Building A Digital Platform for Conducting Ethnography Research

Introduction

Our client, an ethnography research company, have entrusted us to build a technology platform which can support, digitally managing the entire workflow of their research. The business of our client has hit a plateau, after growing for several years, which can be attributed to the fact that: ethnography research is a highly manual intensive and time consuming work, involving a lot of data processing and interpretation; such research demands a scattered field force who constantly struggle with data collection, communication with participant, and data synthesis; executing multiple projects simultaneously, while maintaining quality parameters thresholds, is a challenge.

On further exploration of the ethnography research process we discovered that it is highly iterative, manual and arduous workflow and involves following key activities:

- Writing clear, concise statement of objectives which will help in focus during the fieldwork.
- Creating a screener to qualify the participants and to validate their motivation to be part of the research.
- Creating an interview guide or blueprint of triggers, to unleash a participant's feelings about themselves, their families, and the product or service at issue.
- Recruitment of participants which covers determination of incentives amount and participant number, vetting of the participants, planning for last minute cancellations etc.
- Scheduling, recording and debriefing of interviews with different participants during the tenure of the project
- Analyzing the interviews and interpretation of meaning and deriving insights
- Synthesis of insights and interpretations into a detailed report

Our exploration also led us to the realization that there is a growing demand for ethnography research, especially in the consumer product companies and the new age digital consumer companies, as such research is applied in a wide variety of purposes such as marketing, product development, new ideation generation, complex program finetuning etc. The primary business challenge is therefore to leverage technology to build scale of operation so that it can tap on to the high demand. For this purpose, we were required to build a cloud based SAAS platform which can help – onboard different customers; conduct multiple online ethnography research for a customer; facilitate easy communication with participant; and unify the data interpretation and synthesis steps.

The Challenge

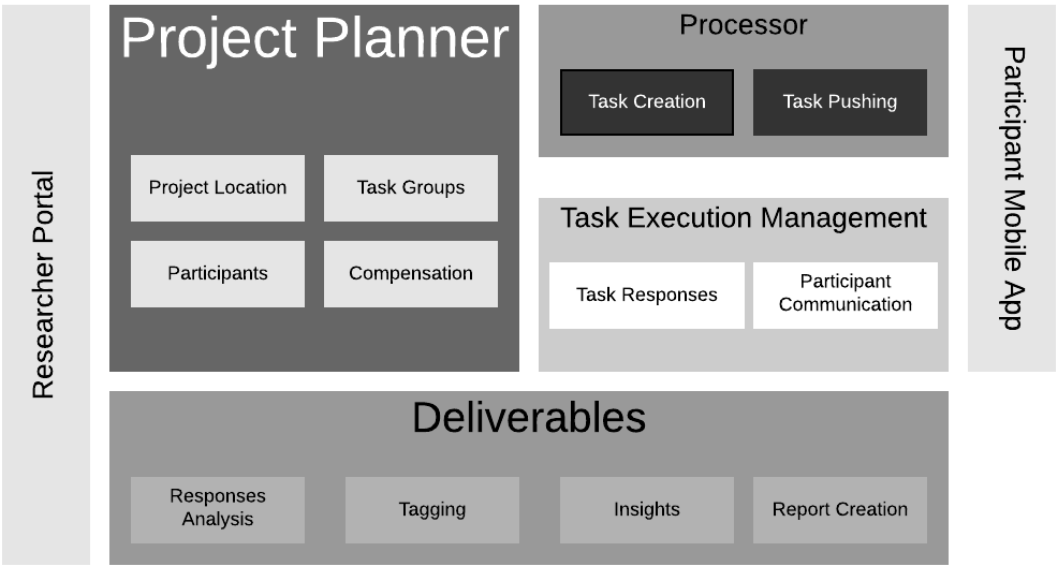
Building up on the domain knowledge of our client, we created the basic framework for ethnography research workflow – each research is set up as a project; the projects have a timetable of activities and a set of participants; the activities are triggers, pushed to participants, that help decode the environment, emotions, attitude and behavior; the project activities are executed simultaneously, on all participants of same location; participants need to respond to the activities pushed to them; themes and insights are extracted, based on the participant response, and synthesized into a report.

But on deeper probing of detailed requirement, the following complexities surfaced up:

- While duration and day wise timetable of activities are defined at a project level, the actual execution of project (project start date) and sometimes the activities vary for different location.
- While participants should be automatically engaged based on predefined timetable of activities, there is need to allow real time modification to activities, during the project execution, for a location or a participant.
- Need for creating participant specific activities which are visible to specific participant or a group of participants and not to all participants.
- Need for making the activities time bound for the participants so that participants can see an activity and respond to it only within a validity period.
- Need for intermediating the communication between multiple researchers and participant so that participant feel they are always conversing with a single researcher
- Need for a flexible tagging mechanism, for the responses of participants, so that themes and insights can be easily extracted from responses.
- Need for making the platform multilingual and the timetable of activities work in multiple time zones
- Need to make some of the activity's conditional, based on completion of other activities
- Need for a payment gateway integration that helps with reverse payment from merchant to customer
- Need for pausing of a project (for one or multiple locations) and being able to resume from same point (even if multiple days have lapsed) without affecting project duration.

The Solution

The above paradoxes and anomalies in the requirement increase the complexity of the solution leading to potential high development and maintenance cost. Our effort has been directed towards simplification of the overall architecture, high-level and low-level design, so that all the different use cases naturally fit. Through successive iterations, we modelled the system into a 3-level architecture where – the project is at the top of the hierarchy, as a template comprising of duration and timetable of activities; at the next level comes the project location, where the actual project starting and ending occurs; and at the leaf level comes the participants, where the activities are created and completed.



Ethnography Research Digital Platform

The project locations are added to a project. The participants are added to a project location. The timetable of activities, defined as a task group, is a set of tasks, each of which are mapped to a time and day of the project. Each project has a default task group which all the project locations within the project inherit. Additionally, a task group can be specifically created for one location that will not apply to other locations. A project location at any point of time will only subscribe to one task group. All participants in a project location inherit the tasks of the location task group. Also, there is provision for creating a task for a participant which is not part of task group of the location or the project.

When a project starts for a location then at midnight the task mapped to the day and time of the project location are created for all participants of the location. Alternatively, a task (or set of tasks) can be created specifically for a participant, outside the midnight processing. Every five minutes, a processor checks if any task is due to be pushed to participants and if required pushes it. When all the tasks for all the participants in the location is over then the project is ended for the project location. If a project is paused for a location, the last activity day is frozen for the location. When it is resumed, it starts with all activities of the next day. This kind of a design greatly simplifies the task creation process and provide tremendous flexibility. Each project location can start on different days and can have the same set of activities day wise for their participant. Also, all locations can go with default set of activities or location specific set of activities. Participants can start on the same date as the location or on a different date and yet they will be able to experience the same set of activities day wise. Also, there can be specific participant-based activities.

The execution of a project, across location, can be managed by a group of researchers who are part of the project. All the researchers will be able to track progress of project at location level and also at participant level, in a uniform manner. They can also interact with the participants using the communication platform, which masks the researcher's identity to the participant. So multiple researchers can communicate with a participant and can pick up a thread where it was last left but to the participant it will appear as if she is conversing and interacting with a single person. All this greatly reduces the operation complexity of project execution across locations.

All the responses obtained from the participants are indexed by the day and activities, which enables to review activity wise different responses from different participant. The responses from the participants can be tagged by the researcher so that they can be connected to other responses, to establish a pattern. The tagging system allows for a tree structure and multi-level relationship structure. So, two tags can be combined to create a new tag and a single tag can be decomposed into multiple new tags. Also, the tags can be traced to a response at a root level. All these flexibilities help greatly in connecting the different responses and deriving insights and meaning from the responses.

Conclusion

Managing an ethnography research project is highly manual and operation intensive work. The above platform digitizes the entire process and workflow of ethnography research and thereby attempts to build efficiency into the operation. The platform greatly helps in reducing the overall time taken to execute the project; to converse and follow up with geographically distributed participants without physically travelling; to collaborate seamlessly with other researchers on a project; to organize digitally and centrally all the project artifacts such as activities, responses and insights; to connect patterns in the participant response and derive meaningful insights. According to an estimate the platform reduces the cost of the project by as much as 15%. It also helps each researcher work on 6 projects parallelly.

On a different note, this project was a great opportunity for developing our expertise on enabling digital transformation for our clients. It involved deeper engagement with the client's research team to understand in greater detail the workflow and associated challenges, leading to co creation of a lot of features. For example, one of the biggest issues was centrally managing the interaction between researcher and participant for which we created a communication platform, masking the identity of researcher to the participant. Another challenge was simplifying the process of extracting insights from the interviews and responses of participants. Based on the observation of the current process, we came up with a digital whiteboard and sticky pad based with tagging as an underpinning framework. Researchers found it quite familiar and intuitive to extract patterns and themes. As part of this project we had to constantly push to enhance the stakeholders experience of our client's customers – both client and participants. The customer of our client previously could not monitor the progress of the project until publishing of the research finding. But with the help of this platform they can monitor the progress of research milestones and continuously provide their inputs. On the other hand, the participants can engage through the mobile app to track the progress of their activities. Also, we were required to train the research team to align their expectation and address their mental block on usage of the platform. These forums offered a lot of rich data on how to evangelize a digital project with an offline team.