

## Example: Expand Then Contract Collaboration Pattern Applied to Listing Use Cases

Reference Chapter 9 in  
*Requirements by Collaboration* by Ellen Gottesdiener, Addison-Wesley, 2002.

General Steps	Brief Description	Potential Step Inputs	Focus Questions and Tips
Expand	<p>Use the focus questions to generate a list of use cases without considering whether they are truly in scope and regardless of priority. First, have each person create a list of use cases. Then form groups to collect and document their respective actors, one per card. Finally, as a whole group, post cards on the wall one at a time, discussing and agreeing on the name for each actor.</p>	<ul style="list-style-type: none"> <li>• List of “good action verbs” to use</li> </ul> <p><b>Top-down inputs:</b></p> <ul style="list-style-type: none"> <li>• Event table</li> <li>• Context diagram</li> <li>• Project goals or objectives</li> <li>• List of features or functions from project charter</li> <li>• Workflow models of the to-be business process</li> </ul> <p><b>Middle-out inputs:</b></p> <ul style="list-style-type: none"> <li>• Actor map</li> <li>• Actor table</li> </ul> <p><b>Bottom-up inputs:</b></p> <ul style="list-style-type: none"> <li>• Scenarios</li> <li>• Prototype screens</li> <li>• Current system screen shots</li> <li>• Workflow models of the as-is business</li> </ul>	<p>We’re going to understand the functions that the system must provide its direct users by understanding the <i>goals</i> these users have in interacting with the system.</p> <p><b>Top-down questions:</b> What goal will someone have to accomplish to satisfy this event, &lt;event from event table&gt;? What key actions that must happen inside the system are represented on this context diagram? What specific goals must a user fulfill to handle &lt;feature from charter&gt;, &lt;goal from charter&gt;? Using an <i>action verb+object</i> format, what are all the major actions that take place? What actions must the system do?</p> <p><b>Middle-out questions:</b> Let’s consider what each actor’s responsibilities are, in terms of the goals he must accomplish. Using an <i>action verb+object</i> format, what are they? What goals do each of the actors in our actor map have in using the system? Which goals are shared by more than one actor? What do the different people, systems, or devices need to accomplish in using the system? What are all the different kinds of interactions that these actors have with the system?</p> <p><b>Bottom-up questions:</b> Which scenarios are similar? Let’s give a name to each grouping, using an <i>action verb+object</i> format. Why is an actor going through these screens? What does the actor need to accomplish with this flow of work? What will the actors do now with the new system?</p>

		<ul style="list-style-type: none"> <li>process</li> <li>User manuals</li> <li>Operating procedures</li> </ul>	
Contract	Eliminate or prioritize use cases that are not in scope.	<ul style="list-style-type: none"> <li>Use cases from prior step</li> <li>List of criteria for determining scope</li> <li>List of words and their definitions for ranking use cases (e.g. <i>essential, desirable, optional, mandatory, important, useful</i>)</li> <li>Formal prioritization methodology</li> <li>List of project constraints</li> </ul>	<p>Which use cases aren't essential for meeting our project goals?</p> <p>Which use cases are so essential that you would not accept the final system without them?</p> <p>Which ones are now performed manually and cause us lots of problems?</p> <p>Which use cases will make this software product really sellable?</p> <p>Which are essential to our project goals?</p> <p>Which use cases could be provided in the future without impacting our business objects as much as they would if we implemented them now?</p>
QA the surviving list of use against other existing requirements.	Ensure that each use case fulfills a goal for an existing actor. Ensure that an event exists that triggers an actor to initiate each use case. Ensure that each event response is associated with the outcome of one use case. Revise as needed.	<ul style="list-style-type: none"> <li>Event table</li> <li>Context diagram</li> </ul>	See QA checklists.
Reach closure.	Use the decision rule and decision rule process (see Chapter 6 and the Decide How to Decide pattern in the Appendix).	<ul style="list-style-type: none"> <li>List of in-scope use cases for the current release</li> </ul>	

### Variations and considerations

- Conduct the entire process as a whole group.
- Create a starting list of use case before the workshop, and post them to get people's juices going.
- If you have a starting list of use cases, assign each to a subgroup; its job is to assign each use case to an actor on the actor map and to edit the use case name for good naming conventions.
- Form subgroups before starting the activity, and assign different actor maps to each subgroup to generate lists of use cases.
- Use the Multi-Model pattern to produce an actor map and list of use cases at the same time.

- For large groups (seven or more), use the Wall of Wonder pattern for the first expand phase. Generate use case names in subgroups then post all subgroups' use case on the wall for further clarification, expansion, and renaming before following up with the contract phase.
- To prioritize the use cases, use the “voice of the customer” technique (see “The Sieve” in Chapter 9) during the contract phase.
- Use a formal prioritization process, such as one that allocates scores to value, cost, and risk (see Wiegers, 1999).
- If you have a business process diagram, use that as your starting point. Ask participants to look at the diagram and find groups of processes that might be use cases.
- Ask your sponsor to provide specific selection criteria before the workshops that you then apply during the contract phase.