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A community-initiated website development project: promoting a San community campsite initiative

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Abstract

Digital services have not been truly available for marginalised rural communities, especially in the Global South. Rural communities often lack technical infrastructures, awareness about available services and the necessary skills to use them to their full potential. In this paper, we present a collaborative web-site development project initiated by a rural San community in Namibia. The website intends to support a current community livelihood activity of setting up a campground next to their village. Embedded in a community-based research approach we have deployed co-design methods and techniques to establish a consensus-based business description, including target market, activities, pricing and promotion strategies. Co-design techniques enabled the community to examine and refine their conceptualisation of their business endeavour as well as anticipate target audiences and operational scenarios. A basic website has been created including the agreed upon content. Further efforts include a wider dissemination of the information as well as possible inclusion in global broker websites. We conclude with a reflection on the co-design process providing a researcher and a community perspective.

1 Introduction

Marginalised rural communities in the Global South have long been displaced from global markets [53]. The communities in these areas have less connections to Internet and digital resources than their urban peers [53]. Internet connection and digital services are important for the rural communities, to offer new opportunities for creating livelihoods and increase entrepreneurship activities [53, 49, 19]. In the absence of national welfare systems, unemployment and lack of financial resources are a serious threat in the Global South. Southern African governments have promoted self-employment through entrepreneurship as well as rural development to counterfeit urban migrations. In this light, it becomes

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a necessity to explore how digital services could be made more accessible and usable for marginalised rural communities and entrepreneurs.

Usage of digital services necessitates readiness on two levels, infrastructure and socio-cultural factors [30]. Digital services require devices [26, 15], and network connections [6, 31] to operate. Besides technical requirements, the effective usage of Internet services demands also certain skills [19, 26, 53], and trust towards the services [22]. The users need to be able to operate their devices technically, know the language, and understand how to communicate with others online [2]. Moreover, awareness about existing digital services is also needed [4]. Thus, making the digital services truly available for rural communities necessitates consideration of all factors simultaneously.

One of the promising fields of business for the rural communities in the Global South is community-based tourism [8, 19], with a growing interest for authentic experiences. Community-based tourism allows rural communities to monetise assets that they have - their traditions and lifestyles [12]. If the experiences are marketed and priced right, starting of tourist activities does not necessarily demand large investments.

In this study, we have worked with a San community in Donkerbos, Namibia. A local mobile operator has made a promise to build a cell-phone tower, which would for the first time enable Internet usage by the community in their vicinity. As the community already has access to electricity, and to mobile devices, the technical problems regarding the Internet connections are solved. The community has decided that they will start a campground for visitors to improve their financial situation. To get started with the campground, they requested for support.

In this paper, we describe the process we used to create a website for the community campground. We have used participatory design techniques with the community members in order to design the content of the website, alongside resolving anticipated operational logistics. The project was community-initiated business project, whose end product is aimed at users other than the community members themselves (the tourists). This paper examines what is the designers role in such a project, and what kind of challenges a rural community faces as it prepares to enter the global digital market. With this paper, we aim at making digitally supporting entrepreneurship more available for the rural communities by sharing our insights to future designers who wish to engage in similar projects.

This paper is structured as follows: in next section the literature on participatory design with indigenous communities, and community based tourism is reviewed. Following that, the research context and methods are explained, and then our design intervention is described. Then the outcome from the intervention - website for the community campground - is presented. We follow by presenting our contributions in section 6, and the reflections from the researchers in section 7. We finish the paper by presenting our conclusions.

2 Related Work

2.1 Participatory Design with Indigenous Communities

Participatory design methodologies have gained wider acceptance among researchers collaborating with indigenous communities [35]. It has been argued, that there should be a shift from research led codesign to indigenous-led codesign, as it would promote communities' sovereignty [32]. Participatory design aims at democratising the design project [24, 44]. Participatory design methodologies have been deemed useful in these research projects, as they emphasise the reciprocal relationship between the designers and the community [37, 51]. These methodologies enable designers to immerse themselves in the community and jointly develop relevant solutions [51].

Designing digital objects with indigenous communities is often focused on how to cross cultural gaps between researchers and community members [48]. A further concern has been, that indigenous communities are often left behind by the digital divide, which means that they might possess very little experiences of digital technologies [53]. If the participants lack the necessary digital readiness, they might be left disempowered, and reluctant to participate [27]. Vesting too much responsibility for participants who are not equipped to handle it might lead to failures in outcomes [40]. Through selection of context fitting tools the designers and the communities may use the design as a mean of mutual communication [39].

Cultural influences of designers and indigenous communities need to be addressed within the design processes. Indigenous communities might have vastly different assumptions, definitions, and value systems than the western norms digital technologies are usually build on [50]. For example, illiteracy or numeracy, and dependence on oral cultures hampers the adoption of standard digital systems [9]. Gallert et al. have collected oral knowledge of the OvaHerero communities in Namibia to include to Wikipedia, and they also note the amount of information that gets lost in translations, be it across languages or mediums [11]. Effective adaptation require more than just translation of terms on the interface [1]. Kapuire et al. have investigated the role of designer who shares the cultural background with the community, and argue that such a designer might act as mediator between the community and other designers [17]. Co-designing technologies with indigenous communities has shown to extrapolate values and worldviews in the process, which then facilitates the design of locally relevant and meaningful technologies [38].

Pradhan et al. have used participatory design methods to support the fishing businesses of Ngemba community in Australia, and found them useful, as they helped them to understand the different views to business between the researchers and the community [34]. Otherwise, initiatives discussing the role of participatory design in creating services to support business operations of indigenous groups are mostly lacking from the literature. Participatory design provides tools that can be used to design systems intending to improve livelihoods in the Global South [20]. However, co-designing with indigenous people

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for an international target market is different. It requires a change in mindset of the participatory designer. The design is no longer made with the community and for the community, but rather with the community to represent the community for outsiders [52]. In this case, an outside designer can become a representative of the actual users of the service.

2.2 Community-based tourism

Community-based tourism (CBT) is a form of tourism, where the tourists are hosted in local communities, that have not been specifically planned for the tourists. Tourists often travel to communities in search for what they perceive as an authentic experience [12]. Communities all around the Global South have been involved in CBT [25, 29, 8].

It has been stated, that the positive effects to the hosting communities overweight the negative ones [43, 28, 19]. CBT has allowed the communities to monetize resources they have, such as beautiful views [21]. This allows the communities to diversify their livelihoods [47, 23], which in turn protects them from other turmoils [19, 8]. CBT also benefits the community members who might not be directly involved with hosting, by providing customers for their products and services [47, 23, 19]. Sloan et al. have studied CBT host communities around the world, and say that in all their research locations, the local infrastructure has improved as a result of CBT [43].

However, CBT has faced a fair share of criticism. Its effects have been sometimes insignificant [25]. Simons and de Groot compare CBT to the opening of Pandora's box, an event in ancient Greek mythos, where all the evil was let loose to world [42]. CBT is ultimately business, and the need of profits for the investors is more important than the effects on the host community [3]. It is also said, that the CBT in emerging economies may promote dependency on donors, which hurts communities [25]. Even the positive examples of CBT often report issues that the tourism causes to the community dynamics [28, 21, 43].

It has been suggested, that CBT is easier to build in societies, where there is trust both within the community, and also to the government [29]. Also important is to understand and consider the local power relations [36]. Local communities are more welcoming to tourism business, if their needs have been considered in planning [25]. The community members usually need training in order to provide the tourists with desired experiences [8]. Local tourism management requires collaboration between different local stakeholders, who might have different perspectives on the tourism [5].

3 Context and Methods

3.1 Donkerbos

Donkerbos is a San resettlement farm 216km east from Gobabis in the Omaheke region in Otjombinde constituency, in Namibia, with about 200 San people.

In the past, their forefathers lived by hunting and gathering, but now their livelihood is sustained by crop and livestock farming. Currently the community is supported by the office of the Vice President the Division of the Marginalized Communities with education and drought relief programs and by the Desert Research Foundation Namibia (DRFN) with gardening and water issues.

The community is located a 5 hour drive from the capital, Windhoek, and 40 kilometers directly from the nearest settlement, Talismanis. The community is reachable by only 4x4 drive. The Donkerbos community currently lacks cars. Donkerbos is surrounded by fenced pastures, which leaves little space for the community members to practice husbandry or agriculture.

Donkerbos is provided with intermittent network connection, which, late evenings, allows to catch a weak signal from nearby hills. Thus limited communication via calls, and SMS is possible yet no Internet. A local telecommunication operator has scheduled to build a tower near the community by 2020.

3.2 Established Community collaboration

One of the computer science research clusters from a local University has established a long-term collaboration with the Donkerbos San community since 2018. Under this partnership, possible projects are suggested from both sides, jointly discussed and modalities are agreed upon within community-researcher meetings. The Donkerbos community has appointed a community representative who is fluent in English to act as the primary contact person for all initiatives. Past and running projects vary from purely research-based projects to commercial ventures and socio-economic and educational development support initiatives [52, 46].

For each project, individual community members express their interest to voluntarily participate. In many cases, especially the dropout youth has shown great interest in technology development at the same time refreshing their English language communication skills. For each joint project one or more researchers from the local University are involved. Depending on the project, visiting researchers from overseas are included, as vetted and welcomed by the community and the local research team.

3.3 Community-initiated Campground Project

The Donkerbos community had learned about community campgrounds, run by other San settlements, and their potential to generate income for the community. They therefore approached the local research team for support with no further details. The research team offered to jointly develop a campground website, thereby establishing operational business plans and marketing strategies.

3.4 Research Team

The research team that travelled to Donkerbos consisted of three local and two visiting researchers from overseas. The local team was constituted by one

female San activist and community innovation coordinator; one female Oshi-wambo speaking Informatics graduate experienced in youth development and facilitation; and one female research cluster leader specialised in co-designing technologies with marginalised and indigenous communities. All three have been involved in previous projects with the Donkerbos community. The visiting researchers consisted of one male PhD candidate working on digital services for rural and informal settlement dwellers and one undergraduate exchange student.

3.5 Intervention approach

We follow a community-based co-design approach which has been deployed in prior activities with the community [52].

3.5.1 Session sequence

Our intervention consisted of a sequence of distinct sessions over three days, that aimed to explore different aspects of the campground business description for the website. The sessions held are explained further in the next section.

3.5.2 Data collection and analysis

Sessions were held trilingual, namely in Ju/'hoansi, Afrikaans and English, translated in-situ and recorded for post-situ analysis. All posters and other artifacts created were photographed. Every evening the researchers recorded collective audio reflections, which were transcribed post-situ. All of the researchers who were present in the community participated in the data analysis.

4 Intervention in Donkerbos

In this section, the sessions that were held in Donkerbos are explained. We describe the sessions, as well as their outcomes. The sessions are explained in chronological order, as the outcomes of the sessions influenced coming sessions.

The sessions took place in a open area in the middle of the community. A gazebo was brought by the researchers to provide shelter for sessions involving computers to protect the computers and other electronic equipment, as well as to provide shelter from the heat for the participants. Participation in the sessions was open to all community members, and the participants entered and leaved the sessions as they pleased. Thus the exact numbers of participants for each session cannot be provided, but an approximation of the number of participants is stated.

4.1 Introductory Session

Upon, the arrival of the research team in the community, 30 members gathered together for the first introductory session. The main purpose of the session

was to share and agree on planned activities needed to develop the campground website, as well as coordinate participation and timing.

4.2 Presentation of Sample Websites

Immediately after the introductory session the next session was started inside the gazebo with the same participants.

In the gazebo, a set of 3 laptops had been set up to show 6 examples of existing community-based websites in Namibia. They were displayed in off-line mode, which failed to load some of the pictures. Also presented was the empty framework for the Donkerbos campground to be filled with media. Not all the participants were familiar with the concept of *Internet* or *Websites*. An attempt was made to explain with examples, saying that people in other countries can see what they decide to display on their website and thereby know about the campground. Typical features and information on a website were explained. Participants were encouraged to browse through the websites using one of the laptops. Only a few used the opportunity, enjoying the experience. At this point they agreed to go forward with the presented framework.

4.3 Visit of the Campground site

The next day, about 20 community members and the researchers walked to the place where the campground was to be located, on a hill next to the settlement. The aim of this session was to familiarise the researchers with the community plans around the physical and activity set-up. They explained in great detail anticipated locations of campsites, fire places, lavatories, and water pumping system. The choice of the site was motivated by it being on a hill with a beautiful view and not too close to the settlement to maintain privacy for visitors and the community. A road was to be constructed to reach the campsite, which would cost much community effort. The feasibility of a living museum and possible activities were also discussed in the bush. However, considering the remoteness of the site, it was not considered a viable option per se.

4.4 Potential Tourists

In this session, different types of tourist were discussed, with 40 community members sitting in a wide circle. Pre-selected and printed photos of very distinct types of tourists were passed around to start the conversation, depicting:

1. Group of young white men drinking beer while camping

2. Two white women in traditional safari gear

3. Two white male hunters with killed warthog

4. Black Namibian official

5. White family with children camping

6. Black family with children camping

7. Asian tourist taking photo of elephants on safari

8. Two young white women doing yoga exercises

The aim of this session was to explore what sort of visitors the community wished to (not) attract, and consequently which kind of services and activities should be offered.

Requested to describe the pictures, individuals mentioned singular items, like that they saw killed game in the photo, not indicating that it was likely killed by the two hunters posing with the carcass. When asked what kind of visitors they would prefer in the community, they answer that they welcome all kinds of people who want to come and experience their live style and culture with them. It does not matter who they are or where they come from, as long as they were friendly and interested about the San culture. This demonstrated that they surely did not have the same associations we had when looking at the pictures.

During this session the subject of alcohol was mentioned, as one of the images showed visitors drinking beer. The Donkerbos community prides itself with no consumption of alcohol, much distinct from other settlements across the country. The community had different opinions whether the tourists should be allowed to drink alcohol in the vicinity. While some extended the ban of alcohol to tourists, others suggested open a bar for the tourists, but this was not widely supported. Equally among the researchers both opinions were present, as the foreign visiting researchers argued that foreign tourists could find the total alcohol ban peculiar. Scenarios were discussed of possibilities that the youth might be tempted and mingle with the drinking visitors. The discussion was heated, but in the end a consensus was reached: Tourists will be allowed to drink but only at their own campground, not with the community; no drunken behaviour will be tolerated; the community will not sell any alcohol and a request for mutual respect was explicitly stated.

4.5 Activity Creation

The aim of the session was to create ideas on activities that the community could offer for the visitors. Thus, the community members were divided in 4 balanced groups in terms of age, gender, and English proficiency. Each researcher facilitated one group, having selected two of the previously shown tourist images, to trigger a brain storming on activities the community could offer to that specific group of tourists. So for example the group with the two family picture focused on family activities, such as donkey cart rides. The ideas were written on post-it notes, shared with the entire group and agreed upon (see Table 1).

Some groups invented a smaller number of activities, but planned them in more detail than other groups, that created greater number of activities. In the following discussion, the suggested activities were accepted as potential offerings. In the discussion regarding the activities, a question of possible injuries and

Table 1: Table of activities and their prices

Activity	Price in NAD
Gathering and cooking traditional food and medication	400 per group, 200 for the first person
Horse & donkey rides	100 per person
Donkey cart riding	75 per person
Ostrich eggshell beads	60 per person per hour
Bow & Arrow preparation	300 per person
Making traditional perfume	300 per person
Running & jogging	Priced upon request
3 day walk	3000 for one person, 5000 for two
Living museum	(after built) 200-300 per person, under 13 olds half price

accountability was raised. Some activities planned include inherent risks, and if the tourists get injured while doing them, the guides could be held accountable. It was decided that a release waivers would need to be created, and signed by the tourists.

The discussion then steered to pricing of the activities. There were noticeable tensions between the community members about how much should be charged and how the money should be divided. For example, one of the suggested activities was a performance of traditional dances. Women, who were supposed to be the ones performing, said that they found dancing humiliating, as the traditional outfits were very revealing. Therefore, they suggested NAD 1000 per dancer, which would likely mean, that no customer would be willing to pay the price. The plan of the campground was to generate profits for the whole community, and thus other members of the community objected the women's idea of pricing, demanding lower prices which would attract more customers. The discussion did not progress, and the question of pricing was left unresolved at this point.

4.6 Photo Selection

The aim of this session was to select photos for the website to represent the community and their campground, with 20 participants present. The researchers had brought with them a repository of photos taken on previous research trips in the community. Participants selected photos they liked, and made a list of missing photos to be taken later, by themselves. The discussion had two major

themes, how does the community wish to be presented, and how tourists could be attracted.

The community knew, that the image of San typically presented in media was about their traditional hunter-gathering life [46, 52]. The community discussed that the traditional imagery could possibly attract tourists, but it would not match the reality in the village, as they wear western clothes rather than their traditional leather loin clothes and do no longer hunt. There was a discussion about living museums, where the visitors could experience the traditional ways of indigenous living as there are hosts who dress and act the part. However, the community did not wish to transfer their every day life into a living museum, and decided, that the photos about themselves should present the reality in the village. The community members should dress in their normal clothes, and engage in their daily activities in the photos, for visitors to experience their current way of life. However, the community decided to consider the possibility to open a separate living museum in the future.

Peculiar was that none of the pictures chosen from the repository contained a non-community member. To demonstrate possible affects on viewers the community was shown a picture of a party only attended by Scandinavians and another of a Namibian-Finland celebration event. Asked which event they would attend and why sparked a discussion on whether aliens should be presented on the pictures for potential tourists to relate to. It was then decided, that some of the photos on the website should show the tourists beside the community members. The community agreed, that it would likely be good for the potential tourists to see how their visit could look like, and to see people who they could relate with in the photos. As there was little suitable photos with tourists taken already in earlier research sessions, it was decided, that new photos with the researchers posing as tourists should be taken. Considering that photos for each activity still needed to be taken this activity was combined.

The role of humor in content creation was also discussed. The researchers suggested, that a Facebook page could be set up for the campground, and the feed from the stream could be embedded in the website, allowing the community members easily and constantly creating content for the website to keep it lively. The nature of these photos could be funny, and they could present aspects of the village life that are not often otherwise discussed. As an example, the researchers mentioned, that there could be a photo of community's donkey cart with caption "Donkerbos limousine". The community quickly understood the nature of these pictures, and started to design future photos.

After the session, the researchers handed the community members three smart phones with cameras to take pictures to be included on the website. The photos the community members took were of good quality. The researchers were asked to pose and try out activities, such as donkey riding, and nature walks which the community members documented. These photos were later used on the website. To generate more humorous material on the website, the community asked the researchers to dress in the San traditional clothes. The researchers complied, and the community held a photo shoot with them, performing traditional San activities such as dances, or shooting a bow and

arrow. In some, they posed with the researchers, depicting themselves in modern clothes and phones next to to the researchers dressed in traditional San clothes.

There was also a short discussion on the communications between the tourists and the community members. A member of the research team suggested, that it could be done via WhatsApp, with the correct number posted on the website. This plan was approved by the participants of the session.

4.7   Pricing of the Activities

As the pricing of the activities was not completed during the Activity Creation session, it was revisited the next day. This time, the activity was led by the researcher, who asked the community what price would be suitable for each activity. About 40 members of the community were present to go through the list and allocate prices as shown in Table 1. Activities, such as games and stories were considered to be minor and integral to the life in the community, that putting special price on them would have been weird. The tourists are welcome to join the games and story times as they happen in the community, on the other hand some activities were allocated to the living museum experience, with one entrance fee.

4.8   Testing of the Activities

When there was extra time during the intervention, the planned activities were tested with the researchers as the tourists. These tests were also photographed to provide pictures for the website. Community members, who were interested in providing these activities for the visitors were able to test their ideas with the researchers.

These tests were planned in an ad hoc nature, and were not a full experience that would be provided for the tourists. The activities that were tested were: Donkey riding, Donkey cart riding, Bow and arrow shooting, Nature walk and Running with the community. The researchers enjoyed the experience and recommended them for potential visitors.

4.9   Text Creation

Eager to use the laptop, three young men dedicated their efforts to write the introduction of the community for the website, over two evening sessions with the following result:

> INTRODUCING DONKERBOS TO THE PEOPLE
>
> Donkerbos is a San resettlement farm 216km from Gobabis east in the Omaheke region in otjombinde constituency, with more or less 200 San people. In the past our forefather's live by hunting and gathering lifestyle, however now we lived by crop and livestock farming. Currently the community is supported by the office of the Vice President the Division of the Marginalized Communities with

education and drought relief programme and by Desert Research Foundation Namibia (DRFN) with garderning and water issues .But now we the San community want to develop ourselves by starting up a campground

4.10   Role Play

For the final session, a short simulation depicting how the guest would book for the campground and how the arrival operations would go was acted out. The two foreign researchers pretended to be a foreign tourist couple and they booked their stay via SMS. When they arrived at the campground, they inquired about the amenities and the activities. The community members acted as they would act with real tourists, and took roles in the play while others were spectators.

Since the community is yet to have mobile connection, the researchers stayed out of sight behind a building as they made their booking via simulated "SMS booking". The researchers typed their messages on a smart phone SMS application, and then one of the local researchers brought the phone and the message to the community members. The community members then typed their reply on the same application, and the phone was then brought back to the researchers pretending to be tourists.

The researchers had the following text exchange with the community:

"Hello! My name is ******, and I would like to come to your campground for 2 nights next week from Thursday to Saturday. We are 2 people"

"Wellcome we will organize"

"Ok, good. We are interested in nature walk and donkey ride. How can we pay?"

"for donkey riding 100 per b and Bush walk Wil be 100 per hr in person"

After the booking was made via SMS, the "tourists" arrived at the community. A reception desk had been set up to welcome them. The researchers then asked how they could make payment, and about the available activities. The community informed them that they would like to get paid in cash, and enlightened them about the activities, as has been decided. The community members at the reception desk seemed very eager to provide a pleasurable stay for the tourists. When the researchers asked whether they could buy beer from the community, they were told that it is possible, which was against what was agreed in the previous sessions with the whole community.

5   Website

With the material put together in Donkerbos a simple website was created, using Wordpress, by an undergraduate student.

The Donkerbos website consists of four pages. The Home page (Figure 1), the Community page (Figure 2), the Campsite and Amenities page (Figure 3) and the Activities page (Figure 4). This structure was inspired by similar websites.

D onkerbos is a San resettlement farm 216km east from Gobabis in the Omaheke region in Otjombinde constituency, with more or less 200 San people. In the past, our forefathers lived by hunting and gathering. We now live by crop and livestock farming. Currently the community is supported by the office of the Vice President the Division of the Marginalized Communities with education and drought relief programs and by Desert Research Foundation Namibia (DRFN) with gardening and water issues. But now we, the Donkerbos San community, want to develop ourselves by starting up a campsite.

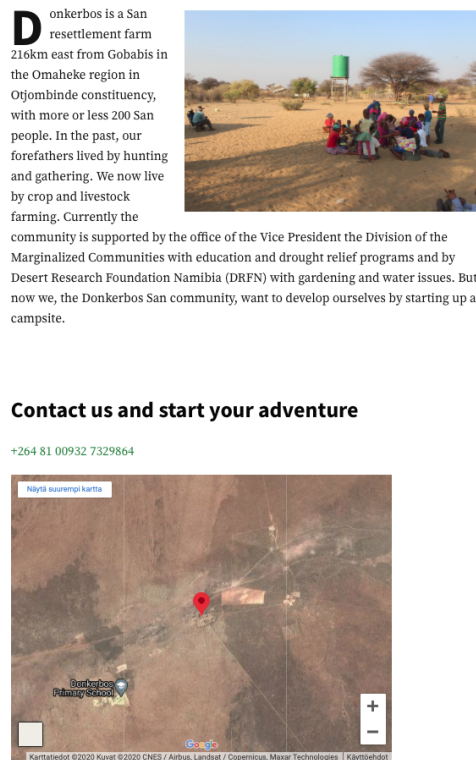**Contact us and start your adventure**

+264 81 00932 7329864

Figure 1: Information on the Home page

The Community page welcomes potential visitors and outlines a number of community pictures. The community page also gives brief details about what people should know about the community.

The Campsite and Amenities Page showcases pictures of how the campground ground could look like and operate. It also has information on what visitors should bring when they visit the Donkerbos campground.

The Activities page consists of all the activities that will be offered by the community plus their price rates that visitors can take part in, and they are accompanied with pictures.

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Things you should know about us:

- In Donkerbos, we have both Naro and //Kao-//Aesi tribes.
- Our language includes many clicks.
- We are very kind and friendly and want to welcome you with open arms.
- You don't need to know our language, we can communicate in English.
- We wear the traditional attire only in special occasions.
- There is no Wi-Fi or electricity here.
- You can really unplug yourself from the everyday life.

Figure 2: Information on the Community page

5.1 Survey with the Potential Tourists

In order of getting feedback from the potential tourists, an online survey was created. The responders were asked to familiarise themselves with the campground website, and asked whether they would recommend the site for their friends or colleagues on the scale from 0-10. The net promoter score that can be calculated from these answers is a widely used, and useful metric used to describe the usability of websites [41].

There were two versions of the survey, one in English and one in foreign researchers native tongue. Both versions contained identical questions. The surveys were digitally distributed by the members of the research team.

In the end, we got 45 answers, and net promoter score of -24. While in no means good, the score shows that most people were able to use the website at least adequately. Additionally, several low scores were related to the whole concept of the community campground, which brought the score down. Overall, the website seemed to fill at least the definitions of minimum viable product, and there was some interest towards the concept among the responders.

6 Discussion

In previous sections we described our intervention in the Donkerbos community, and our actions there after. These resulted in a completed website for a community-owned campground located in the community, and a better understanding of operating a tourist business among the community members. The website fills its purpose as confirmed by the potential tourists, and all the elements of the stay have been tested by the researchers.

The aim of this paper is to make digitally supported entrepreneurship more

Make yourself at home at our campsite!

You should bring your own:

- **4 x 4 vehicle**
- Tent
- Mattress
- Sleeping bag
- Cooking equipment
- Flashlight
- Hygiene equipment
- Alcohol beverages (However, you are only allowed to drink at the campsite)

- Please note that we do not sell alcohol beverages

We will provide:

- Water
- Toilet
- Shower
- Fire for cooking
- Network tower

Pricing

- One person: N$ 250 per night
- Two people: N$ 300 per night
- Child: N$ 100 per night

Figure 3: Campsite and Amenities page

available for the rural communities. In this section we forward that aim by sharing our learnings.

Our project had three elements, that have not been much discussed in previous participatory design literature regarding to work with indigenous commu-
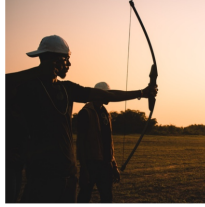
Donkey cart riding – N$ 75 per person

Donkey or horse ride- N$ 100

Bow and arrow workshop- N$ 300 per person

Traditional food tour – N$ 200 per person OR N$ 400 per group

Enjoy an unforgetable ride with a local guide around the area.

Jump on a donkey or a horse, and explore the surroundings.

Learn, how to make a traditional San-hunting tools with a guidance of a local.

Gathering ingredients from the nature to prepare a typical local meal.

Figure 4: Activity listing at Activities page

nities. The project was:

1. Community initaited

2. Aimed at creating business

3. Aimed for the use of the group other than the community

Addressing these characteristics has required us to adapt the usual means of user-centered design, and our main contribution for the knowledge is to share our lessons from the design intervention in Donkerbos. Donkerbos is well representative for many remote rural communities throughout Africa whereby communities are not aware of how to start business with outsiders, what their needs could be and how to position and represent themselves in the digital space.

We examine the needed future endeavours, the role of designers in community-initiated business projects, and the effects that the entrepreneurship could have on the community.

6.1 Next Steps

After the intervention, the obvious next step for the Donkerbos community is to start to build the amenities needed for opening the campground. During the visit to the Campground session, preliminary discussions about the building process were had. The Community wished to have financial help from outside to support the building of the amenities, but they were reminded that they need to take the responsibility for building by themselves.

Additionally, having a website is not enough for attracting several visitors. The website does not start to gather traffic, if it exists in a void without links from other websites. Creating connections to the Namibian Tourists Offices and tour operators would be useful.

One of the possibilities available is to connect with existing platforms, such as Booking.com or AirBnB. Platforms like these are used by many tourists when

finding accommodations. Creating and managing accounts on global digital platforms would require more training for the community members. Arvila et al. have trained a group from a Namibian informal settlement to act as crowd-funding advocates in their own communities [2]. Two members of the Donkerbos community were present in the trainings, and they could be further trained to administrate the campground accounts on platforms with relative ease. They already possess the skills to create required media (text and pictures), and they have been introduced to the concept of platforms.

The trained community members could take even broader responsibility. As mentioned, the community lacks funds to fully realize the campground. The trained community members could also help other members of the community by finding investors within the country, or by utilising digital services such as crowdfunding to achieve their goals. Digital services are not a silver bullet to solve all the problems the community might have, but it would be helpful for the campground if there were community members who could help others to access the available services in various issues.

Additionally, the trained members should also understand how the community should be presented in the global arenas, which is also reflected in Arvila et al.'s work [2]. The discussion regarding to the images of different tourist showed, that the community members' interpretations differed from the designers' interpretations. If the Donkerbos community wishes to market the campground to outsiders on the Internet, they need to create content that appeals to tourists who live in different contexts. The ideas the community had about the funny pictures they could create for the website indicate that they have readiness to create such media.

6.2 Co-designing in Community-Initiated Business Project

Participatory design aims to democratize the process between designers and users [24, 44, 34]. This design intervention was started with a request from the community. This flow changed the role of the designers from collaborators towards the role of an consultant. Although these are not the excactly same roles observed by Kapuire et al., they have also noticed that the participatory design with indigenous communities requires the designers to balance between different roles [17]. Translating the oral indigenous knowledge to the standards of global Internet services has proven to be problematic before [11]. To solve this, instead of designing the website directly with community, we gathered information and media from the community, and translated that content into a website without direct feedback from the community. This required us to take proactive role in the design, similarly to Pradhan et al. [34].

In our design intervention the foreign researchers were actually the closest representatives of end-users (tourists) out of all who participated in this design project. While bringing in the real tourists would have been optimal, it was not practically possible for us, due to the location of our intervention site. Normally, a participatory design intervention would result in a design that would then be used by the participants of the intervention (for example, [14, 13, 34]).

However, in this case the website was designed for outsiders and thus the foreign researchers guided the discussion on the design suggestions of the community.

This was manifested in the discussion regarding the policy on alcohol, where the foreign researchers insisted on the freedom to drink principle, thereby influencing community decisions. In systems for internal use the community would have been encouraged to reach consensus among themselves only [10]. However, in this case, the website is a cross-cultural communication tool thus foreign researchers provided early feedback. The community was not forced to accept alcohol drinking tourists, but they were able to have a more informed discussion about the policy.

While compromises had to be made in the design process, we were able to create a website that was accepted by the community, and that appears to the tourists at least as a minimum viable product. The ordinary design guidelines, such as the ISO 9421-210 standard [7], do not match the reality that was faced on the field. The standard for example assumes, that the designers have an access to the real users of the system, which was not logistically possible in our remote location. While in global north these types of resources are mostly available, this was simply not true for our design intervention. In the atypical context where a rural community had requested for support for a tourist business, the tradeoffs to both the spirit of participatory design and regular design guidelines allowed us to efficiently use the resources that were available during the design intervention.

6.3 Community Realisations during the Design Intervention

As the idea of community operated campground stemmed from the Donkerbos community itself, the justification of the whole project was not questioned. The role of entrepreneurship as a solution for poverty in the Global South has been questioned [16, 33], especially in digital forms [45, 18]. As the community itself proposed starting the business, these viewpoints were not considered in our intervention.

However, in contrast to many codesign projects where the digital elements are added to already existing things, in our work the website was the first step towards a new thing - the campground. Thus, through the process of understanding the website, the community was able to explore more how the operation of campground could affect the community as a whole.

Our intervention shows, that the community had not anticipated thoroughly what the campground would mean for them. The tensions that arose when the sharing of the money and the alcohol policies were discussed are inherently linked to the idea of campground. Internal tensions are a well known problem associated with community-based tourism [28, 21, 43], and there appear to be few ways to avoid them. Starting the campground will likely change the community, and benefit some individuals more than others. The campground might actually be negative for some individuals in the community, as the flow of visitors could disturb the peace in the community. Such effects could increase the

tensions within the community.

However, even if the community's decision to establish the campground was not made fully informed, the desire to start a business is very understandable. As it stands, the Donkerbos community is dependant on the government's aid. It is sensible that the community wishes to empower itself to earn money itself. Despite their problems, digital services may offer opportunities to earn livelihoods for the rural communities in the Global South [19]. Even if the community ultimately rejects the building of the campground, the digital intervention and the discussions it has entailed have already led to greater self-realisation in the community.

7 Reflections

This paper has discussed the role of the designers in community-initiated projects. In this section, we share two reflections from our research team; the San activist and community innovation coordinator, and the foreign visiting researcher. This section has been inspired by a similar perspectives offered by Kapuire et al. in [17].

7.1 San Activist's Reflection

The Tech hub started working with the Donkerbos community in year 2018, by introducing technology to the community and in order to allow them to experience the use and importance of technology in our daily life. In our previous workshop with the community the youth had requested computer training sessions, and during the workshop they received computer training, where they learn how to type and other basic word activities. They were extremely happy and excited for the opportunity to learn how to use a computer. When they first started working with the computers, they were a bit reluctant and they were panicking afraid to make mistakes on the computer.

Before we traveled to the community, we had to communicate and inform the community that we would be coming. We also informed them of the reasons why we are coming and the background of the visit. Arrival of the team is also something great and exciting for the community as they know they are about to learn something new from the tech side and they are also willing to share their cultural knowledge and skills. For the team it's also a great time as they usually prepare a lot of material to share with the community so they get familiar with technology and help them learn ways in which technology can make a difference in their community. The website activities session was the most interesting, productive and enjoyable for the community as you can tell how happy they were to share their cultural background, stories and skills for the creation of the campground and website.

Giving pricing to the website activities was very stressing for me as I had to facilitate the session, because the friendly and formal atmosphere that we are in immediately changed to one that was serious and not too friendly. This outcome

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made me sad. Some participants did not take the session seriously and others were just joking with the pricing they gave: underpricing same activities and overpricing other activities. This was the session where some (ladies) gave input that prices for traditional must be high whether the number of tourist available are a lot or not because there is a lot of mental strain that goes into dancing without being fully clothed. This put some pressure on the pricing because if the pricing is too high then visitors would not want to do some activities. This is where the team had to come in and assist by looking into the pricing range of other campground and this was helpful.

The community was extremely happy and they express that they are truly passionate about the campground and the website that accompanies it. The campground will help them become self-dependent other than to only depend on the government for everything. Knowing that they contributed fully to the creation of the website made them happy. The community was excited and they are always willing to learn and take part in the sessions.

7.2 Foreign Researcher's Reflection

I found my role in this design intervention interesting. I was simultaneously a researcher, a designer, and a consultant. I had to conduct the sessions with the others in the research team, and to take care that what we gathered would result in both the website and this paper.

However, I was also an expert whose perspective the community wanted to hear while creating the campground. During the discussions I kept thinking about how this would appear to me, or to my friends and family at home. This led to complicated feelings. I strongly felt that a campground that had banned drinking beer at campfire could seem even suspicious for tourists with my background. By pointing that out I felt that I made a service to the community business-wise, but I was not sure if it was service or disservice to them cohesion-wise.

The diverse results of cross-cultural aspects were surprising to me. On the other hand, I felt that the prices the community dictated for the activities were mostly too cheap. For example, bead making with the tourists seem quite laborious, and it involves materials. 60 NAD (approximately 4 euros) per hour seems extremely cheap. On the other hand, the suggested prices for the dance performances were priced in a way that no tourists would likely want to try them. These discussions showed me that there was still some work to do in understanding the tourist's expectations.

On the other hand, some aspects of the community's understanding of cultural language of the Internet really surprised me. They were able to create memes that would fit right into their prospective Facebook page. I found the results from the photo shoot with me in loin clothes, and the community members in jeans genuinely funny, and I have been showing them to my friends at home. Clearly some members of the community have a pretty clear picture of cross-cultural communication, which is a good base line for understanding tourists.

Overall, I feel privileged for being able to visit the Donkerbos community. In many cases, I felt the genuine human connections to people coming from very

different background than me. Whatever the community decides to do with the campground, I hope that I helped them make the best decisions they could.

8   Conclusions

In this paper we have shared our experiences on co-designing a website for a community owned campground in a community initiated project. The nature of the project and the realities on the field determined, that we had to adapt the usual design methods and designer roles to better fit the needs in our context. However, we were able to create a website to support the campground business as well as help the community to further discuss the policies, and operation of the said campground.

Our intervention highlights issues that the rural communities might encounter while establishing a digitally supported business. We started our design intervention by making sure that all participants were familiar with the concepts of *internet* and *website*. The community lacked the skills to start their own website. However, codesign methodologies allowed us to combine the technical skills of the research team with the vision of the community.

In the future, there is a need for more sustainable ways of ensuring the participation of marginalised communities in designing digital services that concern them. While we were able to create the website with the community, the administration of the website needs to come from the Donkerbos community. Certain members of the community displayed digital skills, which suggests that the responsibility for the website can be transferred to the community with short training. Still, there are digital resources available for the community beyond just the website. The training of local digital service champions, who could help their peers in finding and using these resources could be a solution worth investigating.

Digital services have promise for helping marginalised communities in earning livelihoods in novel ways. Endeavours, such as the community operated campground, can empower these communities to better operate in a digitalising world. The digital divide has often left these rural communities behind, and thus attempts to bridge the gap between these communities and global digital networks are worth trying.

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Declaration of Interests

No conflicts of interests to declare.

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