INTRODUCTION

The Vale a Pena project aims to increase the uptake of family planning in Mozambique, with a focus on rural adolescents between 10 and 19 years old. To that end, the project is using human-centered design (HCD) to achieve a deeper understanding of the barriers and behavior drivers of rural adolescents and their influencers, and to design user-centered, catalytic interventions to increase their use of family planning (FP). These interventions will be piloted, refined and scaled up during the implementation phase of the project. ThinkWell—a project consortium partner—is conducting operational research to continually inform the design and the implementation of project solutions. This report is the first of a series of quarterly learning reports that capture the findings and learnings from operational research conducted throughout the project.

The report responds to the research questions designed at the beginning of the inception phase. It discusses learnings that emerged from direct observation and a series of interviews conducted with design team members and project leadership during the first half of the inception phase. The report provides a brief overview of the project and outlines findings around four topics that speak to the objectives of the research that have emerged as key themes during the data analysis:

- Adolescents’ involvement in the design team
- Inclusion of non-expert designers in the design team
- Building design capacity of PSI and N’weti’s staff
- Achieving a deeper understanding of barriers to family planning for rural adolescents
METHODOLOGY

Operational research in Vale a Pena aims to produce evidence to inform implementation and improve the project’s effectiveness, efficiency, quality, access, scalability and sustainability. In the inception phase, our operational research employs an emergent design in the conceptualization of the research sub-questions, as well as in data collection and analysis. This approach allows for unanticipated information arising within the research process to feed back into the research design.¹

The following research questions were identified to guide operational research during the inception phase:

1. To what extent did the project achieve the desired results for the inception phase?
2. What are the added value and challenges related to the key features of the inception phase?
3. To what extent is the project adaptive during the inception phase?

During the first half of inception phase, the research concentrated on the following sub-questions:

- To what extent did the project achieve a deeper understanding of rural adolescents’ barriers to family planning? (Q1)
- To what extent are adolescents included as decision-makers? (Q1)
- What HCD principles, processes, and tools did PSI and N’weti members of the design team learn during the inception phase? (Q1)
- What are the added value and challenges related to having an adolescent in the design team? (Q2)
- What are the added value and challenges related to conducting three weeks of immersive research? (Q2)
- What are the added value and challenges related to having PSI and N’weti staff in the design team? (Q2)

Data collection and analysis

- 11 semi-structured, in-depth interviews—of which 5 conducted in Gaza Province during a field visit, 5 in Maputo and 1 via Skype—with design team members (5 PSI staff, 3 N’weti staff, 2 ThinkPlace staff) and project’s leadership (1 PSI staff);
- 1 group reflection exercise in Maputo with design team members;
- Observation in the field in Guijá and Macia (2 days) and observation of the ideation workshop in Maputo (1 day).

In this phase we employed framework analysis, a thematic analysis technique that is grounded in the respondents’ accounts but that starts deductively from the operational research objectives.² Therefore, framework analysis uses both inductive and deductive techniques. The analysis process involves the identification of common themes from the data set, and the extrapolation of themes and sub-themes which serve as units of analysis.
THE VALE A PENA PROJECT

The Vale a Pena (VAP) project aims to change shared behaviors and beliefs to increase the use of family planning among 10- to 19-year old girls, with a focus on rural areas.

The project is divided into a 6-month inception phase and a 24-month implementation phase. During the inception phase, PSI and N’weti, in partnership with the design firm ThinkPlace, are employing a human-centered design-inspired approach to identify project solutions that are rooted in the needs and aspiration of adolescents. During the implementation phase, project solutions will be piloted, refined, and scaled up. Throughout the project, ThinkWell will conduct operational research to inform implementation.

Desired results of the VAP inception phase
The overarching goal of the inception phase is to design project solutions to increase the use of family planning among adolescents. In a project intent meeting facilitated by ThinkPlace, project staff identified the following additional desired results to be achieved during the inception phase:

1. To achieve a deeper understanding of barriers to family planning for rural adolescents
2. To develop 1-2 prototypes with potential for catalytic impact on rural adolescent FP
3. To design project solutions that are driven by adolescents’ insights and to include adolescents as decision-makers in the design process
4. To design project solutions that are informed by providers’ insights and capabilities
5. To build HCD capacity in PSI and N’weti staff who are members of the design team

Human-centered design in VAP
Human-centered design (HCD) is an approach to solve complex issues by designing products and services that address the core needs of the end user. The HCD process is usually undertaken by a team of professional designers who conduct immersive design research to understand the needs of mainstream and extreme users. After gathering insights in the design research, designers facilitate users in co-designing solutions, which are then prototyped, tested and refined. The ongoing HCD process in Vale a Pena includes some essential elements of human-centered design as well as key features that are specific to this project:

- Adolescents in the design team: In HCD, users are at the center of the design research and participate in co-designing and prototyping of solutions, but they are not usually part of the design team. In Vale a Pena, the users—in this case rural adolescents between 10 and 19 years old—are also members of the design team. The adolescents in the design team were selected independently by each district team, with the support of local authorities, during the first week of the inspiration phase. In some locations the team selected a youth (20-21 years old) to be part of the design team.
Mixed expertise in the design team: While HCD is generally undertaken by a small team of professional designers, in Vale a Pena the design team includes two ThinkPlace professional designers and twelve PSI and N’weti non-expert designers, split equally among two provincial teams. Each provincial team is then split between two district teams supervised by one ThinkPlace designer. Each team includes a N’weti staff member who is from the province where the team is operating and who is also a youth (20-21 years old).

Geographic coverage: As design teams are generally small, to reach mainstream and extreme users they move from community to community during the design research. In Vale a Pena, having a larger design team allowed for the design research to take place in four locations at the same time. This enabled the teams to spend 3 weeks in the same community.

Capacity building of PSI and N’weti staff: One of Vale a Pena’s inception phase desired results is to build basic design capacity in the PSI and N’weti staff that are contributing to the process as part of the design teams. At the end of the process, PSI and N’weti staff should be knowledgeable of HCD principles, processes and practices. To this end, all PSI and N’weti design team members, except the two N’weti youth provincial staff from Nampula and the adolescents in the design team, participated in a pre-inspiration phase HCD training held by ThinkPlace’s professional designers in Maputo. The training provided an overview of the principles and processes of HCD and guided the design team through the definition of the line of inquiry and targets interviewees for the inspiration phase. ThinkPlace designers are continuing to provide capacity building through mentoring and supervision throughout the design process.

PROVINCIAL DESIGN TEAM

ThinkPlace Designer
- Professional designer
- Leads the HCD process
- Provides capacity building
- Alternates between districts

DISTRICT TEAM 1
PSI Design Team Lead
PSI Design Team Member
N’weti Youth Design Team Member
Adolescent Designer

DISTRICT TEAM 2
N’weti Design Team Lead
PSI Design Team Member
N’weti Youth Design Team Member
Adolescent Designer
Inception phase key activities timeline

**LANDSCAPING**
- **Who:** VAP project staff, donors, NGOs
- **Where:** Maputo
- **What:** Participative literature review of SRH evidence Mozambique

**HCD TRAINING**
- **Who:** The design team*; other VAP project staff
- **Where:** Maputo
- **What:** Training on HCD process, principles and tools. Definition of line of inquiry and targets for interviews

**IDEATION PHASE**
- **Who:** The design team
- **Where:** Maputo
- **What:** Identifying ideas for prototyping that are rooted in the insights collected during the inspiration phase. Prioritization of ideas for prototyping

**1st PROTOTYPING SPRINT**
- **Who:** The design team
- **Where:** Gaza and Nampula
- **What:** Building, testing, and iterating low fidelity prototypes

**2nd PROTOTYPING SPRINT**
- **Who:** The design team
- **Where:** Gaza and Nampula
- **What:** Building, testing, and iterating medium fidelity prototypes

**3rd PROTOTYPING SPRINT**
- **Who:** The design team
- **Where:** Gaza and Nampula
- **What:** Building, testing, and iterating high fidelity prototypes

*The N’weti youth staff from Nampula and the adolescent designers did not participate to the HCD training in Maputo*
FINDINGS

ADOLESCENTS IN THE DESIGN TEAM
To varying degrees, the adolescent fulfilled a threefold role in each of the district design teams. First, she was perceived as an entry point into community, someone that could support the mobilization effort and that could facilitate the design team’s acceptance into the community. Second, the adolescent acted as a peer mediator, bridging the cultural and generational gap between the adolescents interviewed and the rest of the design team. Finally, the adolescent participated in the insight-generation, ideation and prioritization processes, supporting interviews of users and influencers and in some cases participating in the synthesis of the information collected.

Adolescent designers as community facilitators
In all districts, the adolescent was an important entry point into the community, helping identify target interviewees and anchoring the design team into the local context. While in most districts this was perceived as a valuable contribution, some team members questioned whether this role had to be covered by a member of the design team and by an adolescent. In one instance, as the adolescent was well known in the community and she had not received formal training in conducting design research, her participation in the data collection was perceived as a constraint or even a risk. The adolescent knew many of the people interviewed and the design team was concerned about her ability to keep the information collected confidential. While most times the team re-arranged the interview teams to prevent the adolescent from attending interviews with people she knew, some interviews had to be canceled, stopped halfway or conducted by only one team member.

“Sometimes I remained worried that she would tell the stories [heard in the interviews].”
– Design team member

In one location, the design team was supported by a local guide, who had the sole role of facilitating the team’s work, mobilizing specific target groups and making sure the team was well received by the community. According to the team in that district, this was a successful model as the presence of the guide ensured that the team complied with local norms and customs. Moreover, this increased the community’s trust in the design team as they were perceived as being led by a community member.

The Ideal Adolescent Designer

- Has completed 12th grade
- Is from a nearby community
- Is dynamic and outgoing
- Has been exposed to SRH topics (e.g. was a Geração Biz activist)
- Is available to take part in all activities, including daily and weekly synthesis and an HCD training

Will support the design team by:
- Acting as a peer mediator, to help the design team understand youth slang and experience, as well as the local language
- Contributing actively in collecting and processing insights from users and their community
Adolescent designers as peer mediators
According to the design team, the adolescent’s ability to mediate between the adolescents interviewed and the rest of the design team was their key contribution to the design research. Seeing a peer talk about sexual and reproductive health made the interviewed adolescents feel at ease and more open during the conversation. Moreover, the design team valued the adolescent’s ability to interpret the experience of the youth interviewed, thanks to her knowledge of adolescents’ slang and to her shared understanding of the life of a rural adolescent, allowing the design team to better understand the perspective of the interviewees.

“[Having her in the team] updated our understanding of what it means to be an adolescent.”
– Design team members

Adolescent designers as insight generators
While in most teams the adolescent designers contributed to the data collection process—translating during the interviews, taking notes, and in some instances conducting the interviews themselves—their ability to support generation of insights was limited. Only in one district the adolescent was able to participate to all activities scheduled for the inspiration phase—daily data collection and synthesis at district level, weekly synthesis at provincial level, and an ideation workshop in Maputo. In most cases, due to the distance between their home and the team’s accommodations, the adolescent did not participate in the daily synthesis but only left her notes from the day with the team. While the project provided accommodation for the adolescent designers to spend the night with the team, none was able to take advantage of that due to lack of parental consent. Similarly, no adolescent was able to travel with the team to attend the weekly provincial synthesis.

Even when the adolescent was able to participate in the daily and weekly synthesis, according to the design team members, her ability to think analytically was limited. Moreover, she struggled to keep an open mind when considering the insights brought by the team from the other districts. Design team members suggested that participation to the pre-inspiration HCD training held in Maputo could have empowered the adolescents to contribute more substantially to the insight generation.

“It would be a lie to say that she found insights that we did not find.

In terms of their contribution [to design research], I question the value of that.”
– Design team members
KEY LEARNINGS

1. The adolescent in the design team acted as a peer mediator between the adolescents interviewed and the rest of the design team. This was unquestionably perceived as a value added, though it was noted as more valuable by older team members.

2. The adolescent could be selected from a nearby community and a local guide—who does not take part in interviews—could act as entry point into the community. The adolescent designer was from the community where the design research was conducted. While this helped the team with community acceptance and mobilization, it also posed a limitation on who could be interviewed.

3. Having the adolescent participate in the pre-inspiration HCD training would empower them to be more proactive in the design research, reduce the time spent training them in the field, and minimize the ethical concerns around their participation in interviews. None of the adolescents in the design team participated to the pre-inspiration HCD training in Maputo. While they were all trained informally by the rest of the design team, their ability to learn by doing was perceived as limited—for example as compared to the N’weti youth staff members from Nampula who also had not taken part in the HCD training. Additionally, according to some team members, the adolescents felt inhibited by the fact that other team members had been trained and they had not.
THE VALE A PENA DESIGN TEAM

Most human-centered design projects are led and executed by professional designers, who may not have in-depth knowledge of the location where they operate, nor of the topic addressed. In Vale a Pena, the design process is conducted by a larger-than-usual, mixed design team that includes professional designers alongside non-expert designers from the organizations that will implement the solutions identified during the inception phase, namely PSI and N’weti. On the one hand, this means that most of the design team is from Mozambique and has prior experience working in family planning. On the other hand, having a larger design team meant that design research could be conducted in parallel in four districts, under the supervision of ThinkPlace’s professional designers.

Working across districts
A larger design team meant that the inspiration could be conducted in parallel in four districts. This allowed the teams to stay longer in each location, building a relationship with the community and thereby allowing them to delve deeper into the research. Moreover, working in parallel enabled cross-learning among the four teams—both in terms of design research best practices, and in terms of insights collected. This was facilitated by the ThinkPlace designers who split their time between two districts and by the weekly synthesis that brought together the two district teams. However, with only one ThinkPlace designer per province, working in multiple locations at the same time posed challenges in terms of logistics. This was particularly true in Nampula, where greater distances and poorer road conditions meant that the ThinkPlace designer could change district only twice during the inspiration phase—as compared to 5 times in Gaza. According to the design team members, ThinkPlace designers’ supervision was essential, especially at the beginning of the inspiration phase, to clarify how to synthetize the information collected and how to dig deeper in interviews.

A bigger team for a richer process
More people conducting design research also meant that more eyes, ears and brains could participate in collecting information and generating insights. A larger design team also meant that more users and influencers could be interviewed—for a total of 267 participants—and that the information collected were processed by more people, making the insights generation process richer, as more perspectives were considered. However, this did not always lead to equally richer insights.

“It is good to have diversity of information.”
– Design team member
**PSI and N’weti staff in design team**

The VAP design team includes 12 non-expert designers—split evenly between PSI and N’weti staff—with diverse sexual and reproductive health professional profiles. Each district team had at least two members from one partner organization and one member from the other (e.g. one PSI staff and two N’weti, or vice versa). The design team was overall balanced in terms of age, and—to a lesser extent—gender.

In each of the four district teams, one of the N’weti staff was a youth member. Their presence proved to be a valuable contribution to the design process, as the N’weti youth staff were close in age to the adolescents interviewed, they were from the province where the research was conducted, and they had prior knowledge on sexual and reproductive health. Moreover, as compared to the adolescent designer, they had a higher level of education and stronger analytical abilities which made them more effective contributors to the insight generation process. According to the other team members, the N’weti youth staff from Nampula who did not attend the pre-inspiration HCD training in were also receptive to the training they received in the field, and compared to the adolescent designers, they were more adept to learning through practice.

The PSI and N’weti team members professional background was found to be of help particularly on three aspects. First, their knowledge of sexual and reproductive health helped them identify information collected that was not new. Second, their community experience proved helpful in mobilizing respondents for the research. Third, their operational skills allowed them to solve day-to-day organizational issues when needed and to keep a flexible and adaptive attitude in relation to reaching the target respondents. According to all key informants interviewed, the team members were overall effective in keeping their prior knowledge of family planning in check, and in coming to the design research with an open mind. Design team members found the training to be particularly effective in communicating the importance of keeping prior knowledge out to allow oneself to go deeper during the insight gathering process.

The presence of the PSI and N’weti members in the design team also meant that the team was knowledgeable about the national context—all the PSI and N’weti members are Mozambican nationals—and were in a better position to identify and follow local norms. This was particularly true in Gaza, where everyone in the team spoke fluent Changana, the local language, and where the cultural norms are much closer to those in Maputo. Conversely, in Nampula only two team members spoke the local language fluently. Nevertheless, the team was careful and sensitive to identifying and respecting local norms. While the presence of national members was helpful in contextualizing the design research, non-Mozambicans in the team were not perceived as an obstacle, and in some cases they were an enabling factor in mobilization as they raised curiosity in the community.
KEY LEARNINGS

1. Overall, having a mixed design team proved to be a good approach, but its success hinges on effective capacity building of non-professional designers. Having a mixed design team brought more perspectives to the insight generation process. Additionally, the presence of more team members also meant that more interviews could be conducted. However, as this approach involves many non-professional designers, effective capacity building becomes essential.

2. Working across four districts concurrently enabled cross-learning and sharing of best practices. While posing logistical challenges, working in four locations meant that the two provincial teams could share best practices, triangulate information collected, and complement their understanding of rural adolescents.

3. N’weti youth staff were a valuable addition, as they brought the element of youth with stronger analytical skills than the adolescent designers.
CAPACITY BUILDING OF PSI AND N’WETI STAFF

The VAP consortium chose to include PSI and N’weti staff in the design team and to make capacity building an objective of the design process. Within the timeframe captured by this report, capacity building took place in two key moments: during the introductory HCD training conducted by ThinkPlace at the onset of the project, and during the inspiration and ideation phases.

While the training provided an overview of the entire design process, according to the design team members it was particularly effective in clarifying the use of the data collection tools and in conveying the key principles of human-centered design, such as the centrality of the user and the mindset of openness and eagerness to learn which are required to go deep into the topics investigated.

Capacity building in the field
During the inspiration phase the PSI and N’weti members of the design team continued to refine and improve their understanding of human-centered design through three channels. First, ThinkPlace designers provided capacity building to all team members. ThinkPlace designers alternated between districts and supported the team in their research, providing supportive supervision through observation and feedback mechanisms. The design team found ThinkPlace’s capacity building in the field to be particularly useful for refining their interaction with respondents and diving deeper in interviews, as well as for improving the way to approach daily synthesis and understanding of the information collected to gain greater insight.

Second, according to the design members interviewed, practice in the field was essential in strengthening the way they managed interviews, making the conversation flow, tackling sensitive topics, and mastering the use of the different data collection tools.

Finally, the design team continued to build their capacity on human-centered design by sharing best practices across locations, also thanks to the mediation of the ThinkPlace designers. For example, one team found that by informing the respondents that they would be interviewed the day after and requesting the informed consent ahead made their days more efficient. In some cases, this allowed them to conduct more interviews than planned. At the weekly provincial synthesis, they shared this experience with the other district team. In another example, one team saw that focus group discussions with young girls were not as effective because the girls would influence each other too much. Therefore, they broke the focus group and introduced other data collection tools. Identifying this as an effective practice, the ThinkPlace designer shared it with the other provincial team.

“We continuously learn from one another in the team.”
– Design team member
Take away learnings for PSI and N’weti design team members

Through capacity building, the PSI and N’weti members of the design team should gain basic knowledge of the principles, practices and tools of human centered design. While not all of them will use the full human-centered design process in their future work, most of them identified opportunities to use HCD principles, practices, and tools in their professional and personal life.

— Using the synthesis in a variety of work contexts. The synthesis was perceived as a particularly effective way of brainstorming and bringing information together. Team members appreciated how the synthesis makes you “take time to think things through deeply,” thereby allowing you to “reach conclusions that you would not reach otherwise.” Moreover, its collaborative nature ensures that “no information is dismissed lightly.”

— Having an open mind, at work and in their personal life. Keeping an open mind—approaching topics without preconceptions and with a willingness to learn—was also identified as a valuable takeaway. Design team members found it to be particularly effective in understanding someone else’s perspective, and noted that it had useful applications both at work and in personal relationships. Design members also emphasized the importance of learning to listen to really understand others.

— Putting the user at the center. Team members said that this experience taught them the importance of putting the user at the center and noted that this will inform their future work.

KEY LEARNINGS

1. The pre-inspiration HCD training was perceived as effective in teaching about the use of data collection tools. Design team members found the HCD training to be particularly effective for clarifying how to collect data. However, as capacity building on synthesizing information and identifying insights was not an objective of the training, during the first week in the field the teams found these tasks to be particularly challenging.

2. Learning in the field was an essential element of building PSI and N’weti’s staff design capacity, especially as it relates to conducting the daily synthesis and managing the conversation with the user during interviews.

3. Capacity building in the field was found to be demanding and time consuming. Designers found the experience of building capacity as rewarding but challenging. While they foresee that the time invested in building capacity will continue to pay off in the prototyping phase, they noted that having to build capacity during the inspiration phase took more time and energy than anticipated.
DEEPER UNDERSTANDING OF RURAL ADOLESCENTS’ BARRIERS TO FAMILY PLANNING

A key objective of the project inception phase is to achieve a deeper understanding of rural adolescents’ barriers to family planning. While there is a significant body of literature on this topic, the inception phase aims to go beyond acquiring factual knowledge to achieve a more nuanced, empathetic understanding of rural adolescents’ experience.

Achieving deeper understanding requires three key components:
1. Questioning one’s current knowledge and recognizing that there is more to be learnt.
2. Improving one’s factual understanding by discovering new information, as well as contextualizing, clarifying or disproving prior knowledge.
3. Empathizing with rural adolescents to understand their experience of the world from their own perspective.

Questioning current knowledge
The design team members interviewed stressed that the inspiration phase had been a significant learning experience. Many of them noted that this experience made them realize that there is still a lot to be learned. Interestingly, more senior design team members seemed to be more aware of this aspect.

“‘The field [experience] showed us we still have a lot of work to do.’” – Design team member
Improving factual knowledge

While most design team members had prior experience working in sexual and reproductive health in Mozambique, all of them reported learning new information about rural adolescents’ experience with family planning. Some of the most interesting findings reported by the team include:

– Traditional methods for family planning are regarded as important, even among more educated members of the community
– Adolescents are often more worried about getting pregnant than about contracting HIV
– Parents want their kids to know about family planning, but they do not talk about it themselves
– There are significant disparities in information on family planning within the same community
– The matronas do speak about family planning in initiation rites, but do not frame it as a health issue
– Girls do not talk about FP within the house, they are more influenced by people outside the house
– Girls often do not see a personal gain in preventing or spacing births

Empathizing with rural adolescents

Many team members reported identifying with the adolescents interviewed, relating their personal experiences to what they heard from rural adolescents in the inspiration phase. This was particularly the case for younger design team members, who were closer in age to the adolescents.

In Nampula, greater distance from home meant that most of the team spent three consecutive weeks in the community. While their experience was more immersive, it did not necessarily lead to a deeper understanding than that achieved by the Gaza team. However, the inspiration phase in Nampula was felt as a more transformational experience.

“People working there with me got transformed during the inspiration. It was easy to see the transformation after this experience.”
– Design team member, Nampula
KEY LEARNINGS

1. The inspiration phase was perceived as effective in gathering sensitive and personal information from rural adolescents. According to the team members, the inspiration was particularly effective in uncovering sensitive information because of the wide range of data collection tools available and the flexible approach to their use. For example, the team found to be particularly useful the ability to mix and change the data collection tools to adapt to how the adolescent was responding to the tools initially chosen.

2. The immersive research approach, coupled with the team’s purposeful openness, enabled the team to empathize with rural adolescents. According to team members, refraining from judgment and keeping their previous knowledge in check prevented them from making their own conclusions and allowed them to delve deeper in their conversations with rural adolescents. This, coupled with their extended presence in the community, enabled them to reduce the distance between their experience and that of rural adolescents.

TO WATCH IN THE NEXT PHASE

The second half of the inception phase will focus on prototyping. Based on the findings outlined in this report, the research team has identified the following questions for the next learning report:

- How does a deeper understanding feed into prototyping?
- What is the adolescent designers’ involvement in prototyping?
- How do user-centered insights from the inspiration phase inform prototypes?
- How does the existing evidence-base inform prototyping?
- What are the implications of having a mixed design team during the prototyping phase?