Design Thinking for Requirements Analysis

Are you in the requirements gathering and analysis phase of a project? Do you need to get a clear understanding of the needs and goals of your stakeholders and end users? At the same time are you wondering how Design Thinking can make a difference in this particular context? Then these pages are for you.

Why Design Thinking in this context?
Of course Design Thinking normally accompanies a whole project from scoping till implementation and operations. However, in case a full Design Thinking process is not feasible on customer side it often makes sense to execute “Design Thinking inspired Workshops” that leverage principles and techniques of Design Thinking.

In the context of requirements analysis you might encounter some of the following needs (not a complete list) and Design Thinking can help you to tackle these situations:

- You need to gather requirements from your end users and stakeholders for this project.
- You need to gain empathy for your end users to have a better foundation for solution definition.
- You need to define functional requirements.

Does Design Thinking replace ASAP?
No, not at all. All the templates and techniques shipped in ASAP are essential for good process design. Design Thinking is a technique that ASAP leverages for user-centric results in multiple contexts. Therefore Design Thinking nicely complements ASAP.

This is for you, if...
...you are in the requirements gathering and analysis phase of a customer project and you want to understand how Design Thinking can be of value-add for you and your client. You already have knowledge about the Design Thinking approach, principles and techniques and requirements engineering in general.

What you can expect from these pages
This article summarizes success measures and techniques for a Design Thinking inspired workshop in the context of Requirements Analysis.

This is not for you, if...
...you want to learn about Requirements Engineering and Analysis in general or search for an introduction to Design Thinking.
Before you start
Before you start working on the requirement gathering and analysis, evaluate and make a list of end-users and stakeholders from whom you want to gather requirements. Include people from different job functions and roles, lines of business, geographical locations and those who may be indirectly affected by the project. Schedule interviews with the people in this list, either in-person or by phone. Prepare an interview guide before the interview. Include open-ended questions that allow the interviewees to explain their needs and requirements.

The following success measures will help you to understand the required actions and preparation that is necessary before going into a workshop. These involve

- Design Challenge
- DT Facilitator
- Team Set-up
- Agenda
- Research
- Logistics
- Time-Boxing
- Expectation Management

Design Challenge
Defining the right Design Challenge is crucial as it scopes the workshop and enables the customer to assign the right resources to it. The Design Challenge should reveal the actual demand. That means a challenge such as “Create a new mobile application” is not sufficient as it does not include the actual demand. A quick “why” might reveal demand such as “Create a new mobile application to enable mobile scenarios for employees in the field”.

DT Facilitator
The Design Thinking approach and its principles and techniques used during a workshop might feel odd to participants who are not used to it. Make sure to have an experienced Design Thinking facilitator. Demonstrating confidence and trust in the approach to the participants will make sure the team feels secure to follow the approach and head in the right direction.

Team Set-up
Design Thinking always seeks for a diverse team set-up to ensure business viability, desirability of the solution for the people and technical feasibility. Hence having six developers in the same team isn’t the recommended set-up. Neither six end-users nor six project managers alone will lead to a thrilling outcome. Involve different roles like end-users, project managers, software developers, business analysts, functional analysts etc. in each team. This ensures different perspectives on the challenge and will lead to better solutions and concepts. A good team size is four to five participants.

Research
Understanding the context of the challenge is a central part of DT. Ideally, the project teams should visit the interviewee at his/her work location to observe and understand the context of the user. However, if logistic constraints exist, then invite the user to the workshop for the interviews or set up a conference call. Ask participants to capture pictures of their user’s work environment and collect artifacts that demonstrate the user’s workarounds and needs. Allow 30-60 minutes per interview to observe your users, gain empathy and truly understand their needs.

Agenda
The agenda consists of the different phases of Design Thinking. Within each phase there are different techniques that you can use to create the expected output.

Success Measures

Logistics
Make sure you have one room for the whole workshop, even if it is planned to run multiple days. DT techniques require a lot of wall space (look at the picture above, it is a subset of a result after four hours of work). It is very difficult to transfer all the data on the Post-it notes to another location. DT workshops require a special set of material. A projector and a big screen is not enough (often not even needed). Make sure you are meticulous about the material (to share a moderator’s learning: “always bring your own stuff”).

Time-Boxing
Design Thinking is sometimes called a “messy process”. And it is true, if you don’t time-box each and every exercise, the discussions will get lost in space. Bring a large timer that everyone can see and time-box simply every item on the agenda.

Expectation Management
People who are not used to the rollercoaster of emotions that come with a Design Thinking set-up might quickly lose confidence and motivation during the workshop. Prepare your participants to be aware that this might feel different as it will push them beyond their comfort zones and is an intense and energy-sucking approach. A lot of participants always search for the a+b=c formula which is basically not there in a DT set-up.

Checklist
Think through this checklist to ensure your Design Thinking workshop will kick-off without hurdles:

✓ Is a DT coach/facilitator available for the workshop?
✓ Is the Design Challenge defined, demand-oriented and aligned with the customer?
✓ Is a diverse team set-up in place to ensure multiple perspectives on the challenge?
✓ Are the agenda and relevant Design Thinking techniques defined?
✓ Is the same room available throughout the workshop?
✓ Is the material list up-to-date in terms of quantity and sourcing?
✓ Are the participants aware of the emotions that come along with a Design Thinking set-up?
The following sections show input, output, team set-up and techniques and agenda requirements. Please refer to them as inspirations and proposals for a requirements analysis exercise.

Results and Outcome
The expected results and outcome of this workshop are:

- Step 1: Raw unstructured data captured from interviews with users and stakeholders
- Step 2: Structured data including
  - Insights
  - Needs and goals of users
  - Point of view
  - Persona
- Design principles/recommendations

As post-production activity the outcome needs to be transferred to the common ASAP templates. Alternatively there might be a requirements management system available on customer side.

Team Set-up
A diverse team set-up in a workshop can consist of the following participants:
- From customer side:
  - End-User
  - Process-Owner
  - Software Developer
  - LoB-Manager
  - IT-Architect
  - Business-Architect
- From SAP side:
  - Solution Consultant
  - Business Consultant with industry/process/project topic knowledge

Input
The following things are valuable input for your workshop. Decide if you need participants to come with that knowledge or if you want to walk through the assets during the workshop.

- Customer expectation and objectives about the project
- Reason for project
- Success measures of the project

Techniques
To ensure valid outcomes, apply the following patterns to your workshop:


Scoping is needed to agree on the workshop results and to share perspectives before going into solution mode. Building a context for the challenge is necessary to lift the knowledge base of the participants and to build a basis for creativity. Ideation can start as soon as enough context has been created. Then low-fidelity prototyping will ensure early validation of your solution.

The following techniques can be used to support requirements analysis activities (the assignment regarding the above pattern is mentioned in brackets):

- Brain dump (Scope).
  You can use this technique to scope the area of requirements analysis together with the participants. This technique can also reveal a (probably not complete) list of requirements.
- Remember the future (Scope, mission/vision of the topic).
  Use this technique to create momentum and a common agreement within the group regarding the objectives of the topic.
- Research and interview techniques (if not done beforehand to capture As-Is state) (Context)
- Synthesis of interview data
- Story telling.
  The story telling exercise can help the team members have a shared knowledge and understanding about their users. It helps gain empathy for their users’ needs and pain points
- Clustering and deriving insights.
  This activity will help identify common themes, pain points, bottle necks and patterns emerging from the data gathered from the user interviews.
- Point of View (PoV) helps focus and converge or restate the problem statement. This exercise helps articulate hidden needs and goals of users and stakeholders.
- Personas (Context).
  Use this technique to get a common understanding regarding needs, motivation and expectation of involved stakeholders (which could be end-users but also sponsors, process owners or developers etc.).
- Day in the Life of… (Context and/or prototyping).
  A derivation of “day in the life of…” can be used to describe the as-is process or also as a prototyping technique to define the to-be process.
- Brainstorming, REICC (Reduce, eliminate, increase, create, combine → see Book “Blue Ocean Strategy” etc. for ideation).
  Use for example the results of “Day in the life…” and multiply given enhancements into it. E.g. “How might we decrease the cycle time of the process?”
- Low-fidelity Prototyping.
  Every step in a “day in the life” exercise can be broken down into functional requirements. Use low fidelity mockups if needed to better understand the workflow.

Agenda and Duration
The techniques shown above are already in a feasible order to support your agenda definition. Workshops like this can be run within one day. However, depending on the complexity of the topic this might take longer.