvement

http://businessanalysis.com.au/
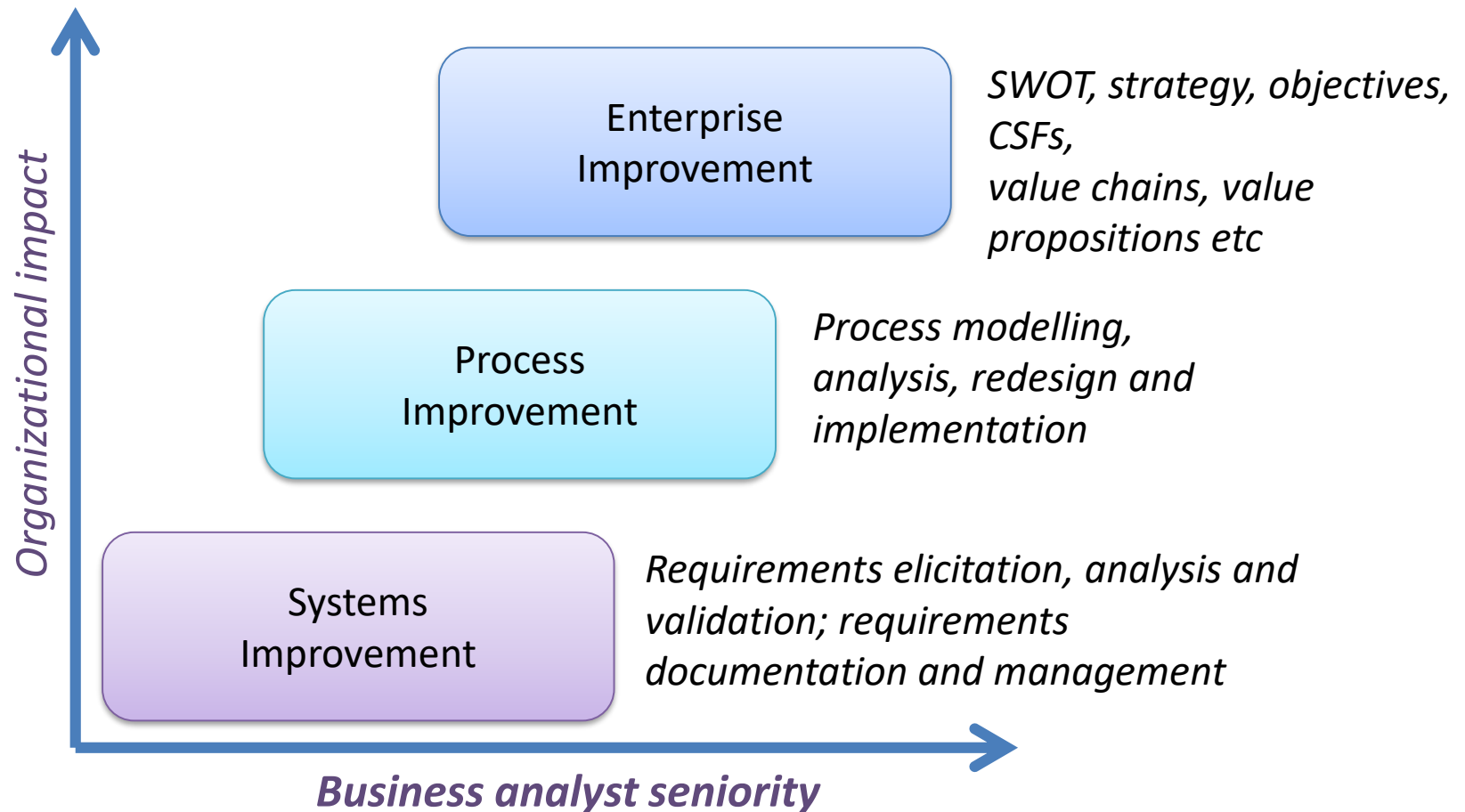
The Business Analyst

IIBA Definition of a Business Analyst

A business analyst is any person who performs business analysis activities, no matter what their job title or organizational role may be.

IIBA BABOK Guide Version 2.0

The scope of business analysis

Enterprise Improvement — SWOT, strategy, objectives, CSFs, value chains, value propositions etc

Process Improvement — Process modelling, analysis, redesign and implementation

Systems Improvement — Requirements elicitation, analysis and validation; requirements documentation and management

Organizational impact

Business analyst seniority

Activities of the business analyst

- Analyze and synthesize information provided by a large number of people

- Responsible for eliciting the actual needs of stakeholders, not simply their expressed desires

- Facilitate communication between organizational units

- Align the needs of business units with information technology

- May serve as a "translator" between business units

IIBA Underlying Competencies

1. **Analytical Thinking and Problem Solving** – problem solving, creative thinking, systems thinking, learning and decision making

2. **Behavioral Characteristics** – ethics, personal organization and trustworthiness

3. **Business Knowledge** – business principles & practice, industry knowledge, organization knowledge and solution knowledge

4. **Communication Skills** – oral communication, written communication and teaching

5. **Interaction Skills** – facilitation & negotiation, leadership & influencing and teamwork

6. **Software Applications** – general purpose applications and specialized applications

IIBA = International Institute of Business Analysis

The Business Analyst – Req. Engineer

- Read all slides to the end of this presentation (Cf. MS Word)

- Execute a self-assessment

- http://www.skillsyouneed.com/ls/index.php/343479/

- What's the result? How do you score?

- Also prepare "recap case":
  Recapitulation case "BA wanted"

The Business Analyst – Req. Engineer

Business

Technology

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- Misconceptions

I'm just a note taker.

I'm just the scribe.

It's not my place to ask questions.

I don't want to slow things down.

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- 6 key areas

Analytical Thinking & Problem Solving	Behavioral Characteristics
Business Knowledge	**Communication Skills**
Interaction Skills	**Software Applications**

* source IIBA BABOK 2.0

The Business Analyst – Req. Engineer

- Creative Thinking

Analytical Thinking & Problem Solving

"Business analysts must be effective in generating new ideas for approaches to problem solving and in generating alternative solutions."
[BABOK 2.0]

- Applying methodology to your project
- Approach for eliciting requirements from team members
- Finding alternative solutions
- Where else can you be creative on your projects?

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- Decision making

Analytical Thinking & Problem Solving

"Business analysts must be effective in understanding the criteria involved in making a decision, in making decisions, and in assisting others to make better decisions." *[BABOK 2.0]*

- Decisions you might be faced with:
    - What kind of requirement is it?
    - How much detail is enough?
    - Is the information relevant?
    - Does it meet the business objectives?
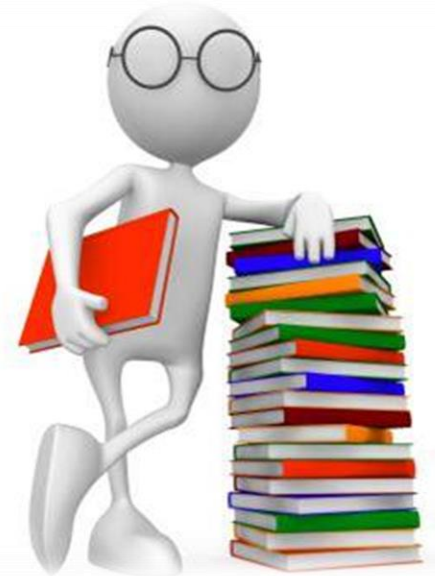   - Should I use a different elicitation technique?

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- Learning

Analytical Thinking & Problem Solving

"Business analysts must be effective at learning about business domains and how they function, and then translate that learning into an understanding of how to benefit an organization." *[BABOK 2.0]*

- How many different projects do you work on?

- Each new project is a potential learning experience
  - New people, new ideas, new solutions

- Be prepared for your project

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- Problem solving

Analytical Thinking & Problem Solving

"Business analysts must be effective at defining and solving problems in order to ensure that the real, underlying problem is understood and that solutions actually address that problem." *[BABOK 2.0]*

- What happens when requirements don't meet objectives?

- What do you do when it feels like no one is getting it?

- What happens when stakeholders don't agree?

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- Systems thinking

Analytical Thinking & Problem Solving

"Business analysts must be effective at understanding how the people, processes, and technology within an organization interact in relationships and patterns to create a system as a whole." *[BABOK 2.0]*

- See the bigger picture!

- System, in this case, means more than an IT application

- What might happen to applications, processes, and people if a requirement changes?

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- Ethics

Behavioral Characteristics

"A business analyst must be able to behave ethically in order to earn the trust and respect of stakeholders, and be able to recognize when a proposed solution or requirement may present ethical difficulties." *[BABOK 2.0]*

- If you aren't getting it, don't hide it.

- Be upfront about your abilities?
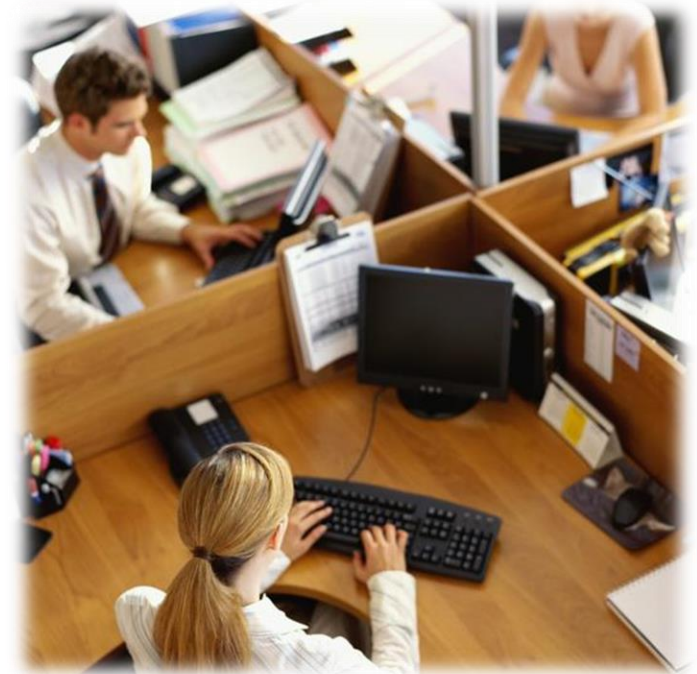
- Can you think of other examples?

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- Personal organization

Behavioral Characteristics

"Personal organization skills assist the business analyst in effectively managing tasks and information."
[BABOK 2.0]

- Lots of information to manage
- Information comes at high velocity
- Most projects have many requirements and documents to manage
- If you aren't organized you will struggle.

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- Trustworthiness

Behavioral Characteristics

"Earning the trust of key stakeholders is necessary to ensure that the business analyst is able to elicit requirements around sensitive issues and to ensure that recommendations are evaluated properly." *[BABOK 2.0]*

- Very important skill!
- If stakeholders don't trust you they won't tell you everything you need to know
- Work in the stakeholders best interest
- Honestly address issues

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- Business Principles and Practices

Business Knowledge

"Business analysts require an understanding of fundamental business principles and best practices, in order to ensure that they are incorporated into and supported by solutions." *[BABOK 2.0]*

- Basic skill for most job types

- Professionalism

- Reporting practices

- Follow-up

- Timeliness

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- Industry Knowledge

Business Knowledge

"Business analysts should have an understanding of the industry that their organization is in so that they may understand new challenges that may be posed by competitive moves, and which solutions have proven effective elsewhere." *[BABOK 2.0]*

- Know your industry

- Know terminology and jargon

- In what other ways can industry knowledge help the BA?

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- Organization Knowledge

Business Knowledge	"Business analysis is significantly assisted by an understanding of the organization for which it is being performed." *[BABOK 2.0]*

- Understand
  - the hierarchy
  - the culture
  - products and services
- Find the right people
- Find help when you need it

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- Solution Knowledge

Business Knowledge	"Business analysts can use their understanding of existing solutions in order to identify the most effective means of implementing a change." [BABOK 2.0]

- Is a pro and can be a con
- Might know an easier way to get it done
- Might know past challenges and avoid them again
- Watch this one – sometimes when you are the subject matter expert your ability to write good requirements can be limited by your unconscious assumptions!

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- Oral communication

Communication Skills

"Oral communication skills enable business analysts to effectively express ideas in ways that are appropriate to the target audience." [BABOK 2.0]

- You have to ask questions!
  - Ask lots of why questions?
  - Ask lots of what questions too!
- Confirm what you thought you heard
- All requirements elicitation techniques depend on the BAs ability to communicate!

The Business Analyst – Req. Engineer

- Teaching

Communication Skills

"Teaching skills are required to ensure that business analysts can effectively communicate issues and requirements and to ensure that the information communicated is understood and retained." *[BABOK 2.0]*

- Know when your audience isn't following

- Change up your presentation approach

- Help stakeholders to understand the process you are using to elicit and document requirements

Tell me and I forget. Teach me and I remember. Involve me and I learn.

QuotesHDWallpapers.com

Benjamin Franklin

The Business Analyst – Req. Engineer

- Written communication

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Communication Skills

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"Written communication skills are necessary for business analysts to document elicitation results, requirements, and other information for which medium to long term records are required." *[BABOK 2.0]*

- Note taking skills
- Clear, concise, simple sentences
- Use common language
- Use good grammar
- Organized documentation
- Don't over complicate your requirements documents

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- Listening

Communication Skills	"Listening skills are critical to business analysts in eliciting, understanding, and documenting information." *[BABOK 2.0]*

- Don't try to write requirements when you are eliciting information
- Practice active listening – confirm what you thought you heard
- Pay attention
- Don't multitask

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- Facilitation and Negotiation

Interaction Skills

"Business analysts facilitate interaction between stakeholders in order to help them resolve disagreements regarding the priority and nature of requirements." *[BABOK 2.0]*

- Disagreements?
  - That never happens, right?
- Sometimes no one talks; only one or two people talk
- Sometimes stakeholders don't agree
- What do you do when these happen?

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- Leadership and Influencing

Interaction Skills

"Business analyst need to be able to be effective in formal and informal leadership roles, in order to guide others investigating requirements and to help encourage stakeholder support for a necessary change." *[BABOK 2.0]*

- Lead your requirements effort
- Motivate team members to work together
- Set vision for where you want the requirements effort to go
- Don't yield your responsibility
- Remember you're not just taking notes!

The Business Analyst – Req. Engineer

- Teamwork

Interaction Skills	"Business analysts must be able to work closely with other team members to effectively support their work so that solutions can be effectively implemented." *[BABOK 2.0]*

- Team relationships are important for project success
- Handle emotional conflicts
  - Us vs. Them
- Handle cognitive conflicts
  - Conceptual differences
  - Some agree and don't realize it
- Everyone gets an opportunity to contribute

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- General Purpose Applications

<table>
<tr><td>**Software Applications**</td><td>"Business analysts use office productivity applications to document and track requirements." *[BABOK 2.0]*</td></tr>
</table>

- Know which tool is appropriate
- Basic, have to know, tools
  - Email
  - Word Processing
  - Spreadsheet
  - Presentation
  - Instant messaging
  - Collaboration / Screen-sharing
- Don't let the tool get in your way!

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- Specialized Applications

Software Applications

"Business analysts use modeling tools to support development of formal models, and in some cases, their validation and implementation as well." *[BABOK 2.0]*

- Apps/Tools for
  - General Diagramming
  - Requirement Elicitation
  - Requirements Management
  - Business Process Modeling

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Requirements knowledge	IT knowledge
• Requirements principles • Techniques & methods • Tools	• Software engineering • Test engineering • Life cycle models • Architecture
Domain knowledge • Business process • User characteristics	**Soft skills** • Communication • Analytical • Change management

Technical know-how on its own won't suffice

Recapitulation case "BA wanted"

Recap case "BA Wanted" (1)

- Read the following description.

- As a team, rank the 5 requirements that are most relevant for this case.

A small scale bank is looking for a new business analyst.

This bank has offices in several European countries and its head office is located in the Netherlands. The bank is working with an internet based Bank Information System. The new business analyst will be working in the head office. He/she will be the link between the business and the (IT-)projects and be responsible for the translation from change requests into business requirements and for new projects also for the elicitation of the business requirements.

The bank has adapted the SCRUM method and the business analyst will be participating in the scrum teams.

Recap case "BA Wanted" (2)

	Requirements	Relevant
1	Successfully completed (business) information technology or economics studies	
2	Several years of experience as software developer and project leader /team leader in the area of ERP are desirable	
3	Good system development skills. You master at least one current programming language (ideally .net)	
4	Very good SQL knowledge and experience with MS SQL Servers	
5	Know-how in Web standard technologies such as HTML and XML/XSL/XSLT as well as knowledge in MS server technology ISS and Share Point	
6	Very good skills in the English language	5
7	Analytical thinking skills and strength in conceptual areas	2
8	Strong orientation to services and consulting	
9	High level of commitment	
10	Sure and convincing attitude	3
11	Ability to work under high work pressure	
12	Convincing communication skills	1
13	Being able to deal with cultural differences in an adequate way	
14	Testing experience on both system and acceptance level	
15	Domain knowledge of banking processes	4

Questions & Answers