Understanding Requirement

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Abstract

Effective use of the Requirement gathering is our greatest and most critical role. We need to communicate with stakeholders to make the best of it. The techniques mentioned here are mixed and for each project, the mix shall be different. This technique for gathering requirements is perhaps the most common way to obtain requirements from all the required techniques. This article also looks at how to run a Delphi session, Creating Affinity Diagram & Mind maps.

Keywords: MindMap, Delphi,affinity,Project Management,Collecting Requirements,Decision Making

Understanding Requirement

The collection of project requirements is a very important part. The process of collecting demands helps define the scope of the project during scope management. Some tools and techniques are available for collecting project requirements. All requirements seem practical to be collected at the beginning via an application. This should ensure that the project is delivered as desired. However, in reality, the present scenario is more challenging – why? The reason is that the current scenario is dynamic. Project stakeholders' needs and requirements frequently change. The Project Manager (PM) is therefore responsible for ensuring that all requirements are met. When collecting requirements, PM must be highly agile. PM should, therefore, use adequate tools to collect requirements during the lifetime of the project. In choosing the requirements tools, PM must be prudent. PM would ensure that the outcome of the project does not miss any requirement. Because PM is ultimately responsible for the project's success. First, let's define project requirements. The requirement is that project stakeholders expect project results. Project results. In accordance with the PMI definition, “Collect Requirements is the process of determining, documenting, and managing stakeholder needs & requirements to meet project objectives."[11] The first step is thus to identify the needs of stakeholders in the process of collection requirements. Second, document these requirements and requirements. And then manage them to meet project objectives throughout the project. The project scope is defined by this process. This process helps a project succeed or fail. As for PMI, approximately 70% of the failure of the project is attributed to the collection of requirements. Furthermore, according to industry and project type, 50 to 70% of this failure range.[11] A shocking fact: the planning and budget criterion of most of these projects were well met. During the final delivery or project

closure phase, product disputes were observed. Where the project product cannot fulfill the requirements of stakeholders. You can now imagine the impact that this process has on the success of the project! The collection of requirements is a key project management activity. Because the project needs to define the scope of the project. And any weakness in the management of requirements will cause scope problems.

A number of tools and techniques are used to collect requirements from project stakeholders. We will be discussing three of these techniques

Delphi Technique

The Delphi Technique is an important project management technique that refers to the technique of knowledge gathering where the perspectives of the most influential individuals, usually industry experts, are obtained, with the goal and intention of achieving agreement. In general, surveys conducted by these industry experts are conducted anonymously in the expectation that conclusions are reached without limiting fear or identification. The responses of all experts will usually be compiled into an aggregate overview, which will then be sent to the experts for analysis and for further comments. Usually, this method leads to a consensus over a number of rounds and this approach typically tends to eliminate bias and the risk that anyone will manipulate outcomes too much. A tool used to predict the probability and outcomes of future events is the Delphi Technique. A group of experts shares opinions, and each gives an assessor, who analyses the data and generates a summary report separately, conclusions and assumptions. The Delphi Method is useful in 2 scenarios:

- When there are many experts involved, and the consensus is not likely to happen quickly.

- When the experts are geographically spread out, and it is difficult to get them into a room to discuss, brainstorm and come up with the best strategy.

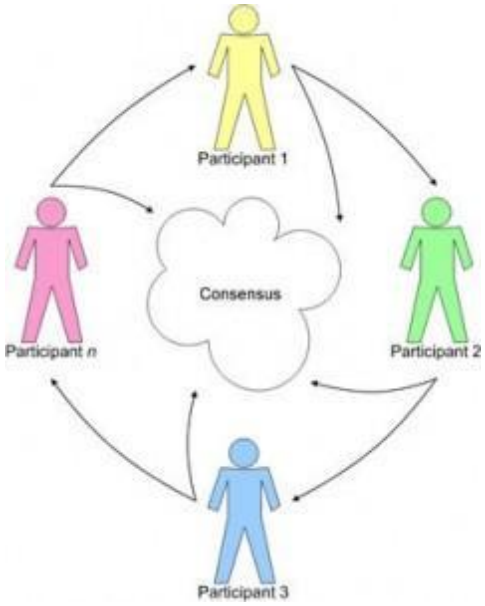

Fig1[1]Delphi Technique

The method is an iterative procedure and first, it tries to obtain a wide variety of expert opinions. If summarized, the outcomes of the initial Question Round are the basis for the second Question Round. The second round of questions outcomes is expressed in the third and final rounds. Identify areas of agreement or disagreement and begin to reach consensus on topics to explain and extend.

Steps

1. Select the facilitator: First, the facilitator is to be selected. You may want to assume this position or find a neutral person in your organization. It is helpful to have someone knowledgeable about research and data collection.
2. Identifying the experts: The technique in Delphi relies on an expert panel. This panel maybe your project team, including the customer, or other experts from within your

organization or industry. An expert is "anyone who has important expertise and experience on a particular topic."

3. Define the Problem: Which is the problem or problem we want to comprehend? The experts must know what problem they are discussing so that a clear and detailed interpretation is given.
4. Round One Questions: Ask general questions so that experts can understand the potential events. The questions can be asked in the form of a survey or questionnaire. Collate and summarize answers, delete content irrelevant and try specific points of view.
5. Round Two Questions: The next questions will be discussed to better explain particular issues based on responses to the first questions. Such questions may also take the form of a survey or questionnaire. Collect and summarize the data, delete all the content irrelevant and look for the foundation. We're trying to create unity, remember.
6. Round Three Questions: The ultimate questionnaire focuses on decision-making support. Hone about the agreement areas. What is the agreement of the experts. To find a closer consensus, you may want more than three rounds of questioning.
7. Act on Your Findings: Your experts have reached a consensus, and we hope that you will have a summary of potential events following this round of questions. Analyze the outcomes and prepare to tackle the projects' future challenges and opportunities.

Use the Delphi Technique for creating Work Breakdown Structures, identifying risks and opportunities, compiling lessons learned and anytime you would usually conduct a brainstorming session. Predicting the future is not an exact science, but the Delphi Technique can help you understand the likelihood of future events and what impact they may have on your project.

Mind Map

A mind map is a powerful tool to reflect the needs of a project. This is a graphical device you use to view project specifications visually. Furthermore, a mind map depicts the connection between all components of the project and is a hierarchical representation of ideas. You start from the center of your mind map with the main concept, like the name of the project, when you construct a mind map. The core concept as its parts is often connected with concepts. You can use various images, phrases and even some terms to represent ideas and their divisions. For the visual representation of their thoughts, consumers around industries use the methodology for the mind map. Each branch of the mind map flows from the center to the last node like a plot and provides a full understanding of a concept. In addition, a visual map is very versatile. If a further idea is given or a branch can be removed from nodes that are not needed, you can add a branch to a node. A project is based on the same idea of a mind map. This strategy helps you to map the applicable requirements as different areas of the project and to further expand requirements as sub-branches of each requirement while integrating and interpreting the requirements of the parties. It helps you not only to grasp the requirements of stakeholders but also to compare different requirements as they are visually portrayed. Upon finalization of a project mental chart, you will evaluate these specifications for different project components and supplies, including procedures to complete these supplies. The visual map of a project provides a bird's eye view of the project that you can show to stakeholders in order to ensure that they understand the criteria they have met. In addition, the product and its features can be visualized using an intellectual diagram. We can build a map on a paper manually or use any of the commercially available automated intellectual map utilities. While you can use your creative sense in the manual

method, you can use the advanced technologies and features of the automated system, such as the individual collapse of different node rates, which makes it simpler and more regulated when the involved parties present them. Any usefulness, manual or automated, the basic method is the same to construct a diagram. The project title starts with the middle and is extended in a radial hierarchy.

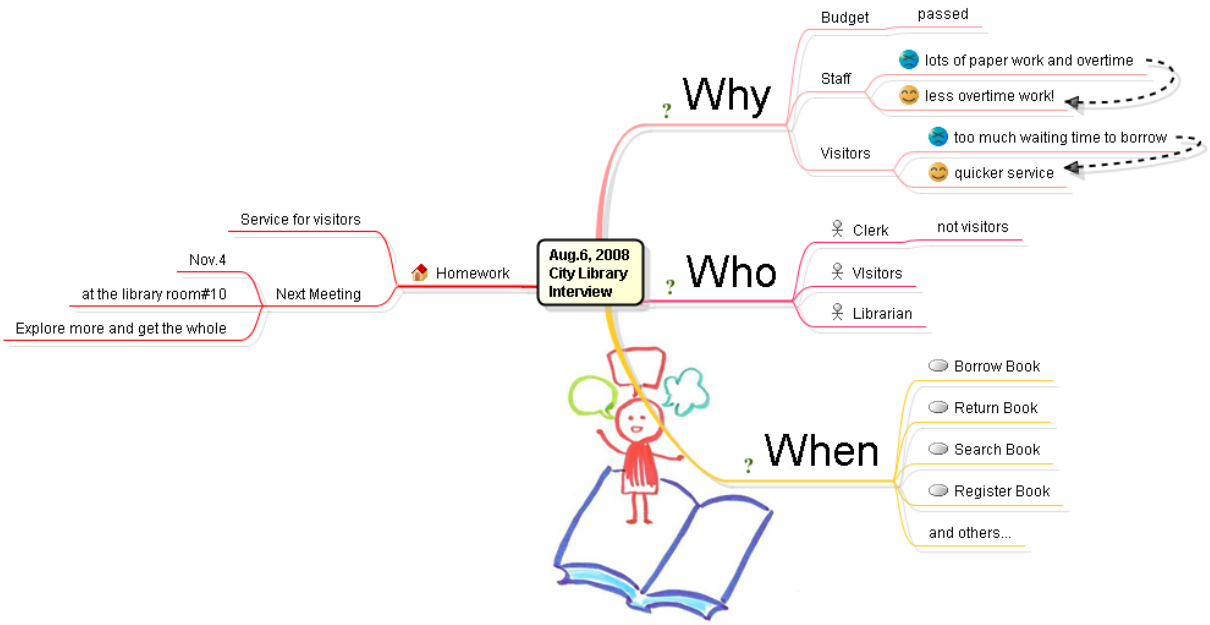

Fig2.Example of “User Wish” mind map including “Why”, “Who” and “When” branches.[8]

The mind map is shown with shapes, pictures, symbols or even pictures of the words or letters. From Ralph Haber's and then from R studies. S. Nickerson found that pictures are more relaxing than words, generating more innovative ideas and encouraging improved memory. The Mind Map should survive the theoretical equalization of the left and right brains (Morris et al. 1998). As developed by Dr. Roger W in the 1960s. Sperry has its own way of thought, understanding and sharing thoughts in every part of the brain hemisphere (Sperry, 1981). The left side of the hemispheres is more rational and systematic in word and method. On the contrary, it functions

more intuitively, holistically, and predictably on the right side. Most people prefer to dominate on one side of the brain, but the goal is to balance it so that the brain can take maximum power or capacity.[7]

There are seven key stages of the Mind Map Process, according to Tony Buzan in his book "The Mind Map Process." [7]

1) Subject Description – All team members must clearly define and understand the subject and purpose. Therefore, all relevant information to be addressed will be communicated to all group members.
2) Individual brainstorming – Each participant has to create their own unique Mind Map for at least one hour.
3) Small group discussions – Teams are then split into smaller teams to exchange thoughts. Members must cultivate an attitude that is totally optimistic and appropriate.
4) First Mind Map Development – Collect all ideas and start creating the mind map community.
5) Incubation – a cycle where ideas are sought both analytically both verbally as long as the results are collected.
6) The second reconstruction and analysis – Iterating phases 2, 3 and documenting the result of the freshly thought-out and incorporated concepts. The group Mind Map production is used to evaluate the final stage planning.
7) Analysis and decision-making-Make choices, create priorities, planned devices and edit them.

In a nutshell, the Mind Map is that. But it needs the opportunity to realize its full potential. In addition, learning is simple and fast. Finally, Mind Map may improve the job, such as problem-solving, research, decision-making, brainstorming, organizing, taking notes, presentation, and project management if integrated into the project.

Affinity Diagram

It is fascinating to use the Affinity Diagram and one of my favorite ways of doing stuff. This lets you separate masses of knowledge into natural classes based on their specific features or the categories to which they belong. This is also an engaging tool to explore ideas/suggestions gained in brainstorming. This is known as the KJ System, following the Japanese Anthropologist, the founder of Kawakita Jiro.

When to Use an Affinity Diagram

- When you are confronted with many facts or ideas in apparent chaos.
- When issues seem too large and complex to grasp.
- When group consensus is necessary.

Typical situations are:

- After a brainstorming exercise.
- When analyzing verbal data, such as survey results.
- When collecting and organizing large data sets.
- When developing relationships or themes among ideas.
- When reducing attributes to categories that can be addressed at a higher level.

The affinity seeks to gather and combine thoughts, opinions, and insights. Thus, to ensure effective results, the attendance of affinity processes should be limited to 5-6 participants.

the affinity process proceeds based on the following steps:

1) Plan for the Affinity Meeting: For participants, it is important to understand what they will experience about the topic and process in the meeting. This helps them to get ideas and information ready. This step helps to decrease the time during the preparation.
2) Generate Ideas: The next step is to generate and write ideas on adhesive notes. The participants write down their thoughts or information on a separate note with each idea or piece of information.
3) Display the Ideas: All the notes are randomly placed on a whiteboard or a table in this step. At this point, no organization is needed. The following figure shows how each idea is placed on a single, random note with each idea.

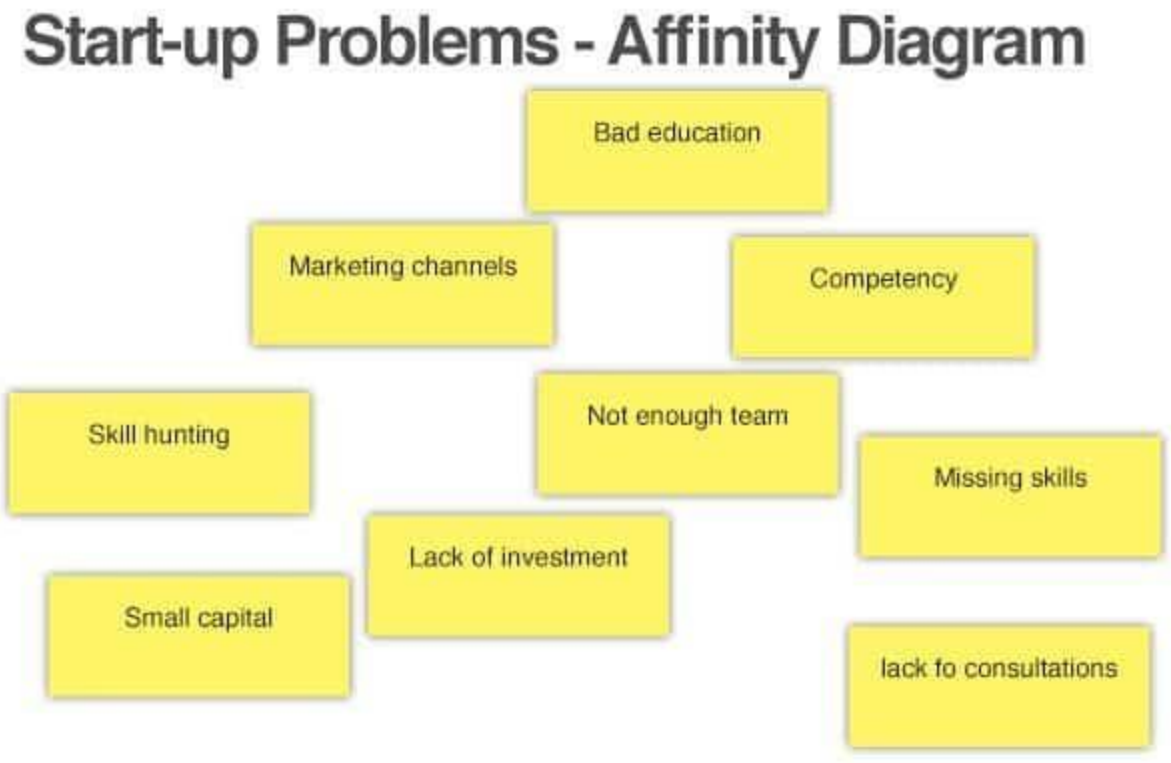

Fig3.Using the affinity diagram to brainstorm problems that face start-ups. Step3 write the different ideas[12]

4) Sort the Ideas into Groups: The ideas are organized in groups defined by the relationship between the thoughts in this step. Once a group has been established, the team begins creating a new group of ideas and the process continues until the ideas are all arranged in one group. In any of the groups some ideas may not fit, and they will be added to a different group. The ideas presented in the figure below were based on the relationship between them.

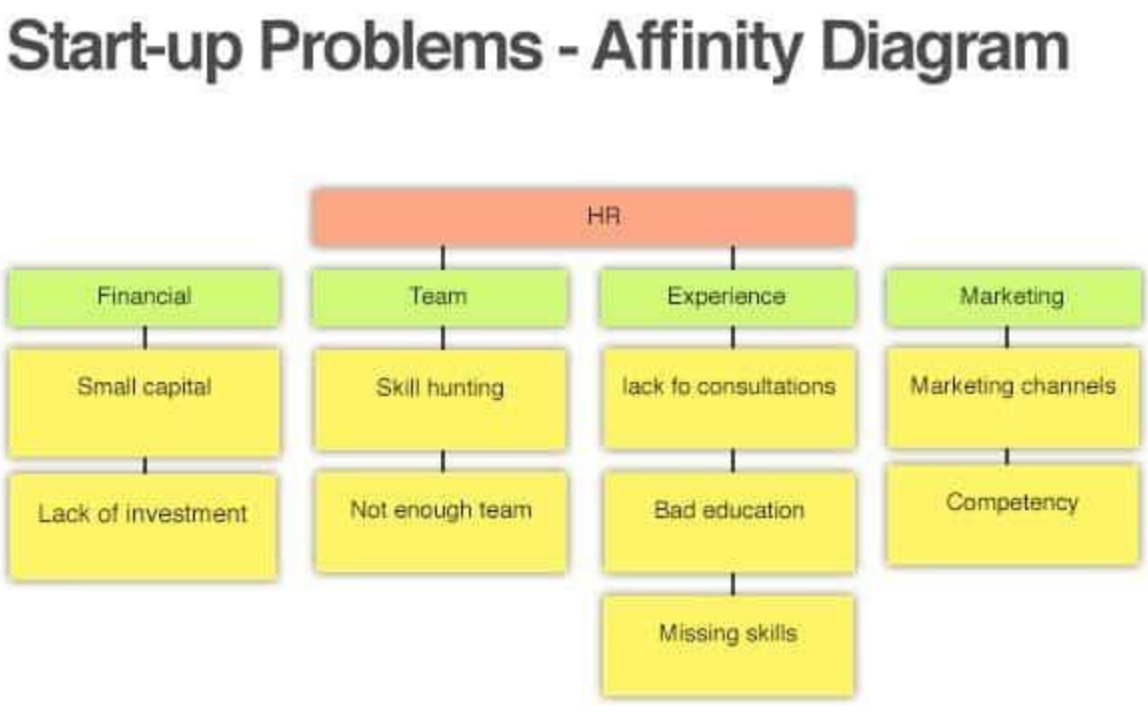

Fig4 [12] Add header to link related groups.

5) Add Headers: After the groups were created, the team named each group and created each group name for a sticky note. This is called the header cards. One or two groups can be organized according to the same rule as group headers under a super-group header. The following figure shows the header for each group of ideas.

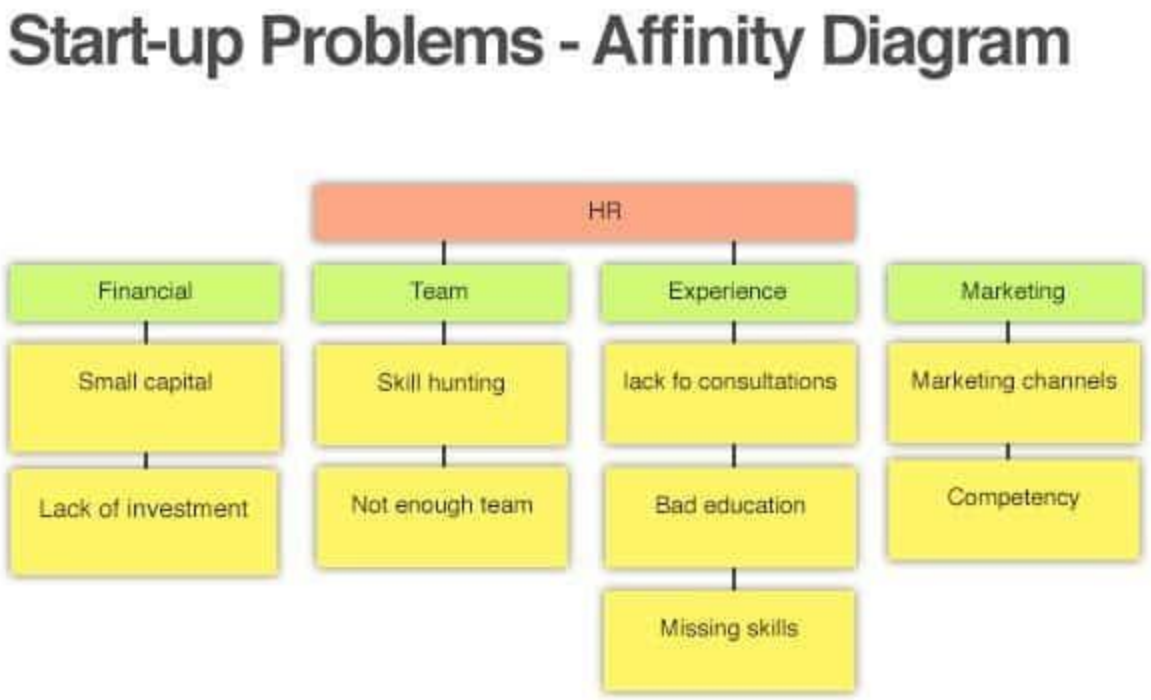

Fig 5. Add a header to link related groups.[13]

6) Draw the Affinity Diagram: The headers, the super headers, and the groups are organized, and the team reviews the relationships between the groups and modifies the diagram if necessary. The affinity diagram is a single document once completed. Something like the example below should be the final look for the affinity graph.

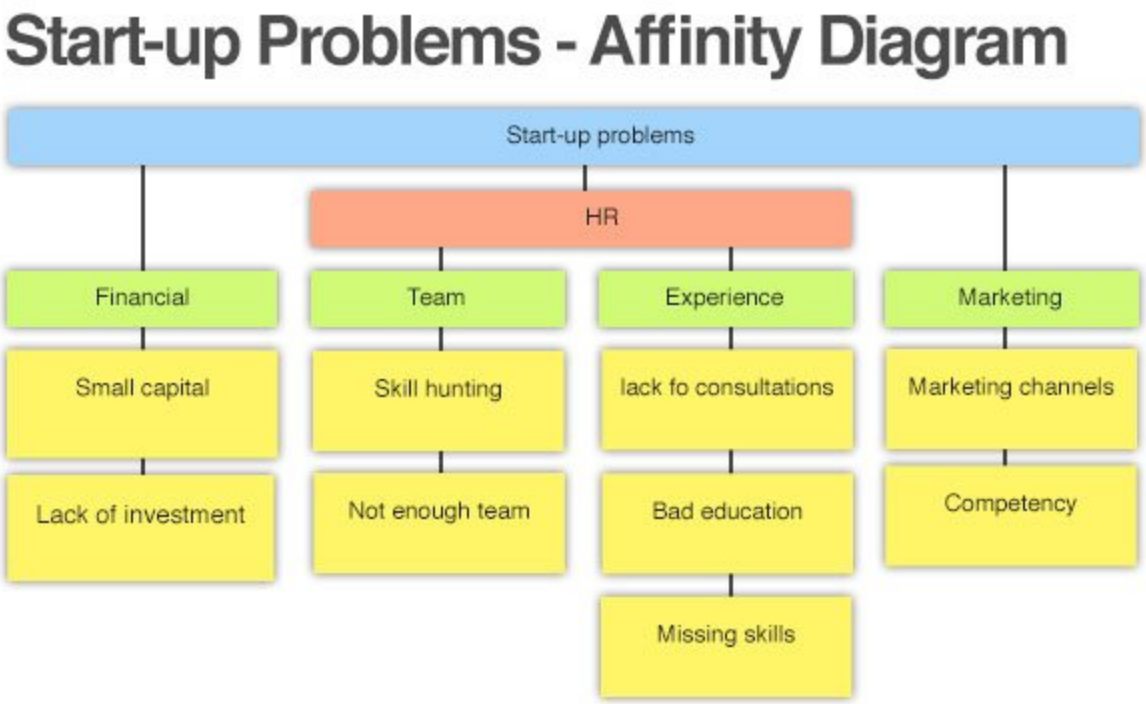

Fig 6. the final look for the affinity diagram [12]

Conclusion

A customer will be receptive for the vast majority of the time if it means you maintain their budget; if you inform the customer why a feature should be dealt with (or not dealt with) and then document the logic behind that approach within the requirements, it is much more likely that your customer will work collaboratively (they generally like to feel involved, isn't they?!). They are more likely and will have a head start to understand the "why" behind the solution of your team when testing User Acceptance (UAT). They'll give your approvals. The bulk of your requirement documentation for something similar to a full website build should start as soon as your commitment begins and throughout your entire project life cycle after discovery (consumer strategy, site mapping, wireframes, designs) and prior to developing. The collection and the documentation of project requirements are never too early. Actually, start yesterday.

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