Requirements Prioritization

Taking the Driver's Seat

Requirements

– A requirement is:

1. A condition or capability needed by a stakeholder to solve a problem or achieve an objective
2. A condition or capability that must be met or possessed by a solution or solution component to satisfy a contract, standard, specification, or other formally imposed documents
3. A documented representation of a condition or capability as in (1) or (2).

Page 3

Requirements: *"I want it all!!!"*

Page 4

Requirements Prioritization (RP)

By the Book (BABOK):

The importance of requirements may be based on their relative value, risk, difficulty of implementation, or on other criteria. These priorities are used to determine which requirements should be targets for further analysis and to determine which requirements should be implemented first.

"Left to their own devices, stakeholders will set 85% of the requirements at high priority, 10% at medium, and 5% at low priority. This doesn't give the project team much to work with."
-Karl E. Wiegers

Activity – 2 minutes

Scenario:

- It is 2p.m. on a Saturday. You have 4 hours – you want to accomplish the following (driving your friend's car):
  - Grocery shopping
  - Soccer game for the kids
  - Purchase BDay gift for sister
  - Schedule baby sitter
  - Make reservations at restaurant for 7 p.m. dinner
  - Get gas for the car
  - Wash the car
  - Weed the front yard
  - Pick up girl scout cookies for delivery to buyers
  - Pick up dry cleaning
  - Get dressed for formal dinner
  - Shower / personal grooming
  - Return defective merchandise for refund
  - Repair chipped windshield
  - Eat lunch
  - Fold and iron clean laundry
  - Replace broken sunglasses
  - Mail Credit Card payment
- You can't do them all – how do you decide? What is your technique?
- Which items do you choose?

What Drove Your Decisions?

- Personal Value of the Item?
- The Risk Factor? Assumptions?
- Difficulty?
- Likelihood of Getting it Done on Time?
- Simply a "Must Have?"
- How Closely Linked it was to other Items? (Geography, type of task, etc.)
- Unspoken Agreement with the Spouse/Friend?
- Personal Deadline?

Page 7

Inputs to RP

- **Business Case:** The business case states the key goals and measures of success for a project or organization, and priorities should be aligned with those goals and objectives.
- **Business Need:** Serves as an alternative to the business case if no business case has been defined.
- **Requirements:** Any requirement may be prioritized, at any point in its lifecycle. Requirements prioritization requires that requirements have been stated by stakeholders; however, the requirements may not have been fully analyzed or in their final form.
- **Requirements Management Plan:** Defines the process that will be used to prioritize requirements.
- **Stakeholder List**, **Roles, and Responsibilities**: The list of stakeholders, annotated with their levels of authority and influence, is used to determine which stakeholders need to participate in prioritization.

Page 8

Challenges

Challenges in facilitating a requirements prioritization session include:

- **Non-negotiable Demands:** Stakeholders attempt to avoid difficult choices, fail to recognize the necessity for making tradeoffs, or desire to rank all requirements as high priority.
- **Unrealistic Tradeoffs**: The solution development team may intentionally or unintentionally try to influence the result of the prioritization process by overestimating the difficulty or complexity of implementing certain requirements.
- **Too Many Stakeholders:** It is not uncommon that many business area resources demand to be in attendance at RP workshops (or even RD workshops). The larger groups can be harder to coordinate and individual agendas may not align with overall business objectives or future state processes.
- **Poor Preparation:** The BA may face scheduling, participation, and tool / approach challenges in the RP session without proper preparation of facilities, tools to be used, a focused approach and agenda, pre-organized RP inputs, and clear delineation of ground rules for participants.

Page 9

Tools and Techniques

- Decision Analysis
  - Decision Flow
  - Decision Tree
  - Weighted Scorecards
- Risk Analysis
- MoSCoW
- Time Boxing/Budgeting
- Voting
- Delphi Technique
- Brainstorming
- Ranking and Categorization
- Past Project Templates (i.e. RTM)
- Observations (Job Shadowing)
- Prototypes
- Surveys / Questionnaires
- Benchmarking
- Context Diagrams (swim-lanes & ERDs)
- Document Analysis

Page 10

Output

Requirements [Prioritized]: A prioritized requirement has an attribute that describes its relative importance to stakeholders and the organization. At the completion of this task, each requirement should have an assigned priority. The priorities may apply to a requirement or to a group or related requirements

Example

You are going to buy a motorbike/scotty with an extra seat to travel with your friend on the weekends. The bike should have a low seat and a four-cylinder engine. Unlimited mobility is also important. Your favorite color is red, so you want to have a red color body. You also want to get good wind protection.

It would be also nice to have Bluetooth connectivity for your iPod. In addition, you are fond of having a helmet with a double ventilation system…

MoSCoW

Page 13

Example

- Let's define prioritization:
- **M** – a new bike for traveling, an extra seat.
- **S** – a low seat, a four-cylinder engine. Unlimited mobility.
- **C** – a red color body, extra wind protection.
- **W** – Bluetooth and a helmet with a double ventilation system.

Page 14

The RP Process
Rqts
Inputs to RP
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Obstacle Awareness
Tools and Techniques
Pareto Diagrams
Tree Diagrams
Prioritization Matrices
Interrelationship Digraph
Flowcharts
Matrix Diagrams
Rqts
Output
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Page 15

Open Discussion and Q&A
Page 16