

Introduction

Defining requirements is still the best tool we have for reducing the risks associated with developing solutions to business problems. A solution that does not fulfill the needs of the business is not a solution at all. Moreover, if an organization does not understand all of the requirements that must be satisfied in order to solve the business problem, it will be impossible to know what the solution must entail.

With the business world being pressed to always do more with less, faster than ever before, the process for defining requirements must be highly optimized for quick results. To address the challenge of defining requirements in a highly compressed timeframe, CSG has developed the Rapid Requirements Discovery (RRD) technique.

What is Rapid Requirements Discovery?

CSG processes have evolved over the course of many years from our involvement in scores of projects. Our approach to defining requirements is based on our experience with what consistently works well to produce good results. The RRD technique is an important component of the larger CSG process framework, and is oriented to the need for quickly understanding and documenting requirements.

Borrowing from established methodologies such as CRC, Rational Unified Process and Agile development, the RRD process is intended to identify and document the essential requirements that will drive the design, development and quality assurance of the intended solution. The technique can be effectively applied to business processes as well as software development projects. Through well-facilitated “conversations” (requirements discovery sessions), small groups (3 to 6 people) composed of business stakeholders, subject matter experts, technical experts and end users collaborate to expose “raw” requirements. The essence of these raw requirements is captured in the form of “essential elements” of the software system. There are five core elements that pertain to requirements. These are:

- ▶ Business and System Goals
- ▶ Assumptions and Constraints
- ▶ Actors
- ▶ Subjects
- ▶ Processes

As initially described, the RRD technique relies on facilitated group conversations involving the people who are sources of requirements information. The facilitator will guide and direct the conversation, focusing the group discussion around specific topics of interest (i.e., business processes). The conversations are intended to be highly interactive with rich and full participation from all members of the group.

Depending on which stage in a project the RRD conversation is taking place, the scope of the conversations will vary. In the early stages of the project, conversations will tend to be broad and fairly high-level. In later stages, the scope of conversations will tend to be narrow and detailed. In either case, the kinds of information captured from the conversation will pertain to one of the five core elements listed previously.

During the RRD conversation, the group gathers around a large table. The tools provided for the group include color-coded 3x5 index cards and markers. The cards are used to capture raw requirements data, which will emerge from the group discussions. Each of the five core elements, as listed above, is

represented by a unique card color. At the start of the conversation session, the facilitator will describe the process, the ground rules, and how the cards will be used. “Creating” cards is a function of the group, not just the facilitator. During the course of a conversation, whenever a new element is mentioned, the group is responsible for briefly documenting the element on the appropriately colored card. For example, there could be a discussion about a customer ordering a product. From this brief snippet of a conversation, there could be five cards created:

- ▶ A Subject card would be created for a Customer
- ▶ An Actor card would be created for a Customer
- ▶ A Subject card would be created for an Order
- ▶ A Subject card would be created for a Product
- ▶ A Process card would be created for the Order Entry Process

Note that in this example a Customer can be both an Actor (as someone who visits our Web site) and a Subject (business class). Note also that the Order Entry Process card was implied rather than explicitly identified.

When a card is created to capture an element, additional information about the element is written on the card. The idea is to capture just enough information to adequately represent the element. Typically this includes some sort of label and a brief description. All members of the group are encouraged to create cards whenever they hear something new in the conversation that relates to one of the core elements.

Once a card is created it goes out to the middle of the table and is “community property”, meaning that anyone in the group can modify the card, if they choose to do so, to further enhance understanding. This promotes lively and productive discussion by encouraging participants to contribute thoughts and ideas, and to validate, or perhaps even challenge, the opinions of others in the group. In this way, the cards further stimulate the discussion, while at the same time, help to record important information that can be later “mined” for detailed requirements.

RRD conversations will focus on the topics relevant to the business problem being addressed. Topics of discussion will tend to include business processes, business rules, business entities, data, transactions, related systems, workflows, technology assumptions, constraints, etc. As cards are created, the group will discuss what the card represents, and will seek to reach consensus about the definition of the card. Later, the contents of the cards will be further elaborated by the requirements analyst to produce other useful artifacts such as process models, use cases, and in many instances, detailed requirements statements. In this way, the raw requirements elements are further refined to produce deliverables that are most useful for the projects. In follow-up to the RRD conversations, when necessary, the requirements analyst will spend one-on-one time, as required, with the appropriate subject matter experts to fully flesh out detailed requirements.

The key to getting the desired results from this process is the effective facilitation of the RRD conversation sessions. These sessions are intended to bring together all of the people who are essential sources of requirements, and through skilled facilitation, the business and domain knowledge held by individuals within the group can be extracted and documented. Using this technique, critical requirements information from participants can be efficiently harvested, producing valuable results very quickly.

From Conversation to Results

The RRD technique is very effective for initializing the detailed requirements process. RRD cards provide the requirements analyst with a way to quickly capture the key elements of the requirements, which can be further elaborated.

Detailed requirements discovery and requirements management builds upon the results of the RRD technique. Depending on the nature of the project and desired results, RRD provides the requirements analyst with a roadmap for follow-on requirements work. For example, if the focus of the project is to redesign and/or optimize existing business processes and work flows, the analyst will focus on the Goals, Constraints, Actors and Process elements to document the as-is details of the existing processes, and then will use the RRD information to drive the design of the new/modified processes. If the project focus is to develop a custom software system, the RRD information will provide input to the conceptual software architecture, and detailed requirements.

Summary

Working within the do-more-with-less constraints that most organizations experience today, RRD is an excellent way to expedite the important work of defining requirements. RRD efficiently taps into the knowledge and ideas that exist in the minds of the people who know and understand the business processes and related pain points. Using RRD to quickly capture this knowledge in a way that can be readily applied to creating solutions empowers organizations and people to succeed in spite of ever-increasing constraints.