

A Scenario on Solving Pain Points

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Purpose of the scenario

By reading this scenario, the reader will understand how to boost the progress of a software development endeavor. The progress is advanced by identifying and solving pain points using the Essence kernel. The scenario is not intended to give you a complete picture of the endeavor. It just provides the slice of information needed for supporting the training objectives.

Pre-conditions

To get the most out of this scenario, the reader should have knowledge of the Essence Alphas, States, and Checklists.

When to Apply

This scenario illustrates how to introduce Essence incrementally over a number of pain point intervention meetings. This is done in the context of an existing endeavor after the first product release. However, the incremental approach described in this scenario remains applicable at any time during the product lifecycle.

Essence Scope

The team focuses on leveraging the Alpha cards only. Other cards, like Activity Spaces and Competencies are not part of this scenario.

Reference Cards

The Alpha cards used in this scenario are part of the SEMAT kernel.



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Background

A five-member team is in charge of developing an online university course management system involving management of administrative information, courses and student performance. Right now, the team is working on its second release and has just introduced Essence in their regular pain point intervention meetings. During the meetings, the team identifies pain points, uses the Essence cards to determine the endeavor's current and target states, and, finally, identifies appropriate tasks for remedying the pain points.

Pain Point Intervention Meeting 1 on May 15

Here is what happens on the first pain point meeting.

1. Pain Point Identification

The team brainstorms the endeavor's overall progress and health. The endeavor does not have any apparent challenges. However, at some point during the discussion, one team member mentions that a few faculty members are resisting the migration to the new system. They are still using the old wiki-based system and spreadsheets for managing course materials, assignments, and grades, as well as emails for communicating grades. As a result, they are not providing any feedback to the team. So far, only one out of thirty faculty members has given some feedback. This member is very unhappy about the new system and unsupportive to the team. His feedback is very negative. It often lacks concrete reasons and motivation.

2. Cards Selection

One team member suggests that, due to the stakeholders' resistance and poor feedback, the *Stakeholders* alpha should be investigated first. Indeed, this should help the team members better understand the nature of the stakeholders' problem. Consequently, the members have arranged all the *Stakeholders* alpha cards in sequences as shown in Figure 1.



Figure 1. Sequence of states for the *Stakeholders* alpha

3. Current State Identification – Stakeholders Alpha

Team members read through the *Stakeholders* alpha states. They start reviewing the checklist of the *Recognized* state card and come to the conclusion that the stakeholders have already been “*recognized*”. Indeed, the important stakeholder groups that need to be represented have

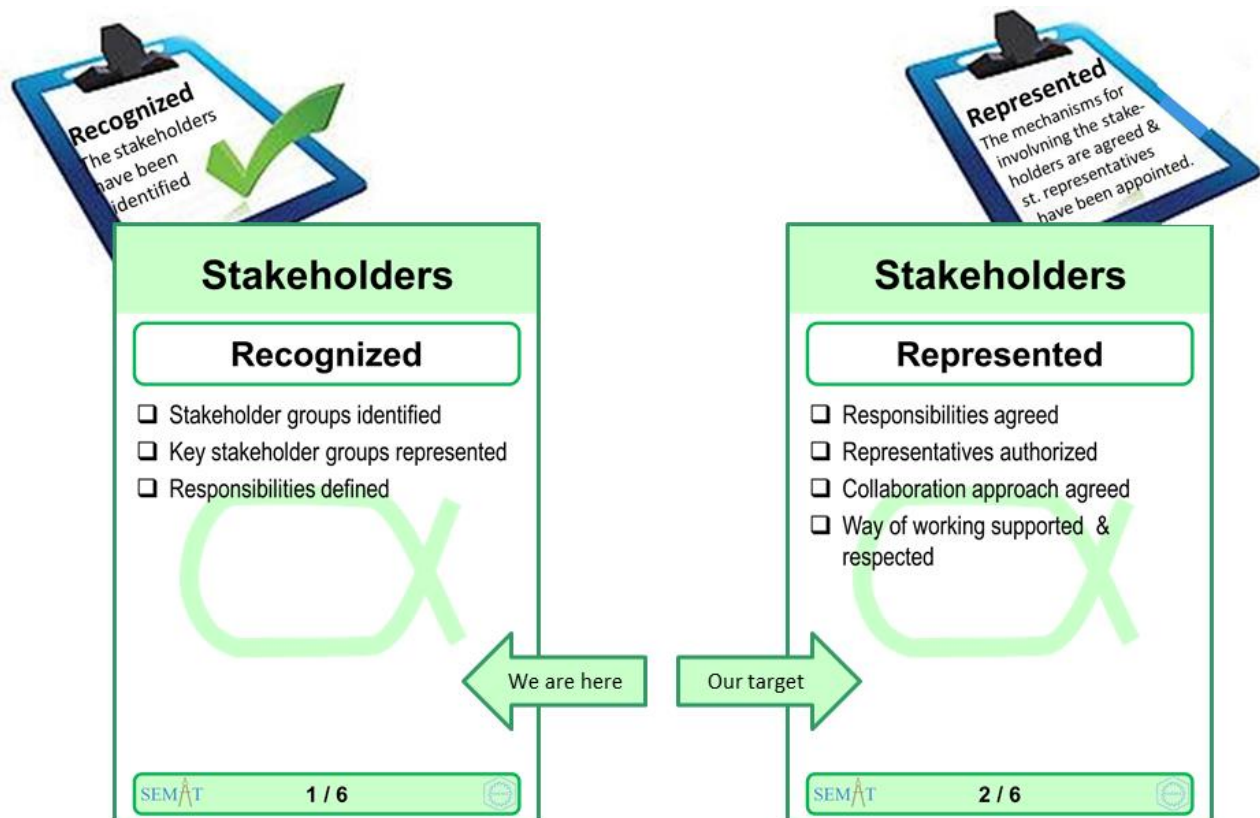


Figure 2. Current and target states for the *Stakeholders* alpha

been identified, and the responsibilities of the stakeholder representatives have been defined for each group. The stakeholder groups that have been identified are *Administrators*, *Faculty*, and *Students*.

- **Target State Identification – Stakeholders Alpha**

Members of the team move on to the next *Stakeholders* state card, the card describing the *Represented* state. They find out that, in contrast to the other groups, the faculty group is not represented since no faculty representatives have been appointed. The reason for not appointing them was the assumption that most of them would provide feedback spontaneously. This, however, has rarely happened so far.

To ensure that the faculty provides feedback, the team has agreed that there is a need for formally appointing faculty representatives. So, *Represented* becomes the target state for the *Stakeholder* alpha.

To facilitate status monitoring, the team separates the cards. As shown in Figure 2, they move the *Recognized* card to the left indicating the accomplished state and the *Represented* card to the right indicating that the target state is to be achieved in the near future.

- **Task Identification – Stakeholders Alpha**

Using the checklist items from the *Represented* alpha state card, the team members discuss what needs to be done to achieve the target state and eventually remedy the identified pain point. They suggest the following action items:

- **Task 1:** Appoint stakeholder representatives for the faculty group, including supportive and unsupportive faculty members.
- **Task 2:** Agree on or modify the existing definition of responsibilities and collaboration approaches with the faculty representatives. Because of the iterative nature of the endeavor, the stakeholders need to agree on providing feedback on a regular basis.

While the team needs to focus on the faculty group at this point, it also acknowledges the importance of continuing to engage the representatives of other stakeholder groups such as *Administrators* and *Students*.

After identifying two new tasks (Task 1 and Task 2) and gaining a better understanding of stakeholder challenges, work on the endeavor continues. The main reason for not proceeding with the additional Essence alphas at this point is to avoid overwhelming the team with new activities that could be perceived as overhead. Additional alphas will be introduced incrementally during future pain point intervention meetings.

Pain Point Intervention Meeting 2 on May 29

Members of the team are ready for another pain point intervention meeting. They start by studying the *Stakeholders* cards hoping to have reached the target *Represented* state. Here is what happens during this meeting.

1. Current State Identification – Stakeholders Alpha

The team reads the checklist of the *Represented* state, and agrees that given the work recently accomplished (Tasks 1 and 2), the *Represented* state has been reached (see Figure 3). Four faculty representatives have been appointed: two supportive and two unsupportive. Also, an agreement has been reached about their responsibilities and collaboration approach.



Figure 3. The Represented state for the *Stakeholders* alpha

2. Target State Identification – Stakeholders Alpha

The team moves to the next *Stakeholders* state card describing the *Involved* state. Even though the team has been receiving some negative yet useful feedback from one faculty representative, it is clear that this state has not yet been reached. The team has not been able to fully engage all faculty representatives. Consequently, as shown in Figure 4, *Involved* becomes the new target state.

3. Task Identification – Stakeholders Alpha

Using the checklist items from the *Involved* alpha state card, the team discusses what needs to be done to achieve the target state. The following action items are suggested:

- **Task 3:** Prepare for short interviews with faculty representatives.
- **Task 4:** Carry out interviews with all faculty representatives.

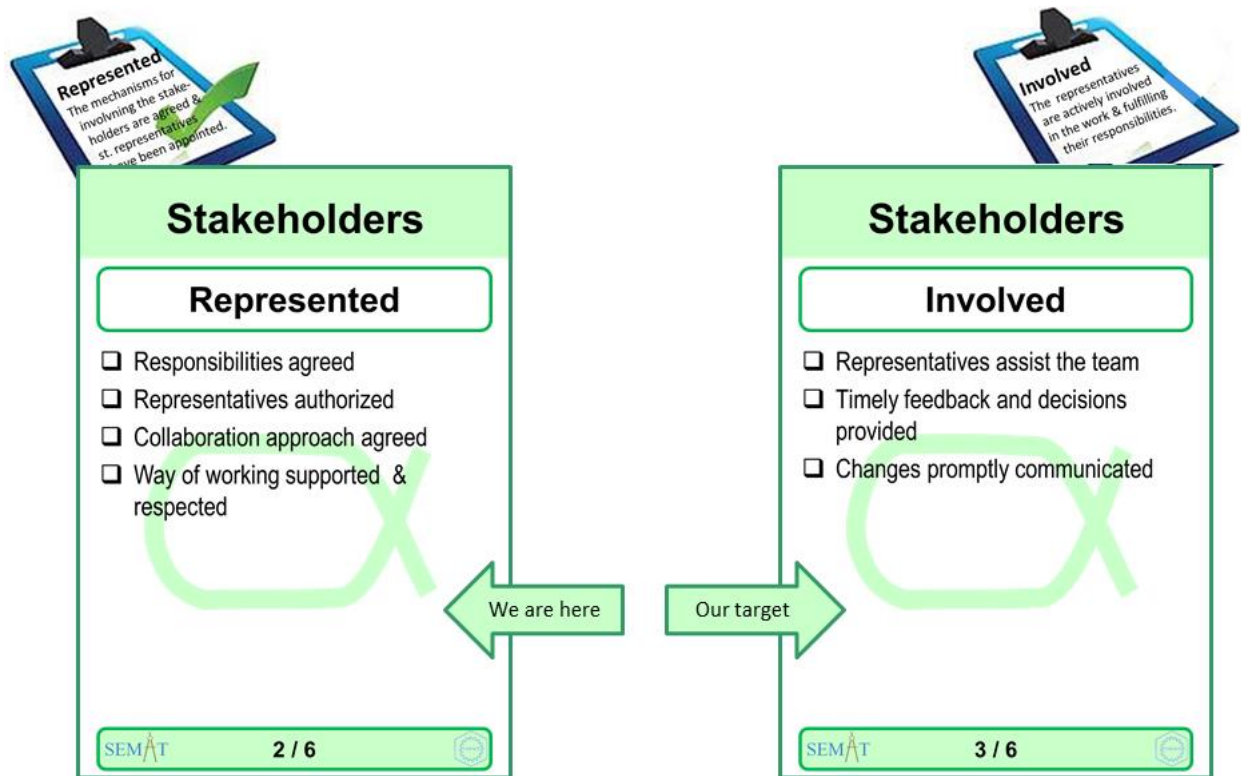


Figure 4. Current and target states for the *Stakeholders* alpha

4. Cards Selection

Since the negative feedback received from the unsupportive faculty member reveals that he does not see the value of the new system, the team decides to study the *Opportunity* alpha. It arranges the *Opportunity* alpha cards in sequences that are shown in Figure 5. The examination of the cards should help the team uncover any issue related to the opportunity and its value to the users.



Figure 5. Sequence of states for the *Opportunity* alpha

5. Current State Identification – Opportunity Alpha

The team reads through the *Opportunity* alpha states. It starts with the checklist on the *Identified* state card as shown in Figure 6. The team reviews the state of this alpha and

comes to the conclusion that the opportunity has already been “identified”. Similarly, the team continues with the checklist on the *Solution Needed* state card and concludes that a need for a software solution has been identified.



Figure 6. The Identified state for the *Opportunity* alpha

6. Target State Identification – Opportunity Alpha

The team moves to the next *Opportunity* state card, the card describing the *Value Established* state. Based on a recent discussion with the faculty, there is clearly a need for articulating and communicating the solution value to all faculty members. Therefore, as shown in Figure 7, not all the items on the checklist can be checked off and *Value Established* becomes the target state for the *Opportunity* alpha.

7. Task Identification – Opportunity Alpha

Using the checklist items from the *Value Established* alpha state card, the team discusses what needs to be done to achieve the target state. It suggests the following action items:

- **Task 5:** Prepare a short demonstration of the new solution key features while articulating their value, including value over the wiki-based solution.
- **Task 6:** Present solution value to faculty during weekly faculty meeting.

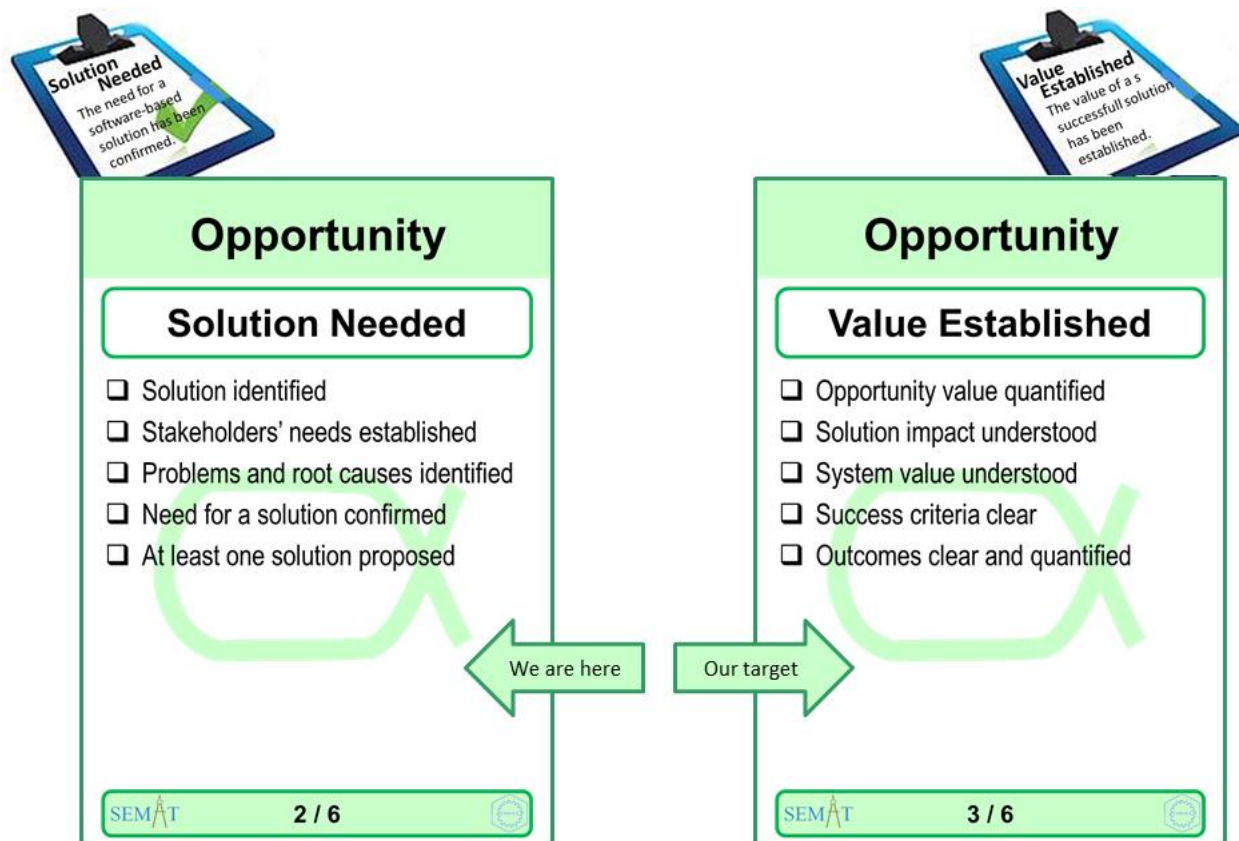


Figure 7. Current and target states for the *Opportunity* alpha

Once these two new tasks have been identified using Essence, and with a better understanding of some of the stakeholders and opportunity's challenges, work on the endeavor continues. As before, the main reason for not proceeding with additional Essence alphas at this point is to avoid overwhelming the team with new activities that could be perceived as overhead. Additional alphas will be introduced incrementally during future meetings.

Moving Forward

The description of this scenario is continued in the appendix. Moving forward, the team will briefly review the alphas that were identified as candidates for pain point identification. Just as with the *Opportunity* alpha, new alphas will be introduced incrementally as needed, to address new pain points or simply check the state of the endeavor.

Appendix

This appendix resumes the description of the scenario. The team now continues with the third pain point intervention meeting.

Pain Point Intervention Meeting 3 on June 6

Here is what happens during the third pain point meeting. Again, the team starts by summarizing what has been done since the last meeting. Then the team looks at the *Stakeholder* and *Opportunity* alpha state cards (see Figures 1 and 5).

1. Current State Identification – Stakeholders Alpha

The team members read the checklist of the *Involved* target state (see Figure 4). They agree that by recently accomplishing Tasks 3 and 4, they have reached the *Involved* state. Indeed, all faculty representatives have been interviewed. The interviews have provided the team with a better understanding of faculty attitude, expectations towards the new solution and reasons behind inertia towards using the new system. For instance, a few faculty members are not using the system because it lacks some functionality present in the wiki-based solution. The interviews have also helped the faculty representatives better understand the system value.

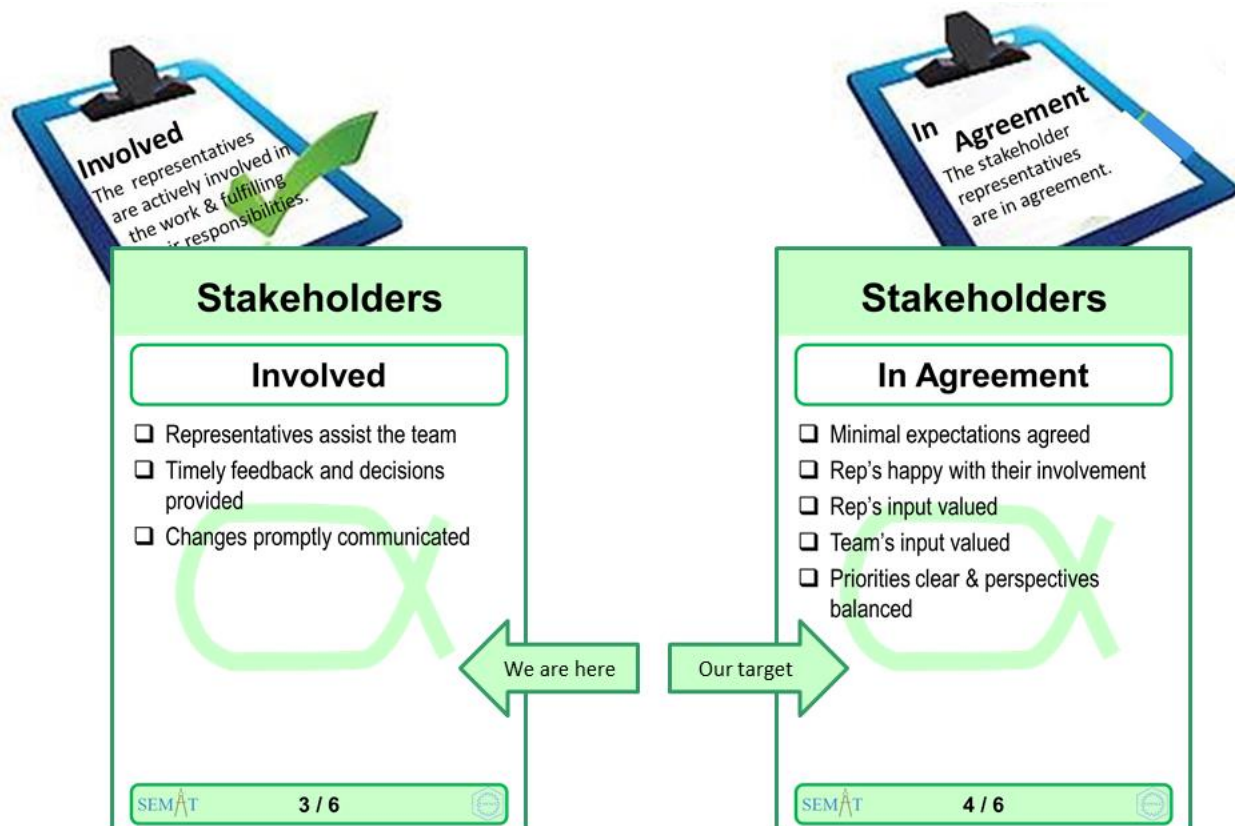


Figure 8. Current and target states for the *Stakeholders* alpha

2. Target State Identification – Stakeholders Alpha

The team moves to the next *Stakeholders* state card describing the *In Agreement* state. Before the project could reach that state, the team needs to demonstrate that it values and respects the stakeholder input. Consequently, as illustrated in Figure 8, *In Agreement* becomes the new target state.

3. Task Identification – Stakeholders Alpha

Using the checklist items from the *In Agreement* alpha state card, the team discusses what needs to be done to achieve the target state. It suggests the following action item:

- **Task 7:** Regularly demonstrate new functionality and send updates to stakeholder representatives showing how the team is incorporating their input into the solution.

4. Current State Identification – Opportunity Alpha

After having worked with the *Stakeholders* alpha, the team members choose to continue working on the *Opportunity* alpha. They read the checklist of the *Value Established* target state (see Figure 9). They agree that given the work recently accomplished via Tasks 5 and 6, the *Value Established* state has been achieved. The solution value has been successfully demonstrated to the faculty group and even the faculty member who was questioning the

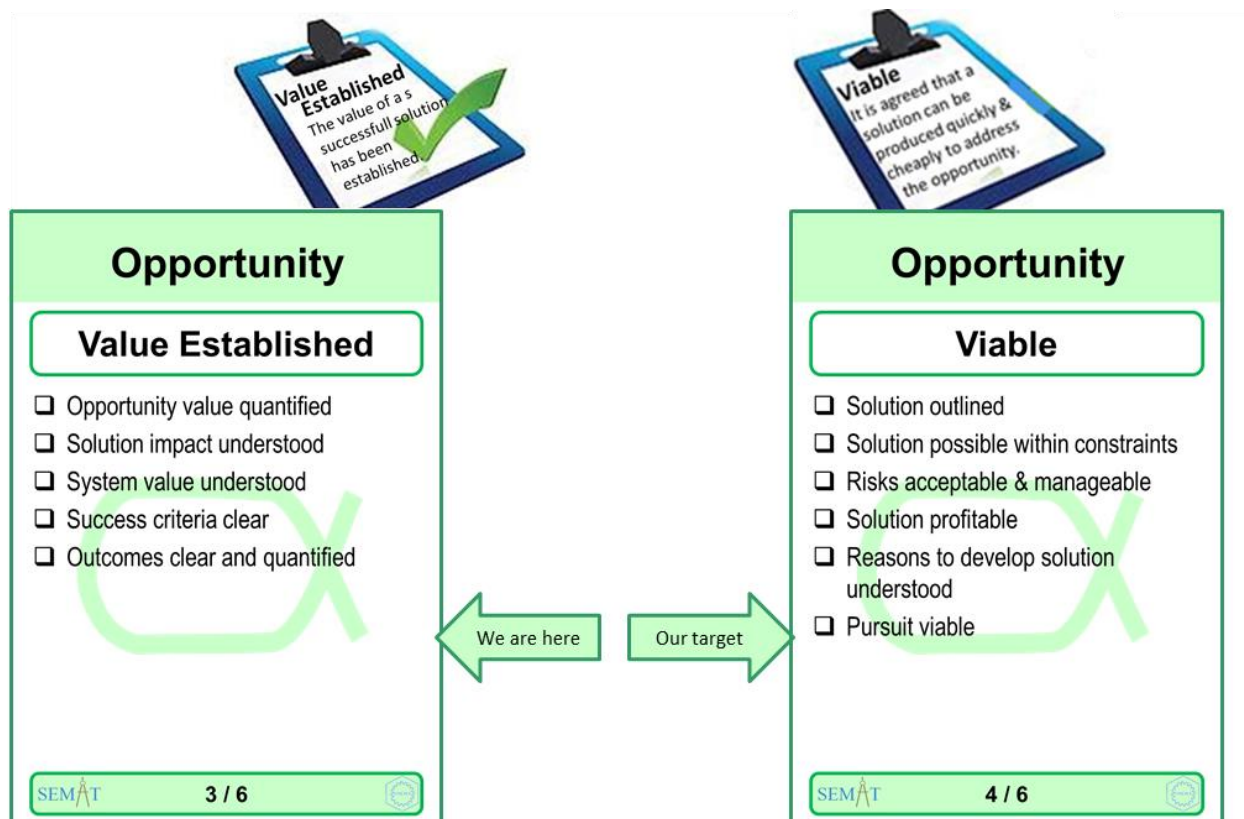


Figure 9. Current and target states for the *Opportunity* alpha

value now recognizes its benefits. In addition, through the interviews, the team has gained a good understanding of the impact of the solution on the faculty members.

5. Target State Identification – Opportunity Alpha

The team moves to the next *Opportunity* state card describing the *Viable* state (see Figure 9). By studying its checklist, they agree that the solution is not “viable” yet. Some faculty members are complaining about lack of important functionality, and thereby, they are still resisting adopting the new system. Therefore, *Viable* becomes the target state for the *Opportunity* alpha.

6. Task Identification – Opportunity Alpha

Using the checklist items from the *Viable* alpha state card, the team discusses what needs to be done to achieve the target state. It suggests the following action item:

- **Task 8:** Address adoption resistance risk or make sure it could be addressed eventually.

7. Cards Selection

To address the adoption resistance risk and since some faculty members complain about lack of functionality, the team decides to focus on the *Requirements* alpha cards. Indeed, this should help the team uncover any issue related to the solution’s expected functionality. The cards shown in Figure 10 represent a possible sequence of states for the project requirements.

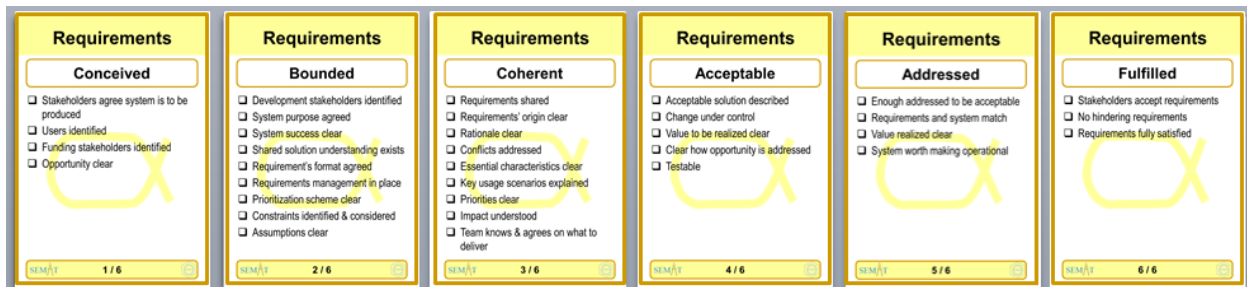


Figure 10. Possible sequence of states for the *Requirements* alpha

8. Current State Identification – Requirements Alpha

The team members read through the *Requirements* alpha states (see Figure 11). They start with the checklist on the *Conceived* state card. They review the state and come to the conclusion that the requirements have already been “conceived”. They then continue with the checklist on the *Bounded* state card and conclude that the solution is already “bounded”. Similarly, they go on with the checklist on the *Coherent* state and agree that thanks to the interviews, the *Coherent* state has been reached as well.

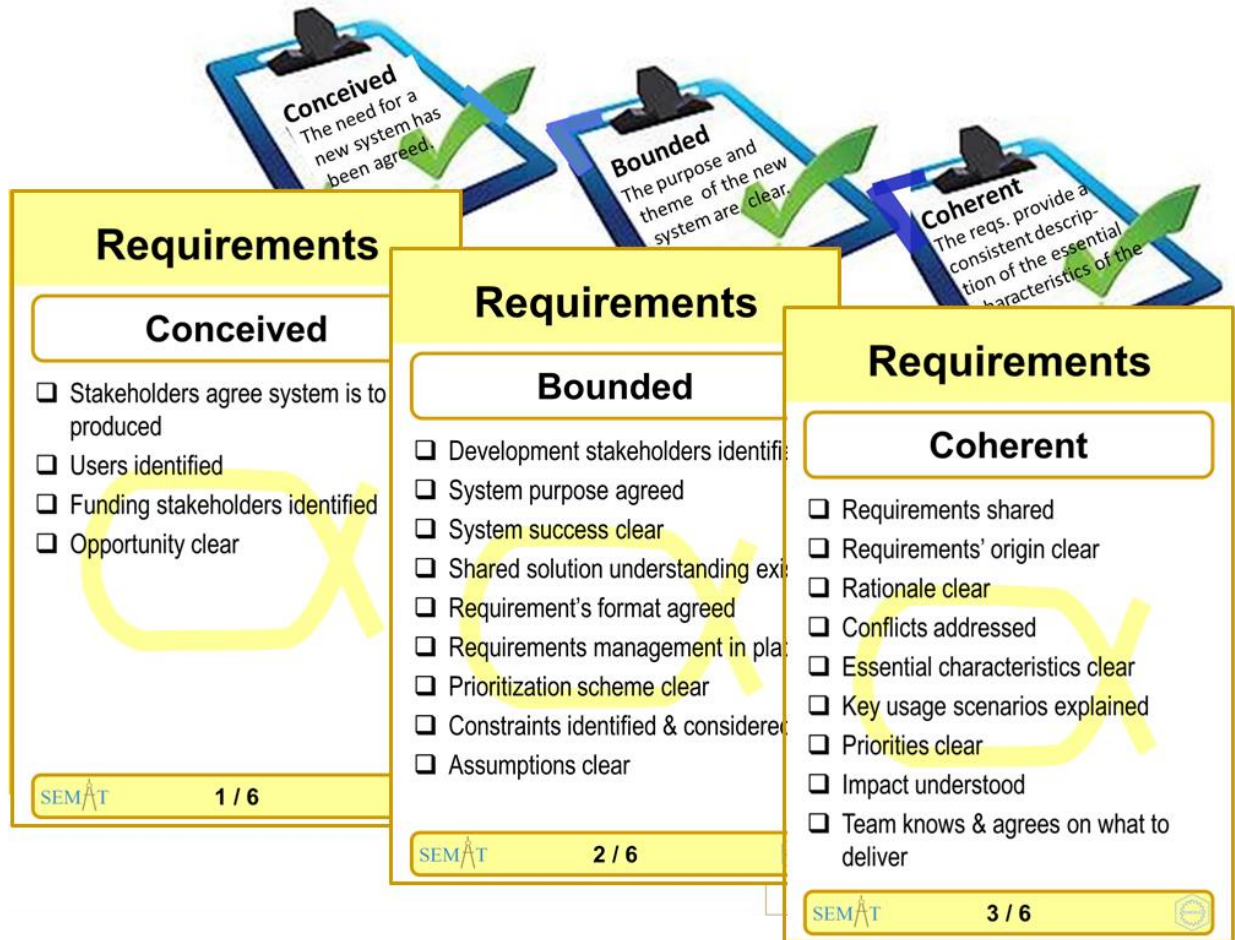


Figure 11. The first three states for the *Requirements* alpha

9. Target State Identification – Requirements Alpha

The team members move on to the next *Requirements* state card dealing with the *Acceptable* state. Based on the complaint about lack of functionality, this state has not been reached yet. Therefore, as shown in Figure 12, *Acceptable* becomes the target state for the *Requirements* alpha.

10. Task Identification – Requirements Alpha

Using the checklist items from the *Acceptable* alpha state card, the team discusses what needs to be done to achieve the target state. It turns out that most of the missing features requested by the faculty members are related to the way the new solution computes grades and manages feedback on deliverables. To overcome these problems, the team identifies the following tasks:

- **Task 9:** Add a requirement item allowing faculty members to associate grading to each individual course deliverable.

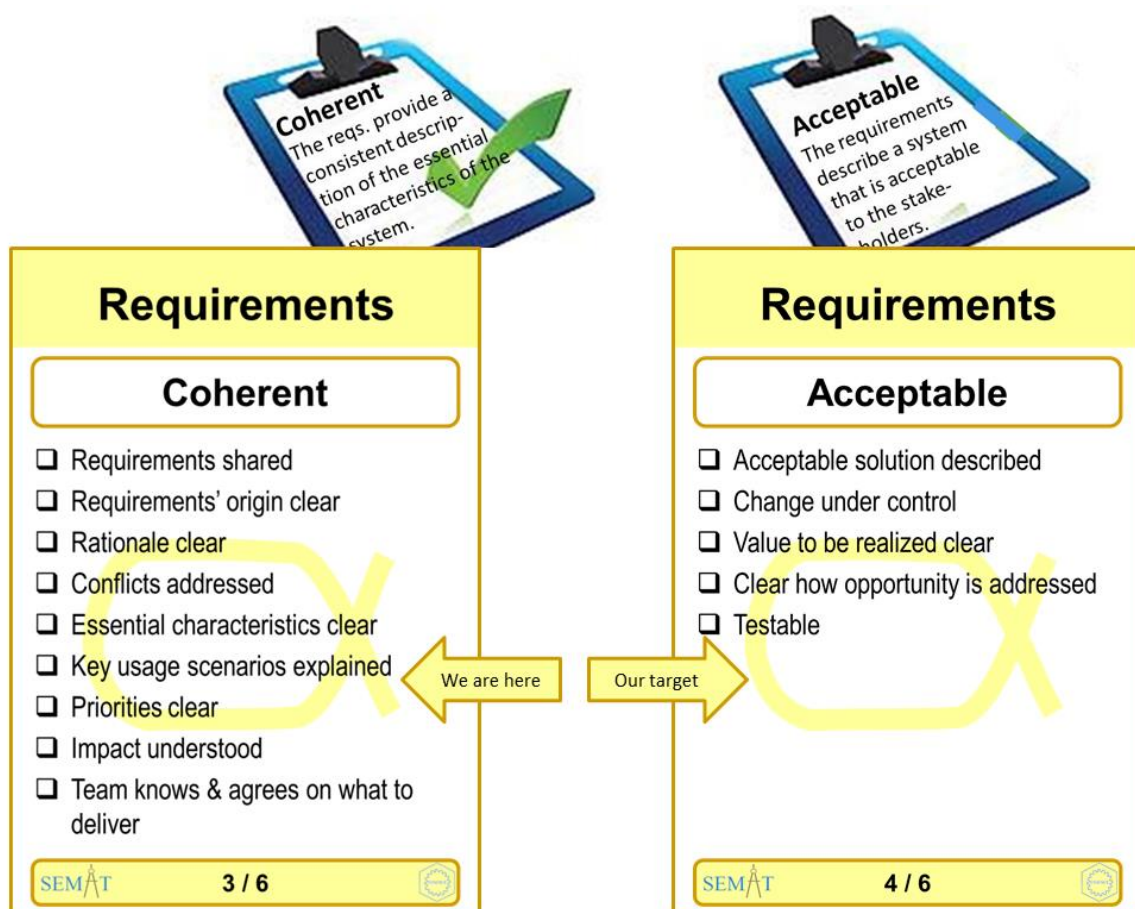


Figure 12. Current and target states for the *Requirements* alpha

- **Task 10:** Add a requirement item allowing faculty members to grade courses by summing up the course deliverables.
- **Task 11:** Add a requirement item allowing faculty members to save drafts while grading deliverables and providing feedback to students.

Pain Point Intervention Meeting 4 on June 22

Here is what happens during the fourth pain point intervention meeting. Again, the team members start by summarizing what has been done since the last meeting. Then they look at the *Stakeholder*, *Opportunity*, and *Requirements* alpha cards (see Figures 1, 5 and 10).

For each alpha, the team members identify the current state, target state, and tasks necessary to reach the target state. They do it in a similar manner as before. To make a long story short, the detailed steps followed by the team during this meeting are not provided herein. Focus is only put on presenting the current status of the project as identified during the meeting. The status is illustrated in Figure 13 and it is the following:

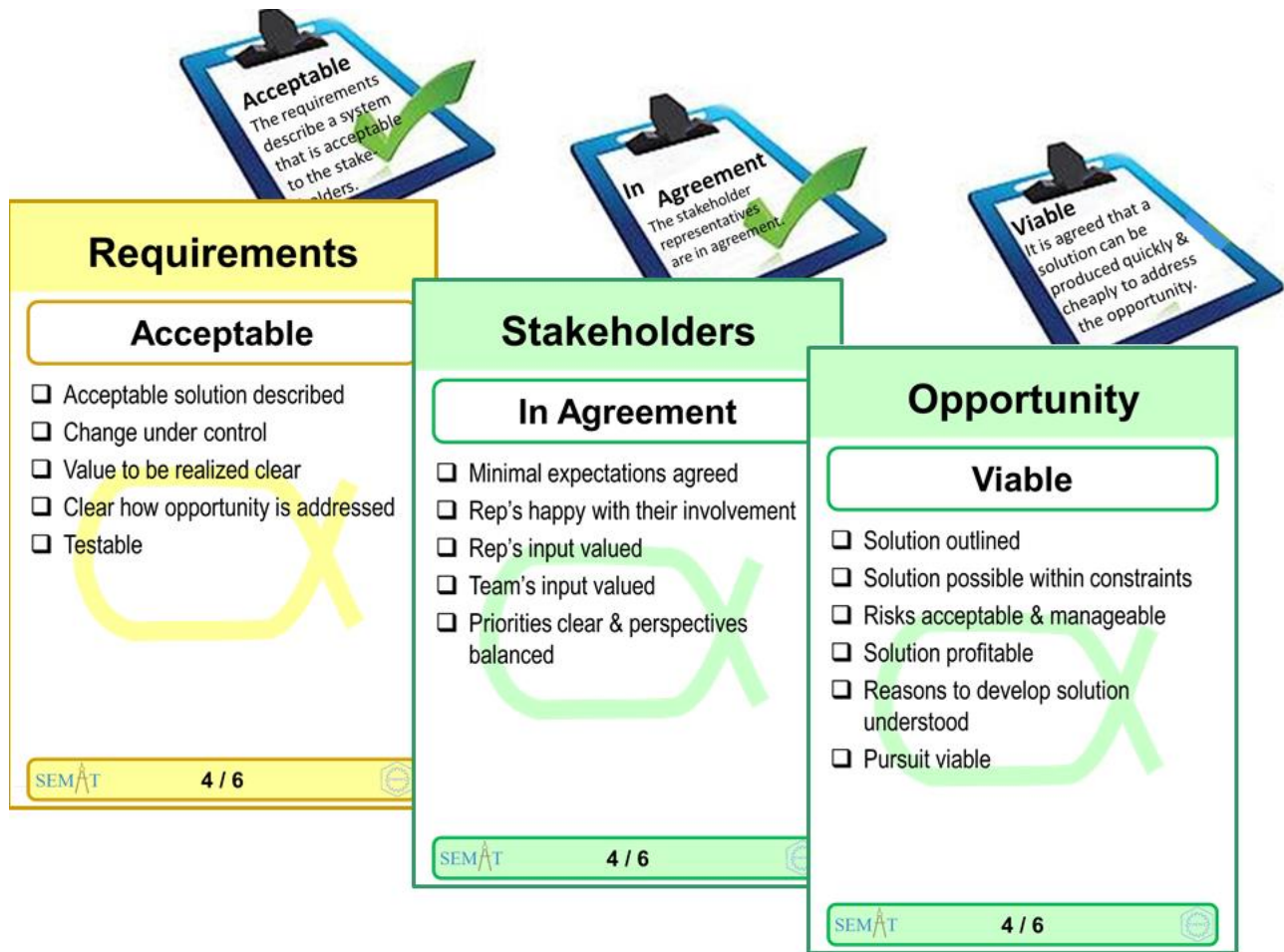


Figure 13. Project state at the end of the fourth planning meeting

- **Requirements.** The *Requirements* alpha is in the *Acceptable* state. Indeed, the new requirements items identified in Tasks 9, 10 and 11 have been implemented, and accepted by the stakeholders. The “unhappy” stakeholders have stopped complaining about lack of functionality. They now accept the new solution and pledge to migrate to the new system this coming semester.
- **Stakeholders.** The *Stakeholder* alpha is in the *In Agreement* state. Indeed, the team has been regularly demonstrating new functionality and sending updates to stakeholder representatives, showing how the team is incorporating their input into the solution. The stakeholders feel respected and valued by the team, and agree upon minimum expectation for the deployment.
- **Opportunity.** The *Opportunity* alpha is in the *Viable* state. The risk of adoption resistance has been mitigated by helping the faculty group to understand the value of the new system.

After having determined the current status, the team continues with identifying the target states of the three alphas studied and determining tasks for reaching the states.