Classification Part IV.b Elicitation	Basic	Advanced
21 Fundamentals of Requirements Elicitation		
21.1 Fundamentals of Requirements Elicitation	✓	
21.2 Requirements Elicitation: Definition	✓	
21.3 Use of Goals and Scenarios in Requirements Elicitation		✓
21.4 Sub-activity: Identifying Relevant Requirement Sources	✓	
21.5 Sub-activity: Eliciting Existing Requirements	✓	
21.6 Sub-activity: Developing New and Innovative Requirements	✓	
22 Elicitation Techniques		
22.1 Evaluation of the Techniques	✓	
22.2 Template for Describing the Techniques	✓	
22.3 Interview	✓	
22.4 Workshop	✓	
22.5 Focus Groups		✓
22.6 Observation	✓	
22.7 Questionnaires	✓	
22.8 Perspective-Based Reading		✓
23 Assistance Techniques for Elicitation		
23.1 Evaluation of the Techniques	✓	
23.2 Brainstorming	✓	
23.3 Prototyping		✓
23.4 KJ Method	✓	
23.5 Mind Mapping		✓
23.6 Elicitation Checklists	✓	

Chapter 21
Fundamentals of Requirements Elicitation

In this chapter, we outline:

- *The main goals of the requirements elicitation activity*
- *The use of goals and scenarios during requirements elicitation*
- *The three essential elicitation sub-activities*

21.1 Goal of Requirements Elicitation

Progress along the content dimension

Requirements elicitation is one of the three core activities of requirements engineering. The goal of requirements elicitation is to achieve progress in the content dimension (see Section 4.4) by eliciting new requirements as well as detailed information about existing requirements. The main goal of the elicitation activity is thus to elicit all requirements at the required level of detail for the system to be developed.

Diversity of requirement sources

Requirements exist in various forms, e.g. as ideas, intentions, or needs in the minds of stakeholders, as documented requirements typically in the form of text in natural language or requirements models, or in existing systems as implemented requirements. Hence, there are many diverse sources from which requirements need to be elicited.

Identification of relevant requirement sources

The different sources of requirements (e.g. stakeholders, documents, and existing systems) are typically not completely known at the beginning of the requirements engineering process. However, the consideration of all relevant sources of requirements during requirements elicitation is essential for the success of the requirements engineering process and hence the whole development process. Considering all relevant sources of requirements is not only important for eliciting all the requirements for the system, but also in order to support the acceptance of the system. Hence, the continuous search for relevant requirement sources is one of the three sub-activities of requirements elicitation (see Section 21.4).

Elicit existing requirements

Even if all relevant requirement sources are known, the requirements for the system must still be elicited from the identified sources. A main goal of the elicitation activity is hence to elicit existing requirements from known requirement sources. For eliciting requirements, the requirements engineers, among other things, conduct interviews with stakeholders, examine laws and documents such as market analyses or the development documentation of other systems, and/or analyse existing systems e.g. by experimenting with these systems (see, e.g., [Gause and Weinberg 1989]). The elicitation of existing requirements from identified sources is hence an important sub-activity of requirements elicitation (see Section 21.5). This sub-activity roughly corresponds to the analysis of the current state in Systems Analysis (see Section 3.1).

Develop new and innovative requirements

Nevertheless, requirements elicitation goes beyond the mere identification of requirements from different sources. In addition, new and innovative requirements should be developed as part of the requirements elicitation activity. New requirements can result, for instance, from applying creativity techniques, resolving conflicts, or discussion among the stakeholders. Obviously, new and innovative requirements for the system to be developed are typically not contained in or known by any requirement source. New and innovative requirements are often developed by combining individual views, opinions, and ideas of stakeholders with different backgrounds and experiences. The creation of new, innovative requirements is hence the third sub-activity of requirements elicitation (see Section 21.6).

Elicitation of goals, scenarios, functional and quality requirements, and constraints

When speaking of requirements elicitation, we mean the elicitation of all requirement types presented in Section 2.2. Consequently, the three sub-activities described in this chapter deal with the elicitation of goals, scenarios, functional requirements, quality requirements as well as constraints for the system to be developed. Furthermore, the elicitation techniques described in Chapter 22 (e.g. interviews) and the assistance techniques described in Chapter 23 (e.g. checklists) can be used for the elicitation and development of basically all types of requirements, i.e. goals, scenarios, functional requirements, quality requirements, and constraints. However, some specifics of goals and scenarios with respect to requirements elicitation are explained in Section 21.3.

21.2 Requirements Elicitation: Definition

Requirements elicitation

Following the characterisation of the requirements elicitation activity in Section 21.1, we define this core requirements engineering activity as follows:

Definition 21-1: *Requirements elicitation* Ⓓ

Requirements elicitation is one of the three core requirements engineering activities. The goal of the elicitation activity is to:

(1) Identify relevant requirement sources
(2) Elicit existing requirements from the identified sources
(3) Develop new and innovative requirements

The attainment of these three sub-goals is facilitated by the three sub-activities:

- Identifying relevant requirement sources (Section 21.4)
- Eliciting existing requirements (Section 21.5)
- Developing new and innovative requirements (Section 21.6)

21.3 Use of Goals and Scenarios in Requirements Elicitation

Goals and scenarios as well as their interrelations and their synergetic effects are described in detail in Parts III.a and III.b. As pointed out in Chapter 12, goals and scenarios are well suited to support requirements elicitation. Goals and scenarios are elicited using techniques for eliciting existing requirements and developing new and innovative requirements.

In the following, we briefly sketch the specifics of goals and scenarios and provide hints for using goals and scenarios in requirements elicitation.

Defining goals first

Goals enable the stakeholders to document their intentions for the system to be developed quickly and easily (see Part III.a). Stakeholders may refine goals (e.g. in a workshop) and document the goal refinement using, for instance, a graphical representation (see Chapter 8). In principle, goal models are well suited for documenting the purpose of the system at an abstract level.

Defining scenarios

Scenarios describe concrete system interactions and hence enable the stakeholders to describe concrete examples of satisfying the identified goals (see Part III.b). Moreover, scenarios put the requirements in context (see Section 9.2), which supports the stakeholders' understanding of the requirements. Scenarios are typically used to document concrete sequences of interactions between the system and its external actors, i.e. interactions between the system and its context (see, e.g. [Carroll

2000; Weidenhaupt et al. 1989]). However, there are various types of scenarios and ways of documenting scenarios (see Chapter 10) which can be used in requirements elicitation.

Iterative goal and scenario definition

Analysing documented scenarios often leads to the identification of new goals and/or adjustments of already documented goals. Conversely, the changes in the goal definitions typically lead to the elicitation of new scenarios and/or the revision of already documented scenarios (see Section 12.3).

Derivation of requirements from goals and scenarios

We highly recommend using goals and scenarios in requirements elicitation, especially to support the development of new and innovative requirements.

! **Hint 21-1:** *Using goals and scenarios for eliciting detailed requirements*

- Elicit and develop goals jointly with the various stakeholders.
- Define scenarios for the identified goals by documenting concrete examples of goal satisfaction. Consider also scenarios in which the goals are not satisfied.
- Analyse the scenarios and identify possible new goals and/or goal refinements: Which goals does the scenario fulfil? Are these goals already known? Do these goals complement, contradict, or refine an already existing goal?
- Define scenarios for the newly identified and/or refined goals and thereby establish an iterative goal–scenario development cycle.
- Derive solution-oriented requirements (i.e. functional requirements, quality requirements, and constraints) from the defined goals and scenarios.
- Document solution-oriented requirements based on the identified goals and scenarios: Which properties must the system have in order to satisfy the goals as well as the scenarios?

21.4 Sub-activity: Identifying Relevant Requirement Sources

The goal of this sub-activity is to identify all relevant requirement sources in the system context (see Definition 5-1). In each requirements engineering process, there are obvious, well-known requirement sources such as the legacy system, various documents (e.g. a user requirements document or a vision document), or already identified stakeholders such as users or the vision holder. However, many relevant requirement sources are initially unknown and hence must be elicited.

Consequences of missing relevant requirement sources

If relevant requirement sources are not identified, they obviously cannot be considered during requirements elicitation. Failing to consider relevant requirement sources during requirements elicitation typically leads to an incomplete requirements specification. An incomplete requirements specification leads to low quality of the resulting system, for example, if important functions and quality properties are omitted. In addition, development cost and time are needed for implementing requirements that have not been identified in the first place due to incomplete consideration of the relevant requirement sources.

For identifying unknown but relevant requirement sources, we propose a two-step procedure (see Fig. 21-1). First, the requirements engineers identify potential requirement sources (see Section 21.4.1). Second, the requirements engineers assess the

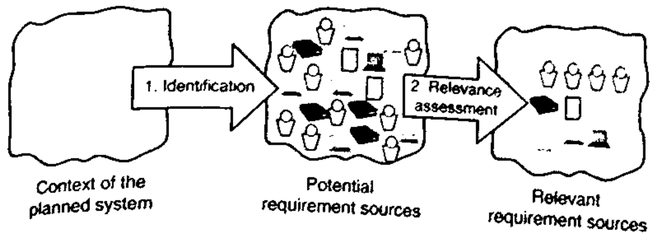

Fig. 21-1 *Identification of relevant requirement sources*

relevance of the identified sources. Based on this assessment, the relevant requirement sources to be considered during requirements elicitation are selected (see Section 21.4.2).

21.4.1 Identifying Potential Requirement Sources

The goal of this first step is to identify a large set of potential requirement sources. To identify potential requirement sources, we propose the following iterative procedure:

- Step 1: Identify additional, potential requirement sources (starting with the requirement sources already known) by
  - Asking already identified stakeholders for additional, potential requirement sources, e.g. by conducting interviews (see Section 22.3), workshops (see Section 22.4), or brainstorming sessions (see Section 23.2).
  - Checking already identified documents for additional, potential requirement sources, e.g. by analysing references to potential requirement sources contained in the documents or by means of perspective-based reading (see Section 22.8).
  - Analysing existing systems for additional potential requirement sources, e.g. by using a system with the goal in mind to identify and analyse the actors of this system (i.e. the roles of persons and other systems who interact with this system).
- Step 2: Record the newly identified, potential requirement sources in a list.
- Step 3: For each newly identified requirement source, perform "Step 1" again.

A general exit criterion for this procedure can hardly be defined. However, we suggest to iterate the steps until, in some iteration, the number of newly identified potential requirement sources becomes sufficiently low or even zero, i.e. until the set of identified requirement sources becomes (more or less) stable.

Checklists support identification

To support the identification of potential requirement sources, we suggest using checklists (see Section 23.6) which contain types of potentially relevant requirement sources (see Example 21-1 for examples of different types of requirement sources for a car safety system). For each type of requirement source, the context of the system should be analysed to identify potential instances of this type of requirement source.

Example 21-1: Types of requirement sources for a car safety system

- Drivers (ordinary drivers as well as drivers with specific demands)
- Car technicians
- Experts for vehicle safety and the prevention of accidents
- Vehicle engineers (electronics, mechanics, and software)
- Regulatory agencies

Consideration of all four context facets

In addition, we suggest defining a checklist for each context facet. Thus a checklist should be defined for each of the four facets containing important types of potential requirement sources. The stakeholders using such a checklist consider each type of requirement source to identify whether one or multiple instances of this type exist in the respective context facet.

Hint 21-2: *Consider all four context facets for identifying potential requirement sources:*

- Check the subject facet for potential requirement sources.
- Check the usage facet for potential requirement sources.
- Check the IT system facet for potential requirement sources.
- Check the development facet for potential requirement sources.

Comprehensive checklists

In Section 23.6, we provide comprehensive checklists for potential requirement sources. We provide a checklist for each of the four context facets as well as for the three types of requirement sources (stakeholders, documents, and existing systems). Example 21-2 shows an excerpt of a list of requirement sources for a car safety system. The list is structured according to the four context facets. In addition, the type of each requirement source is stated in parenthesis.

Example 21-2: Requirement sources for a car safety system

Subject facet:	IT system facet:
Bob Checker (accident assessor)	Betty Smith (car technician)
Chris Smith (physician)	Ute McDonald (car engineer)
	Peter Paul (sensor expert)
Usage facet:	Development facet:
Peter Miller (car driver)	Pit Mal (control unit expert)
Jim Wilde (professional driver)	John McNeel (engineer)
Manual V2.3	

Basic strategy for identifying potential requirement sources

Hint 21-3 summarises the basic strategy we recommend for identifying potential requirement sources. The strategy may be applied for each of the four context facet separately.

Hint 21-3: *Iterative identification of potential requirement sources*

(1) Ask already identified stakeholders for additional, potential requirement sources. Use checklists to support the interrogation of the stakeholders.
(2) Search identified documents for additional, potential requirement sources by perspective-based reading (see Section 22.8).
(3) Analyse existing systems for additional potential requirement sources, e.g. by examining the interactions with users and other systems.
(4) For each newly identified requirement source, perform Step 1, 2, or 3 again.

Stop the identification procedure if no or only very few (and potentially irrelevant) additional sources have been identified.

21.4.2 Selecting Relevant Sources

Not all identified sources can be considered

In principle, all identified potential requirement sources should be considered during requirements elicitation. In practice, the number of sources which can be considered is typically restricted by the resources (e.g. time, cost, availability of experts) that can be used for requirements elicitation. Therefore, only a subset of the identified, potential requirement sources can be considered during elicitation.

Assessing the relevance of a requirement source

The decision regarding whether an identified requirement source is considered or ignored during elicitation should be made based on the relative relevance of this requirement source. Ideally, assessing the relevance of each requirement source should be done objectively. However, an objective assessment of the relevance of each requirement source is time consuming and costly and thus almost not applicable in practice. We therefore recommend subjectively assessing the relevance of each requirement source.

Technique for Assessing the Relevance of Potential Requirement Sources

Technique to assess the relative relevance of requirement sources

The technique we suggest for assessing the relevance of the identified, potential requirement sources helps a group of stakeholders to assess the relevance of each source quickly and easily. The technique relies on the knowledge and intuition of the stakeholders involved and is based on a subjective relevance assessment technique known as the 100-dollar test (see [Gottesdiener 2002; Leffingwell and Widrig 2000]). The 100-dollar test allows a group of stakeholders to metaphorically spend money, 100 dollars, on the items to be assessed. Each stakeholder distributes the money on the different items. The average amount of money spent by the different stakeholders on a specific item denotes the relative weighting of that item.

Procedure for assessing relevance

We suggest determining the relative relevance of each identified, potential requirement source in a moderated group meeting by performing the following steps:

Assigning relevance points to stakeholders

1. Each stakeholder participating in the assessment of the relevance of the requirement sources gets a number of relevance points from the moderator. We recommend restricting the number of relevance points given to each stakeholder roughly by the number of potentially identified requirement sources divided by

three. For example, if 150 potential requirement sources have been identified, each stakeholder gets 50 relevance points.

Subjective, individual assessment of relevance

2. Each stakeholder subjectively assesses the relevance of each requirement source based on his/her knowledge and intuition. Based on their subjective assessment of relevance, each stakeholder distributes his/her relevance points on the requirement sources. Accumulation is not allowed, i.e. a stakeholder must not assign multiple relevance points to one requirement source.

   As a variation, one can allow the accumulation of up to three points per requirement source. In this case, the number of relevance points given to each stakeholder should roughly be the number of identified, potential requirement sources divided by two. For example, if 100 potential requirement sources have been identified, each stakeholder would get 50 relevance points, instead of 33 if no accumulation is allowed.

Sorting requirement sources based on relevance assessment

3. After the assignment of the relevance points by each stakeholder, the requirement sources are sorted according to the relevance points received. The sources with the highest numbers of relevance points are listed first.

Based on the list of requirement sources sorted according to the relevance assessment, the group (or the moderator) can now divide the sources into two subsets. The first subset contains the requirement sources to be considered during the elicitation. The second subset comprises the requirement sources for which (at least at this point in time) the decision has been made that these sources shall not be considered during requirements elicitation.

Selection of relevant requirement sources

The cut-off point for adding a requirement source to the subset of sources to be considered during elicitation can be chosen based on the result of the assessment. For example, the participants can decide that all requirement sources that have received at least one relevance point should be considered (if the number is not too large), or that all sources with at least three relevance points should be considered, or the top 50 ranked sources should be considered, etc.

Alternatively, the group may also decide to re-execute the assessment with a subset of the requirement sources (e.g. the ones with at least two relevance points), especially if the number of sources which have received at least one relevance point is still large.

Selection of sources is context sensitive

However, there is no general rule for the decision on how many requirement sources or which requirement sources should be considered during elicitation. The selection of the relevant sources as well as the definition of the upper bound of sources to be considered has to take into account the specific project, domain, type of system etc. Consequently, these decisions should be made by experienced requirements engineers and in cooperation with the other stakeholders.

Considering all Four Context Facets

Select requirement sources from all four context facets

Determining the relevance of requirement sources using the technique described above does not ensure an equal or adequate consideration of all four context facets (see Chapter 6). In other words, the selected relevant requirement sources might not adequately represent the four context facets. For example, requirement sources might be selected which mainly belong to the usage facet, or the IT system facet etc. If one (or even multiple) context facets are not adequately represented in the list of requirement sources to be considered during elicitation, there is a high chance that the elicited requirements will be incomplete.

When selecting the relevant requirement sources, the four context facets should hence be explicitly taken into account. For example, one of the following options can be chosen to explicitly consider the four context facets during the selection of requirement sources to be considered:

At least check whether all four facets are represented in the selected sources

- ☐ Check after the selection whether the selected requirement sources adequately represent the four context facets. If shortcomings are identified, re-execute the relevance assessment and/or select different requirement sources from the list of ranked, potentially relevant requirement sources (if not all sources with at least one relevance point have already been selected).

Execute the selection process for each context facet separately

- ☐ Classify the requirement sources according to the four facets and execute the technique for selecting the relevant sources for each facet separately (see Hint 21-4). Therein, different stakeholders can be involved in performing the assessment for each context facet. As a result, you obtain a list of relevant requirement sources for each context facet, i.e. four separate lists of relevant requirement sources. The final selection of the relevant requirement sources can either be made by all stakeholders or just by selecting the top ranks from each of the four context-facet-specific lists.

Project- and domain-specific aspects

If required, the presented technique can be further enhanced by taking additional, domain- and/or project-specific factors into account, such as particular laws, regulations, standards, mission-critical factors, etc.

Hint 21-4: *Assess the relevance of requirement sources for each context facet separately*

The assessment of the relevance of the identified, potential requirement sources should be performed separately for each context facet. Thereby, equal consideration of all four facets is guaranteed, which is an important prerequisite for equal consideration of the four facets during requirements elicitation.

In addition, when selecting the stakeholders who perform the assessment of the identified requirement sources, the four context facets should be taken into account in order to ensure that each of the four facets is adequately represented in the selection process.

21.5 Sub-activity: Eliciting Existing Requirements

In the following, we describe how existing requirements can be elicited from the relevant requirement sources, i.e. relevant stakeholders, relevant documents, and relevant existing systems (see Fig. 21-2).

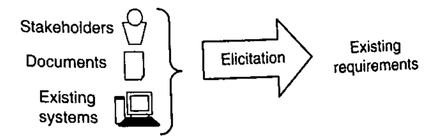

Fig. 21-2 *Sources of existing requirements*

21.5.1 Eliciting Existing Requirements from Stakeholders

Existing requirements can be elicited from stakeholders through conversations, questionnaires, or observation.

Elicitation through conversations

In a conversation, a stakeholder tells the requirements engineer his or her requirements. Conversations may take place within interviews (see Section 22.3) or during workshops (see Section 22.4). Example 21-3 illustrates how requirements are elicited in an interview.

Example 21-3: Requirements elicitation in an interview

Interviewer: "You have said that the car safety system shall keep a safe following distance. What do you mean by that? Could you draw a small sketch to clarify your requirement?"

Stakeholder: "I think of a situation in which the car drives at a high speed – let's say 65 mph – on the motorway. The distance to the car driving ahead becomes shorter. By a sensor, the car measures the distance to the car in front of it." (The stakeholder draws a sketch.) "If the distance is less than 300 feet, a yellow warning signal shall light up."

Interviewer: "What shall happen, if the driver does not react to this warning?"

Stakeholder: "If the distance decreases down to 200 feet, the warning signal shall turn from yellow to red and the driver's attention shall be called to the threat by an acoustic signal."

Elicitation by means of questionnaires

During the elicitation of requirements by means of questionnaires (see Section 22.7), the stakeholders write down their requirements themselves. Example 21-4 shows an excerpt from a questionnaire and the answers that were written down by a stakeholder.

Example 21-4: Requirements elicitation with questionnaires

Question 12: How can the safety of a car in the winter time be improved?

The safety system displays the safety status of the car to the driver at any time. The system displays, for example, a warning when the outside temperature is below 5°C and hence there is a high probability of icy roads.

Question 13: In your opinion, how can the risk of rear-end collisions be decreased?

The safety system checks the distance to cars driving ahead at regular intervals and warns the driver if the distance gets critically low.

Elicitation by means of observation

Requirements can also be elicited through observation (see Section 22.5). By observing relevant stakeholders, requirements that the stakeholders cannot express directly because they belong to the stakeholders' everyday routine (see e.g. [Beyer and Holzblatt 1998]) can be elicited particularly well. Example 21-5 illustrates how requirements for a car safety system can be elicited by means of observation.

Example 21-5: Requirements elicitation by observation

In order to elicit requirements for a car safety system, the requirements engineers observe different drivers (professional drivers, couriers, and chauffeurs) while driving a car and applying the brakes. The requirements engineers observe that many drivers apply the brakes already when the second or third car ahead brakes. Based on this observation, the requirements engineers define the requirement that the car safety system shall not only monitor the distance to the car driving directly ahead but also the distance to the second and, if possible, the third car ahead.

Acceptance criteria

When eliciting requirements from the relevant requirement sources, and in particular during interviews with clients, the requirements engineers should pay attention to potential acceptance criteria, i.e. measurable requirements that need to be demonstrably fulfilled in order to pass the system acceptance test (see Section 16.4). If the requirements engineers elicit a requirement that is a candidate for an acceptance criterion they should document this requirement and mark it as a potential acceptance criterion.

21.5.2 Eliciting Existing Requirements from Documents

In order to elicit existing requirements from documents, the requirements engineers have to read and analyse the relevant documents.

Example 21-6: Extract from a law for safety-critical systems in vehicles

All electronic systems in a vehicle that directly or indirectly influence the occupants' safety or the safety of other traffic participants must be designed in such a way that failure of the electronic system has no negative effects on safety.

The law from Example 21-6 must be considered during the design of the car safety system. As a result of analysing the law, the requirements engineers may define, for instance, the following two goals: "G1: The driver shall be able to override the actions of the system at any time" and "G2: The system must not disturb any other system even in the case of a system failure."

Techniques for reducing effort

Often, there is a large amount of written information such as specifications, standards, or laws that needs to be considered when developing a system. It is important, especially when faced with limited resources, to perform the elicitation of requirements from the relevant documents at an acceptable effort. For this purpose, perspective-based reading may be employed. Perspective-based reading (see Section 22.8) is a technique to support dealing with a large amount of written information.

21.5.3 Eliciting Existing Requirements from Existing Systems

Requirements that are implemented in an existing system can be elicited directly from the existing system, from stakeholders who are familiar with the system, or from documents about the existing system (such as user documentation or error reports).

Using or observing the system

The requirements engineers can elicit existing requirements that are implemented in a system by using the system or by observing the system (see Section 22.5). In the latter case, the requirements engineers either observe the behaviour of the system during its operation or by observing the system while it is used by some stakeholders.

Interviewing stakeholders of the system

In addition, existing requirements may be elicited by means of interviews with users or other stakeholders of the existing system (see Section 22.3). For example, requirements for the new system can be derived from the stakeholders' statements about necessary improvements of the existing system.

Analysing the documentation of existing systems

Finally, requirements may be elicited from documents about the existing system. In particular, the requirements engineers should analyse error reports as well as maintenance reports of legacy systems. By analysing these documents, the stakeholders can avoid making the same errors again during the development of the new system (see Example 21-7) or that the same defects occur in the new system, once again.

Example 21-7: Eliciting existing requirements from error reports

In an error report of a legacy system, the following error has been recorded:

Error FA-2003-1-10-F3: "The airstream cools the sensor that is responsible for measuring the outside temperature. Therefore, the displayed outside temperature is incorrect (too low), especially when driving at high speed."

Error Correction: Install a shielding to protect the temperature sensor from the airstream (see Correction Report K-B-2003-4-12-k5).

21.6 Sub-activity: Developing New and Innovative Requirements

New and innovative requirements cannot be elicited in the same way as existing requirements are elicited, i.e. by interviewing stakeholders, analysing documents, and observing existing systems. Rather, new and innovative requirements have to be developed in a creative process. The elicitation of new and innovative requirements can be supported to some extent by creativity techniques (see Fig. 21-3) such as brainstorming (see Section 23.2) or the Osborn checklist (see Section 23.6.4).

According to experience, innovative requirements emerge from bringing together different stakeholders with different views, from generating ideas (that may be very vague, initially), and even from requirements that appear to be conflicting but can be realised by means of a new, innovative solution. However, a prerequisite for successful creation of new and innovative requirements is successful cooperation of the different stakeholders. This is expressed, among other things, by [Gause and

Weinberg 1989],[1] who state that requirements engineering is a development process performed by a team of people. Unfortunately, the potential of creative requirements engineering is often underestimated in practice. For example, the requirements engineers are not provided with the degree of freedom needed for developing new and innovative requirements, and important creativity meetings such as requirements workshops are rarely held, e.g. due to time and cost constraints.

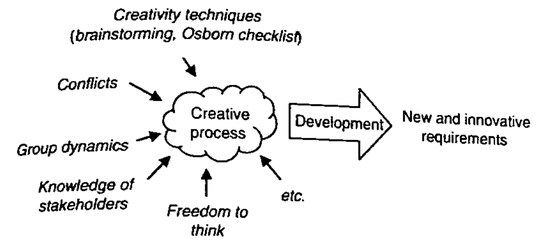

Fig. 21-3 *Elicitation of new and innovative requirements*

[1] [Gause and Weinberg 1989] describe the development of requirements as follows: "[...] developing requirements is actually a process of developing a team of people who
(1) understand the requirements,
(2) (mostly) stay together to work on the project,
(3) know how to work effectively as a team."