

lot#16

INSIGHTS

REPORT

This report details the key findings of the research conducted for the 16th lab of tomorrow.

How might we better protect the biodiversity in Namibia by creating digital, biodiversity-based businesses in conservation landscapes and by capitalizing on the local population's expertise and resources?

Dear lot#16 Participants,

A warm welcome to the lab of tomorrow (lot)! This report will serve as your go-to source for information on the lot innovation sprint. You will find relevant information about the lot#16 in general, protecting biodiversity in Namibia, inclusive business and digital tourism, the sub-challenge you will be working on, as well as an overview of all lot#16 participants.

We are very much looking forward to our collaboration for the lab of tomorrow in Namibia!

All the best,

lot#16 team

GIZ Biodiversity Economy in Namibia

Adelphi


lab of tomorrow



Partners

The lot#16 is a multi-stakeholder collaboration:

Co-Initiators & Project Lead




giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

lab of tomorrow.
NEW WAYS TO NEW BUSINESS

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IMPACT TANK ideate.build. launch.grow. inspire!

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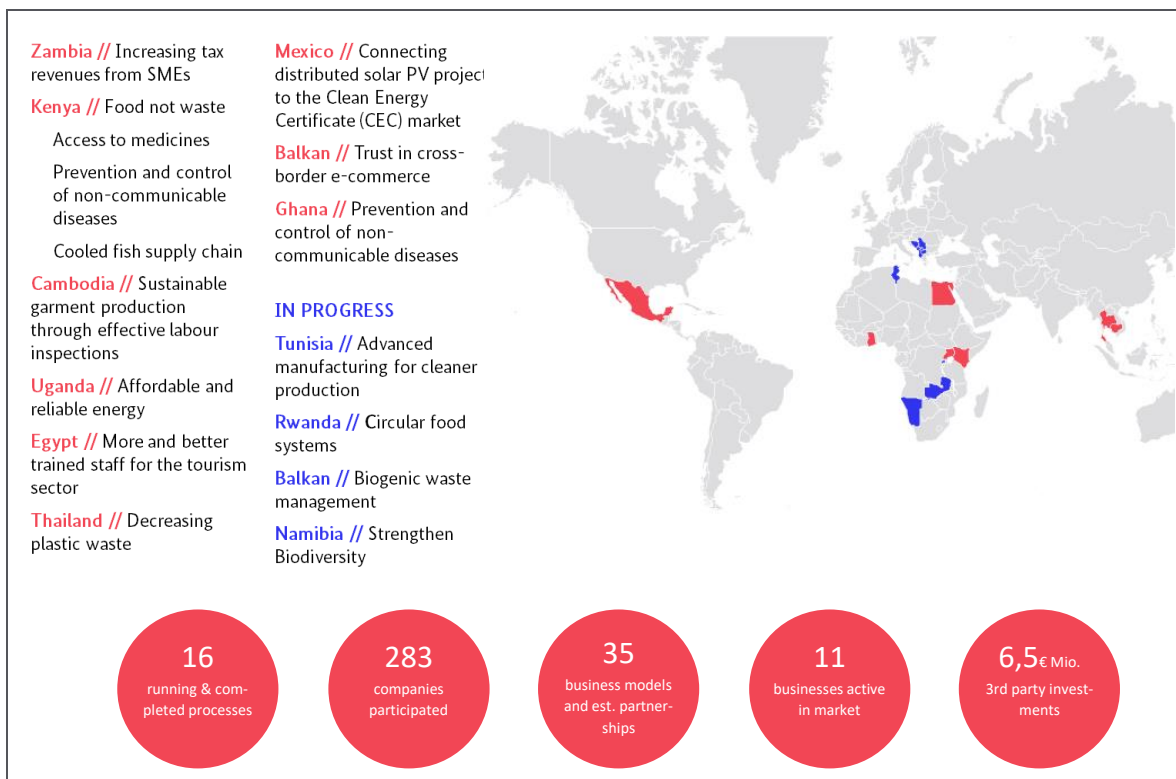
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1. About the lab of tomorrow

The *lab of tomorrow* (lot) is an open innovation process to develop entrepreneurial solutions for development challenges in a co-creation, multi-stakeholder approach. Leveraging design thinking, the lot involves the target group and relevant stakeholders from the very start to ensure the defined challenges and solution spaces are appropriate to the context and address an actual demand. The desired results are new ventures with self-sustaining business models owned by private sector actors or new multi-stakeholder partnerships for impact.

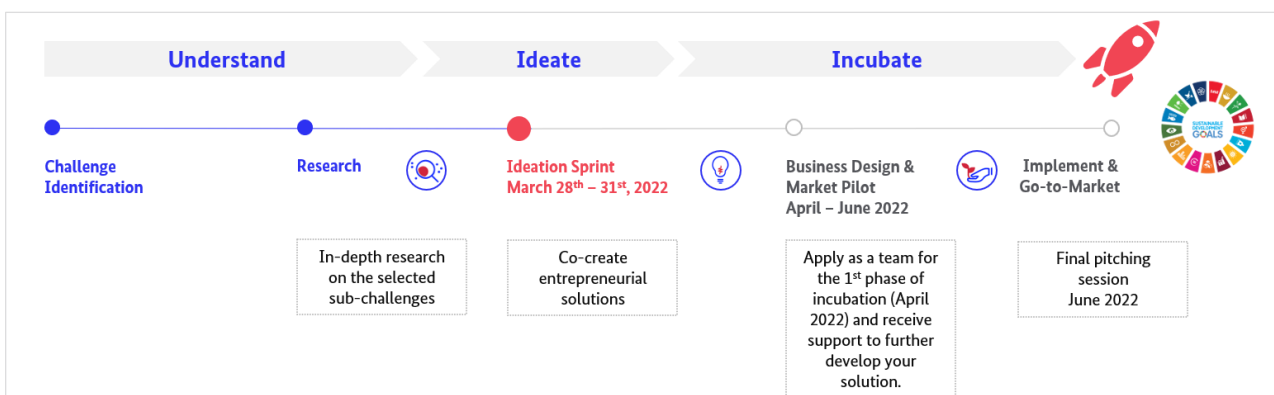
The lot approach was developed by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). It has a proven track record of 12 completed processes and over 58 business model sketches created. Eleven of those went to the market and raised a total of 6.5 million Euros in third-party investments.



lab of tomorrow 16: Biodiversity Protection pays off digitally in Namibia

lot#16 aims to tackle challenges related to biodiversity protection in Namibia. It uses an innovative approach by finding sustainable entrepreneurial solutions that enhance resilience among local communities and improve the local ecosystem and wildlife situation. The focus lies on developing digital products and services based on biodiversity. Therefore, local income streams can be diversified, and at the same time, the value of nature can be increased, leading to more responsibility regarding its protection.

lab of tomorrow process



Further Information



Website: [lab of tomorrow](#)

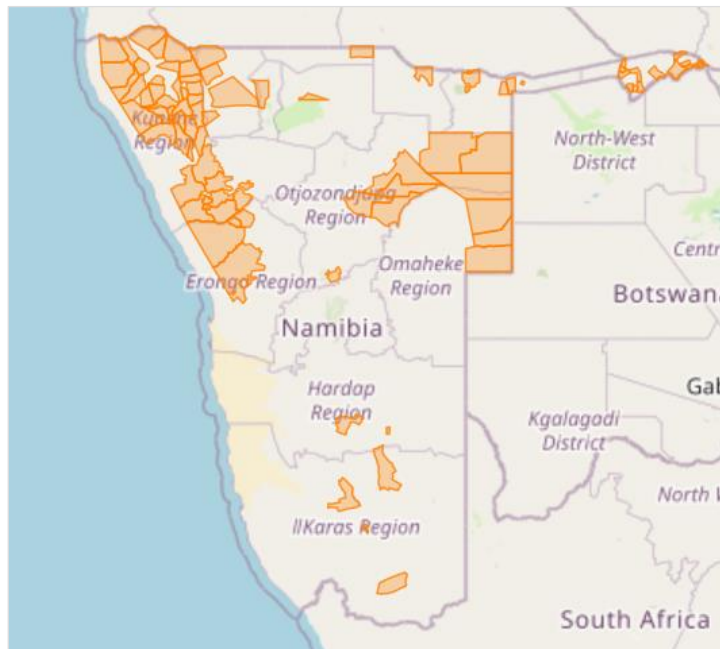


Challenge: [lab of tomorrow 16](#)

2. Biodiversity Protection Pays Off Digitally

Biodiversity and its protection are of crucial importance and value for Namibia. 40 % of the country's land is covered by protected conservation areas like national parks or communal conservancies. With more than 4,500 plants and 217 mammal species, Namibia has remarkable biodiversity (MEFT, 2011). As a resource, it is used in both a consumptive (food, fuel, medicine) and a non-consumptive way (ecosystem services, tourism) (ibid.). 70 % of Namibians directly depend on biodiversity and natural resources for their livelihood. About 10 % of the Namibian population (230.000 thousand out of 2.5 million, as of 2019) live in so-called communal conservancies (NACSO, 2021).

Namibia's "Community-Based Natural Resource Management" (CBNRM) program began in the 1990s when legislation for the devolution of conditional rights to natural resources allowed communities to register areas of customary landholding as "communal conservancies". Registering these conservancies (involving developing zoning and sustainable resource management plans as well as their constitution) allows local communities to manage and benefit from wildlife and other natural resources on their traditional lands. Although people have used wildlife for millennia in the region that is now Namibia, the last century was characterised by declines in various species, by overhunting of big game species by colonial hunters, and more recently by a significant drought combined with a poaching increase in the 1980s (Owen-Smith, 2010). Namibia's CBNRM program is widely recognised as having contributed to a strong recovery of wildlife in large parts of the country by creating social and economic incentives for the sustainable coexistence of nature and people on communal lands (Owen-Smith 2010; Naidoo et al. 2011b; NACSO 2013).



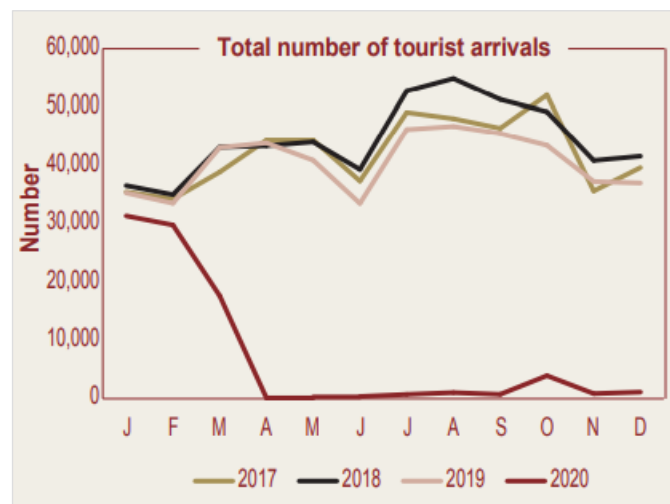
Registered Communal Conservancies in Namibia (NACSO, 2021)

The principles used to incentivise communities to steward wildlife across massive spatial scales are already being adopted by numerous other countries in Africa and beyond (NACSO 2013). The vast part of the tourism and travel sector directly depend on biodiversity for their core business (e.g. lodges, safaris). Wildlife is given a direct use value by marketing natural resources as a tourist attraction (Kalvelage, Diez, & Bollig, 2020). A thriving tourism sector is of great importance for Namibia since it is, among agriculture and mining, the backbone of Namibia's economy (WWF, 2021). With 15 % of the total employees working in the tourism sector, it constitutes one of Namibia's most significant employment sectors and contributes 15.3 % to the national GDP (2019) (World Travel & Tourism Council, 2021).

International tourism, is of significant relevance here, as a quarter of the money (28 %) generated comes from international tourists. Thus, domestic tourism is of comparatively minor importance, especially due to a lower purchasing power can. However, the vital importance of tourism leads to dependency, which became apparent during the COVID-19 pandemic. Of the original 112 000 jobs, 80 000 could be saved in the pandemic year. Furthermore, the income from international tourists has decreased by 65 %, money that Namibian institutions and especially wildlife-related institutions require to maintain nature conservation efforts (World Travel & Tourism Council, 2021). However, biodiversity and conservation areas are increasingly under pressure through poaching, unsustainable farming practices, reduction of arable land due to climate change (increasing temperatures, inconsistent rainfall), and human-wildlife conflict (WWF, 2021). Moreover, economic pressure has further risen during the COVID-19 crisis due to significantly reduced tourism and, consequently, dramatically reduced income for Namibians.

COVID-19 in Namibia

- International tourists arrival in 2020 declined by 81.9 % compared to the year before
- Employment rate in 2020 declined by 30 % (compared to 2019, missing out informal job losses)
- Tens of thousands jobs in the conservancy work sector in jeopardy

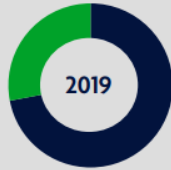


Airports, International and regional passenger arrivals (Mbazuvara, et al., 2020, p. 4)

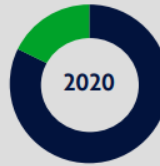
(UNIC Windhoek, 2020) (Mbazuvara, et al., 2020, p. 5)

Namibia Sector Characteristics

Domestic vs International Spending:



● Domestic Spending:
USD 1,042.3MN (72%)
● International Spending:
USD 405.2MN (28%)



● Domestic Spending:
USD 647.5MN (82%)
● International Spending:
USD 139.9MN (18%)

Namibia Key Data

	2019	2020	
	15.3% of Total Economy Total T&T GDP = NAD28,814.2MN (USD1,748.9MN)	9.8% of Total Economy Total T&T GDP = NAD16,873.4MN (USD1,025.0MN)	-41.4% Change in Travel & Tourism GDP vs -8.0% real economy GDP change
		111.9 Jobs (000s) (15.0 % of total employment)	81.1 Jobs (000s) (11.1 % of total employment)
	Visitor Impact International: NAD 6,676.0 MN Visitor spend 10.1% of total exports (USD405.2MN)	NAD 2,303.7 MN Visitor spend 4.2% of total exports (USD139.9MN)	-65.5% -USD 265.3 MN Change in international visitor spend:

Inbound Arrivals³

2019

- 1. Angola **35%**
- 2. South Africa **17%**
- 3. Zambia **15%**
- 4. Germany **6%**
- 5. Zimbabwe **5%**
- Rest of world **21%**

2020

- 1. Angola **38%**
- 2. South Africa **20%**
- 3. Zambia **12%**
- 4. Germany **6%**
- 5. Zimbabwe **5%**
- Rest of world **18%**

(World Travel & Tourism Council, 2021)

Since the purchasing power of tourists from neighbouring countries is lower compared to tourists from European countries and North America, the importance of these tourists remains high. While domestic and regional tourism can partially absorb the shortfall during the COVID-19 period, this situation indicates the need for more diversified solutions and income streams. In addition, tourism is a significant source of income for conservation actors; thus, the decline in tourism leads to a lack of funding for biodiversity conservation.

In Namibia, there is a clear lack of entrepreneurial structures among conservation actors. The conditions that favour entrepreneurial structures are not or only partially in place. One factor is the organizational structure; conservancies often consist of a fragmented employee structure that does not allow for collaboration and therefore creates no innovation. Furthermore, although the deep domain knowledge necessary for innovation and entrepreneurial action exists, there is no knowledge management on which to draw for innovation or entrepreneurial activities. Furthermore, entrepreneurial action requires financial flexibility, and here, too, the tight budget is a limiting factor. This situation is exacerbated by the fact that the conservancies see themselves as nature-protecting professionals but do not have an entrepreneurial mindset.

The lack of entrepreneurial structures, combined with the need for income sources, also results in the need to monetize natural resources, particularly transferring their rights to use natural resources to the private sector (Kalvelage, et al., 2020). This is even more problematic, as enormous opportunity costs arise here. The example of the cooperation between "The Nature Conservancy" and "Techstars" in the context of the Sustainability Accelerator Class shows that conservancies can produce promising, sustainable start-ups (Anon., 2021). Here the potential becomes clear that a co-creation approach, such as the one aimed at in lot#16, has.

Due to this development, local communities also need more diversified income streams to resist crises. Inclusive businesses and digital tourism can play a crucial role in achieving this. Tourism, in particular, has the potential to catalyse economic growth in rural areas, therefore reducing poverty and raising the responsibility to protect wildlife (Kalvelage, et al., 2020). Digital tourism and biodiversity-related products and services create jobs and engage in biodiversity on the service provider and customer side. This increases the positive impact on conservation and protection work in Namibia. lot#16 tackles this challenging situation by asking the question:

“How might we better protect the biodiversity in Namibia by creating digital, biodiversity-based businesses in the conservation landscapes and by capitalising on the local population’s expertise and resources?”



For a better understanding of the challenge, a **Semantic Analysis** is used. This technique improves the overall understanding of the challenge by analysing the meanings of individual words and identifying different connotations and associations that evoke them.

How might we **better protect**

the **biodiversity** in **Namibia** by

creating **digital**, **biodiversity-**

based businesses in

conservation landscapes and

by **capitalizing** on the **local**

population's **expertise** and

resources?



Sustainable use, conserve, preserve, reduce killing, maintain



Wild living animals and plants individual, populations, ecosystems, landscapes



Namibia, focusing on the following target landscapes: Brandberg, Etosha West & South, Ombonde People Park, Waterberg. In well justified cases also outside target landscapes



Develop game changers, innovate, co-create, establish a company, new income stream, value chain



AI, VR, IoT, data enabled, gamification, photos, videos, digital platforms, software, apps



Business solutions based on living wild animals and plants, thereby providing more value to biodiversity for local people and incentivizing better sustainable use and protection of biodiversity



Building on expertise, making use of, taking advantage of

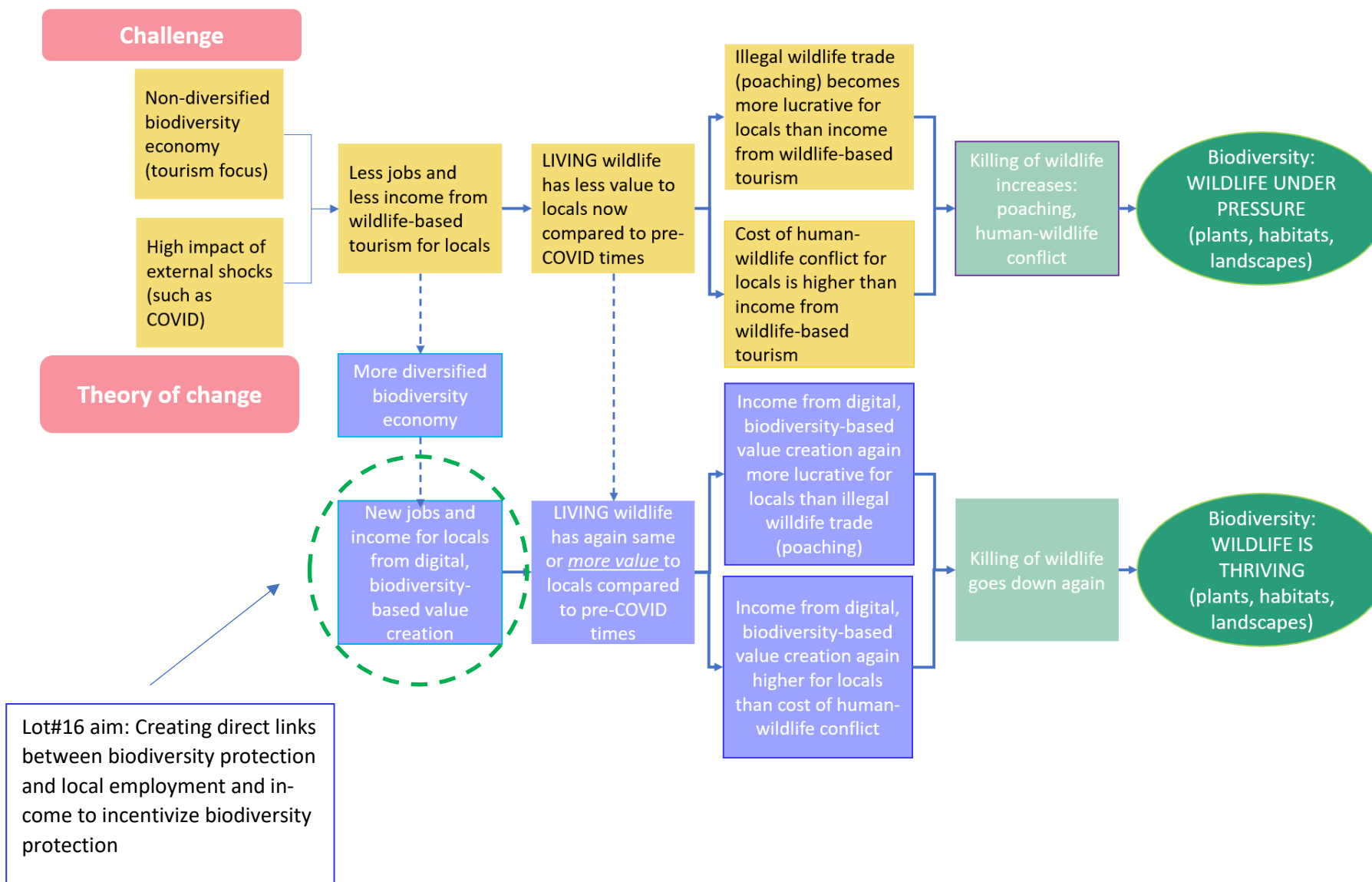


Local people who inhabit and/or who work in the target landscapes



Professional skills, know-how and traditional knowledge about biodiversity, experience, finance, infrastructure, equipment.

Results Chain: Positive Impact of the Biodiversity Economy



The principles for lot#16 are derived from the results chain

- 1 Strengthening value chain linkages by building trust and bridges between the relevant actors along the value chain, horizontally and vertically;
- 2 Diversify income streams for local communities in rural areas through sustainable, responsible business approaches and making them part of the solution and creating direct links to economically incentivize biodiversity on the ground
- 3 Developed products/services are dependent on the sustainable use and protection of biodiversity
 - Adding value to wildlife/biodiversity
 - Raising awareness for biodiversity protection
 - Decrease (financial) dependence of conservancies and protecting actors on physical tourism;
- 4 Digitally respectively remotely available solutions; accessible for financially or physically challenged people that are beneficial for whole communities instead of single stakeholders;
- 5 Strengthening the connection to “Landscape Philanthropists.”
 - Create opportunities to regularly support local communities and nature conservation
 - Connecting rural populations with landscape philanthropists

Digital Tourism



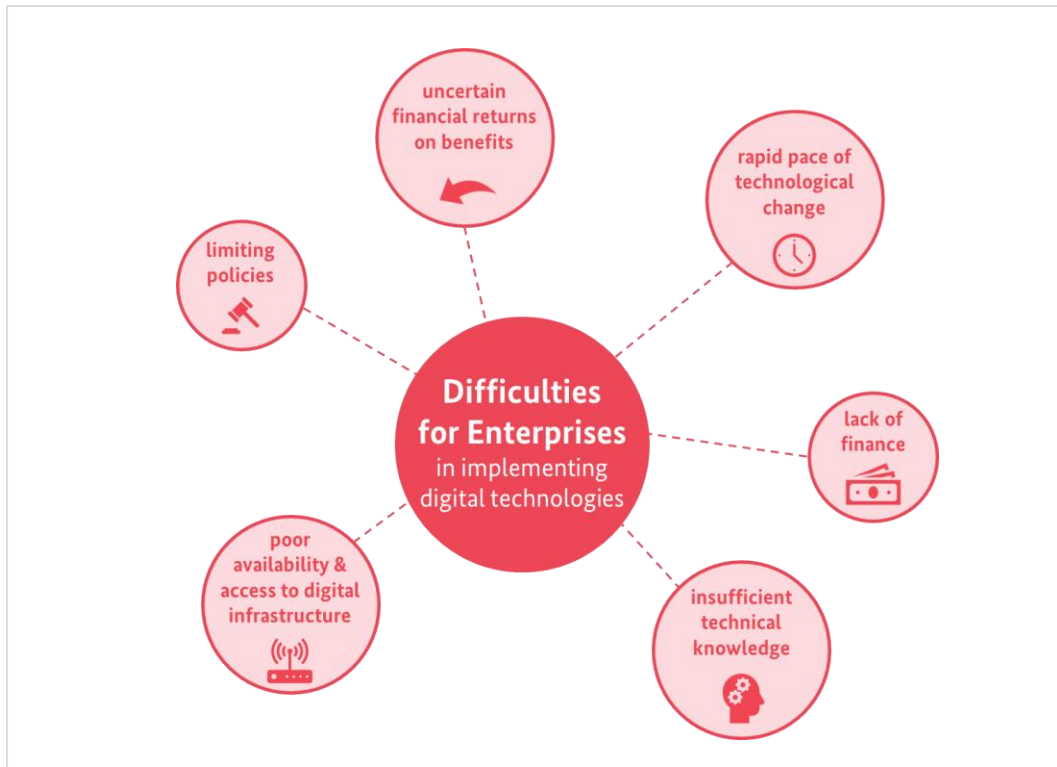
Digitisation is the conversion of analogue data and processes into a machine-readable format. At the same time, **digitalisation** is the use of digital technologies and data and interconnection that results in new activities or changes to existing activities (OECD, 2020). **Digital transformation** refers to the economic and societal effects of digitisation and digitalisation (ibid.).

Advantages of Digital Tourism for Tourists

- Safer and more sustainable (less CO₂ emissions)
- Unprecedented/Unique experiences without leaving home
- Better accessible for e.g. disabled or older people
- Higher flexibility

(Barashok, et al., 2021, p. 1)





(Dredge, et al., 2018, pp. 3, 26 f.)

With a broad network of technical experts and due to the teams' selected composition, these difficulties are reduced within the framework of lot#16. lot#16 brings together stakeholders with knowledge in the digitalisation sector as well as entrepreneurs and experts from the Namibian ecosystem that have profound knowledge about local regulations and opportunities. Furthermore, participants can benefit from an already identified business potential that can be exploited and makes a return of investment more likely. Working with established companies enables exchanging best practices and building on existing infrastructures, shortening innovation processes and increasing the chances of success. Regarding the issue of finance, the credibility of the GIZ and the reputable partners of lot#16 is a confidence builder for potential investors and helps to attract external capital.



(Dredge, et al., 2018, pp. 3, 6)

Thinking in Solutions: Digital (business) approaches to protect the biodiversity



Inclusive businesses in the tourism sector have a high potential to reduce poverty for three main reasons:

- Inter-sectoral linkages can be created, especially with artisan production and additional services (thereby favouring livelihood diversification);
- Tourism takes place in marginal areas, where the majority of the poor live;
- The analysis of the competitive environment in the industry sector shows that tourism has few entry barriers. At the same time, inclusive businesses can lead to product differentiation and consequently address the tendency among tourists to be tempted by new, innovative offers. Furthermore, the rapid development of trends and technologies in the tourism sector is a disadvantage for traditional business models, which paves the way for smaller, more dynamic market entrants.

(Rylance & Spenceley, 2016, p. 373)



3. Sub-challenges

Customer-based research identified five “sub-challenges” or specific needs within the general challenge. They are defined on a level that can be addressed with specific marketable solutions. The sub-challenges constitute the starting point for developing business models during the Ideation Sprint. A profound set of information and analyses on the customer group and need, specific context, and market potential are given below.

3.1. Digital Wildlife experiences for tourism and zoos



How might we enable the tourism sector and zoos to add new income streams by allowing people to experience Namibian nature virtually via digital (live) content provided by local tourism actors and research institutions, as well as landscape guardians?

The problem

Tourism can be considered the backbone of Namibia’s economy, with a unique ecosystem and diverse biodiversity being its most vital asset. However, traditional tourism negatively influences the ecosystem (e.g. the rise of game hunting) and biodiversity, so a more sustainable alternative is needed. The current system strongly depends on in-country tourists with no alternative revenue streams. The non-arrival of tourists, for instance due to a pandemic, would have catastrophic consequences for all ecosystem stakeholders. Additionally, the currently existing growth opportunities are limited as the carrying capacities of ecosystems will reach their limits. Increasing or hastening the implementation of digital tourism and related services to remedy these threats and diversify income streams related to the tourism sector is therefore needed ((WTTC), 2022).

Digital tourism is not only about the organization and facilitation of the travel experience with digital tools. It can also enhance tourist experiences and complement the physical experience. Therefore, digital tourism influences the industry in two ways: Firstly, it provides tourists with a new experience dimension. It expands the accessibility of particular places and attractions for digitally affine customer groups. Secondly, it opens up new business opportunities that offer these new experiences to tourists. For instance can VR technologies lead to a new generation of tourism alternatives that evolves beyond the traditional structure with reality technologies.

Market

The relevant target group for this sub-challenge includes zoos, museums, tourism agencies and all institutions that offer attractions or incorporate them as a central element of their business model. These actors could benefit from digitising attractions and tapping into new customer groups. Currently, these organisations and institutions employ between 11 % and 15 % of Namibia's workforce. The emergence of the digital economy is the primary trend of the information age, with virtual tourism being one of its main pillars. In 2020, 171 million people worldwide were using virtual tourism offers with a market size of 70 \$ billion, a number that is likely to grow in the coming years (Voronkova, 2018).

Tourism agencies are among the most critical customer segment for this sub-challenge, given their interest to grow their service offerings and opening up new markets. Especially the scalability of digital offers is interesting for this target group and has a positive effect on their willingness to pay. As can be seen from the enormous importance of tourism for the Namibian economy, this target group is large and thoroughly attractive due to its affluent and steadily growing group of end customers. Virtual tourism services could be a welcomed source of preliminary information and follow-up content for those customers. The target group also includes large multinational agencies with the required capital to pay for the creation of cost-intensive and high-end content.

Zoos, wildlife reserves and museums are other essential customer groups. For them, digital offers are attractive because they increase the occupancy rate of their attractions and enable a more holistic experience for the visitors. New virtual offers can be used for follow-up content and educational purposes. Research institutions are also part of the target market because they gain the opportunity to make their research results available to a broad public and monetise them at the same time. Depending on the product, all actors in this market can either take on a co-creator role or a customer role (in the sense of a B2B relationship). Especially partnerships with research institutes and wildlife facilities are promising, as their in-depth domain knowledge presents a competitive advantage.

Possible Stakeholders

- Zoos that could offer an in-house observation of their animals, thus providing an authentic impression of the zoo for visitors at home
- Museums, conservancies
- Tourism agencies
- Advanced tech & media companies (drones, VR, AR, etc.)
- Traditional media & communication companies

Possible End Users

- Local & international tourists
- Local & international students, schools, researchers
- International media & film documentary companies
- (International companies and enterprises)
- (Amusement parks around the world)

Opportunities

- 1 Innovative approach: The tourism industry in Namibia is an established industry, with slowly grown strong structures based on proven business models. Innovative approaches like digital tourism models are a leap forward that can disrupt the status quo and open up new markets.
- 2 Quality and deep domain knowledge: Research institutions and tourism actors possess profound domain knowledge of the Namibian ecosystem and its flora and fauna. As a result, they could create and provide insightful digital content beyond the competitive offer to meet customer needs.
- 3 Namibian flora and fauna as unique selling proposition: The astonishing Namibian flora and fauna are one of their kind, and content created around this habitat will undoubtedly stand out against the competition in the VR sector.
- 4 New markets and cross-marketing effects: Digital tourism is a trend, and the market is constantly growing. External economies of scale apply for digital tourism services, which tap into a market with millions of potential customers with high purchasing power.

Threats

- 1 Insufficient infrastructure: Even though Namibia is among the African countries with the best ICT infrastructure, a lack of internet connectivity is a primary consideration that must be taken into account the more remote and away from settlements activities are planned.
- 2 Resistance against adoption: Local and international tourists might be hesitant to adapt to new business models in the Namibian tourism sector. Proposing a similar or better experience is one of the most crucial elements to consider when redesigning the experience.
- 3 Lack of digital competencies: Digital skills of the tourism workforce need to be improved as digital competencies were not part of established business models before.
- 4 There is a lack of understanding of the potential in this sector: Interviews indicate a belief that value is only found in the tangible experience and therefore that the customer will not pay the same or an equivalent rate as they would for a non-virtual experience.

Existing initiatives

- 1** **Digital Exhibitions - The traditional arts & ethnology Centre in Laos**
The TAEC is a centre for learning and exchange that makes it possible to digitally experience a wide variety of exhibitions. The living museum offers virtual visits to the exhibitions, where, for example, the sound of traditional music instruments can be experienced at home.
- 2** **Watching Rhinos - Houston Zoo**
The Houston Zoo offers the unique opportunity to observe the in-house rhinos from home. The visitor gets an accurate impression of the zoo from home with different cameras.
- 3** **Panda Cam - Zoo Atlanta**
In an adaptation to the difficulties caused by the pandemic, the Atlanta Zoo began to offer virtual tours to its pandas. Visitors get access to different camera perspectives and are invited to donate.
- 4** **Coral Reefs – 360 Virtual Tours**
360 Virtual Tours offers an authentic experience of the earth's most stunning coral reefs. Visitors on a 360 degrees virtual tour can experience the coral reefs for an affordable price without destroying the fragile ecosystem.
- 5** **Heritage in Motion**
This multimedia competition offers a platform for creators of films, games, apps, and websites on themes related to Europe's natural and cultural heritage.

3.2. Incentivised Virtual Tourism for Individuals



How might we incentivise and enable individuals to engage with the Namibian nature virtually provided via offerings from local tourism actors, research institutions, and landscape guardians?

The problem

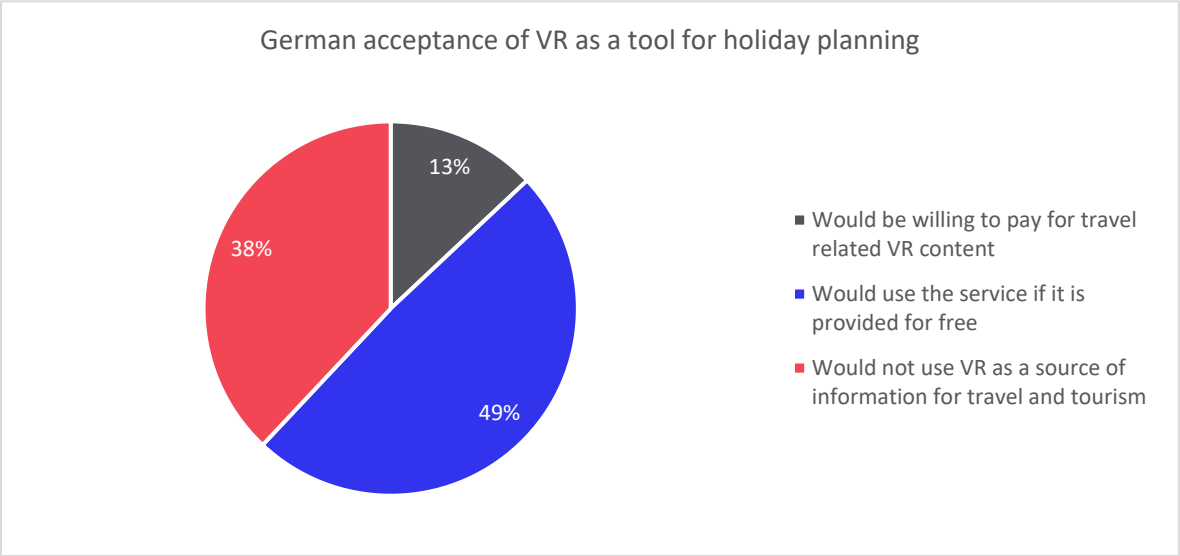
The Namibian ecosystem is unique and offers its international visitors a flora, fauna and landscape that they are unfamiliar with from their home countries, especially North America and Europe. Until now, this offer has been experienced by tourists almost exclusively physically. The possibility to virtually experience safaris and other interactions with the environment is not yet available as an option to tourists wanting to inform themselves about the unique landscape. Two factors further exacerbate this problem. Firstly, the lack of relevant offers and, consequently, the fact that the advantages and opportunities of such virtual offers are underestimated. Secondly, tourists are often older and therefore generally less familiar with innovative technologies. The challenge will therefore be to establish virtual offerings as a real alternative and to convince tourists that they can add value to offline activities.

Market

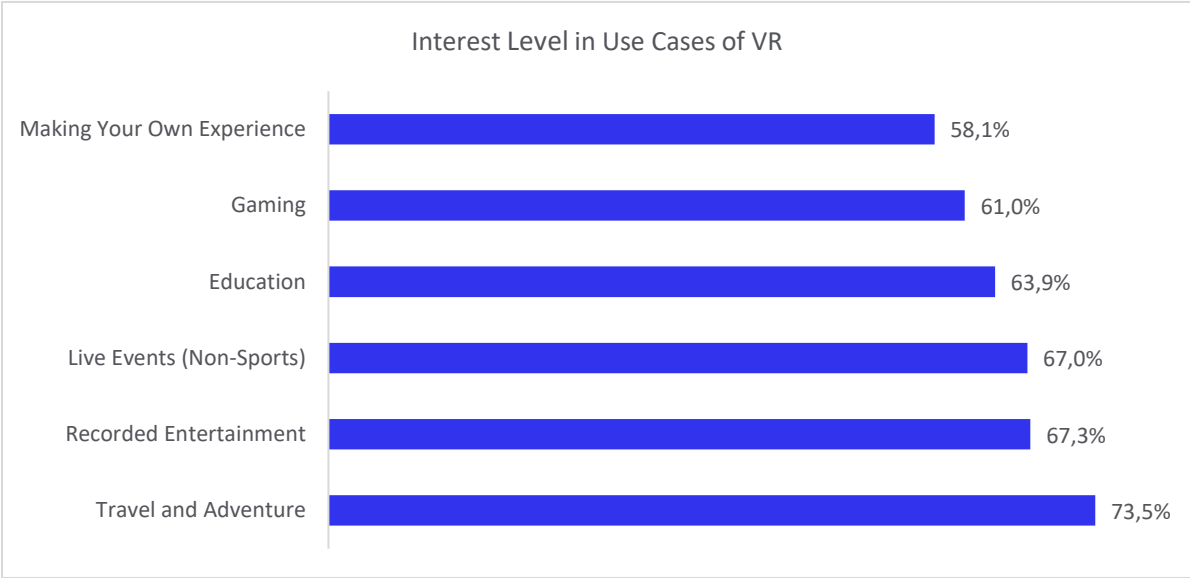
For most establishments in Namibia, international tourists and, more specifically, Europeans have been the most significant market. Close to 1.5 million tourists visited various establishments in 2017, as reported by the 2018/19 Namibia Tourism Board Annual Report (Namibia Tourism Board, 2019). The main countries of origin of tourists are Germany (33 %), the United States (11 %) and the United Kingdom (9 %). The dominant age groups of tourists from North America (30 %) and Europe (24 %) were 60 years and older, with 60 % male visitors and an average length of stay of 17 days (Ministry of Environment and Tourism, 2011). This group is interested in a more holistic travel experience, additional content to their trips and will remain an important target group for several reasons.

Firstly, people from North America and Europe are less price-sensitive and generally have high purchasing power. Secondly, their desire to make the most of their stay makes it likely that this group will be open to digital tourism services to enrich their experience. Furthermore, they can act as a kind of multiplier for another important, potential younger customer group: North Americans and Europeans that do not travel to Namibia. This group is characterized by a high affinity for technology and a high purchasing power. In addition, it is likely that this group already has some experience with virtual tourism through existing best practices in North America and Europe. It can also be assumed that the global mindset of this target group will be awakened and addressed with Namibia's unique ecosystem. Therefore, this market remains the most significant target market for the solutions that will be developed. Especially, Generation Z and Millennials, who rank VR as the second most important activity for travel content (Beck, 2016).

Overall, 70% of the population in the focus regions of North America and Europe are interested in virtual travel and adventure vacations (Rex, 2016). This broad interest illustrates the monetization potential and, in conjunction with the absolute market size, is an indicator of the attractiveness of such solutions. An assumption supported by the fact that the willingness to pay for holiday planning tools alone is already 13% of those willing to pay for VR offerings, a figure that knows no bounds with appropriate customer education (Beck, 2016). Statista Digital Market Outlook conducted a survey in Germany (n = 1.001). 62% would consider VR as a tool for holiday planning, whereas 49% would only use it if it is provided for free and 13% would be willing to pay for it (Beck, 2016).



(Beck, 2016)



(Rex, 2016)

Although digital or virtual tourism is not popular in Namibia at the moment, national tourists can also become an important target group. At the moment only 31 % of travellers are Namibians with

71 % saying that the high prices deterred them from travelling (Voronkova, 2018). Digital tourism could increase the accessibility of sights and wildlife attractions for Namibians, enabling them to experience and inform themselves about their country. However, this needs to be accompanied by a lot of awareness-raising and training to convey the value of a non-traditional tourist experience.

Relevant Stakeholders

- Customers: local education institutions, international tourists, end users in North America and Europe especially early adopters from Generation Z and Millennials, international media & film documentary companies
- Content creators: studios, tech companies and research institutes
- Content providers: museums, living museums, zoos and wildlife parks
- Distributors: tourism agencies, hospitality sector



Source: Creative Commons

(Pexels)

Opportunities

- 1 Deep domain knowledge: Namibia has a very well-developed tourism industry, which means that the knowledge to create an authentic virtual touristic experience would be readily available. Namibians are familiar with the preferences of potential customers and can address them directly.
- 2 Cross-marketing opportunities and access to the customer: Non-virtual tours and offers are an introduction to the target market and could serve as cross-marketing platforms for other potential customer groups.
- 3 Natural increase in customer awareness: Offering digital tourism services means building upon a trend. Studies show that the consumption of digital travel content is on the rise with a growth rate of 44 % in the U.K., 41 % in the U.S., and 18 % in Canada. Travel content is also widely consumed in each country by 75 % of digital users in the U.K., 70 % in Canada, and 60 % in the U.S. (Abramovich, 2021). This is exacerbated by the pandemic increasing the demand for virtual experiences.

Threats

- 1 Education of the customer required: To tap into the market, customers must believe that the true value of a touristic experience does not only lie in the tangible experience. A paradigm shift would be a necessary consideration in any undertaking.
- 2 Lack of understanding within providing, creating and distributing stakeholders: Stakeholders involved in the creation and distribution of virtual tourism offers are among the most important multipliers and advertisers. Unfortunately, the lack of virtual tourism offers leads to a rather reserved attitude among stakeholders. To fully unfold the potential of virtual tourism, all stakeholders have to be on board and informed about the benefits of virtual tourism for their business.
- 3 Creating the right content is crucial: This requires high initial investments. To benefit from the trend and attract tech-affine customers, state-of-the-art technology has to be used, which is expensive and requires professional studios and editors.

Existing initiatives

- 1 *Timelooper*
Timelooper enriches the interaction between cultural institutions and the modern visitor. Through the application of cutting-edge technologies - including geographic information systems (GIS) mapping, holographic imaging, and 3D scanning virtual and augmented reality-based immersive learning experiences can be created.
- 2 *WindowSwap*
Window Swap transports the visitor to a stranger's windowsill for up to 10 minutes. By clicking a button, the visitor is being warp-zoned somewhere else. In five minutes one can be transported from a Singaporean sunrise to a view from underneath the Brooklyn Bridge to a Slovakian goat farm.

3.3. Interacting virtually with artisans in their creation process



How might we enable local artisans to interact virtually with customers in the creation process of biodiversity-based products?

The Problem

Local artisans and craftsmen, specialising in biodiversity-based products made of wood, leather or stone for example, usually sell their products on the roadside, in lodges or in retail stores. These local artists have to deal with a range of challenges. First of all, there is a dependency on various levels. They are not able to influence tourism flows and are often dependent on tourism agencies and tour operators, which puts them in a rather passive position. Furthermore, they are dependent on on-site customers, may they be Namibians or international tourists. Many local artists live on their daily income and have no way to save money. The purchase of commodities is expensive and subject to price fluctuations, which negatively affects the profit margins of traders. Their growth and expansion capacities are limited.

Virtual workshops, on the contrary, are scalable and the additional revenue sources would reduce the dependency. Additionally, many artisans offer similar, partly even the same products, making customers less attracted to buy them (Saarinen, 2016, p. 415). To stabilize income streams and scale business, there is a clear need to create opportunities for local artisans, to sell their products online and offer services like customization. A more flexible portfolio and the idea of co-creation are more likely to attract new customers worldwide, especially since uniqueness through co-creation and customization approaches holds great potential for business success.



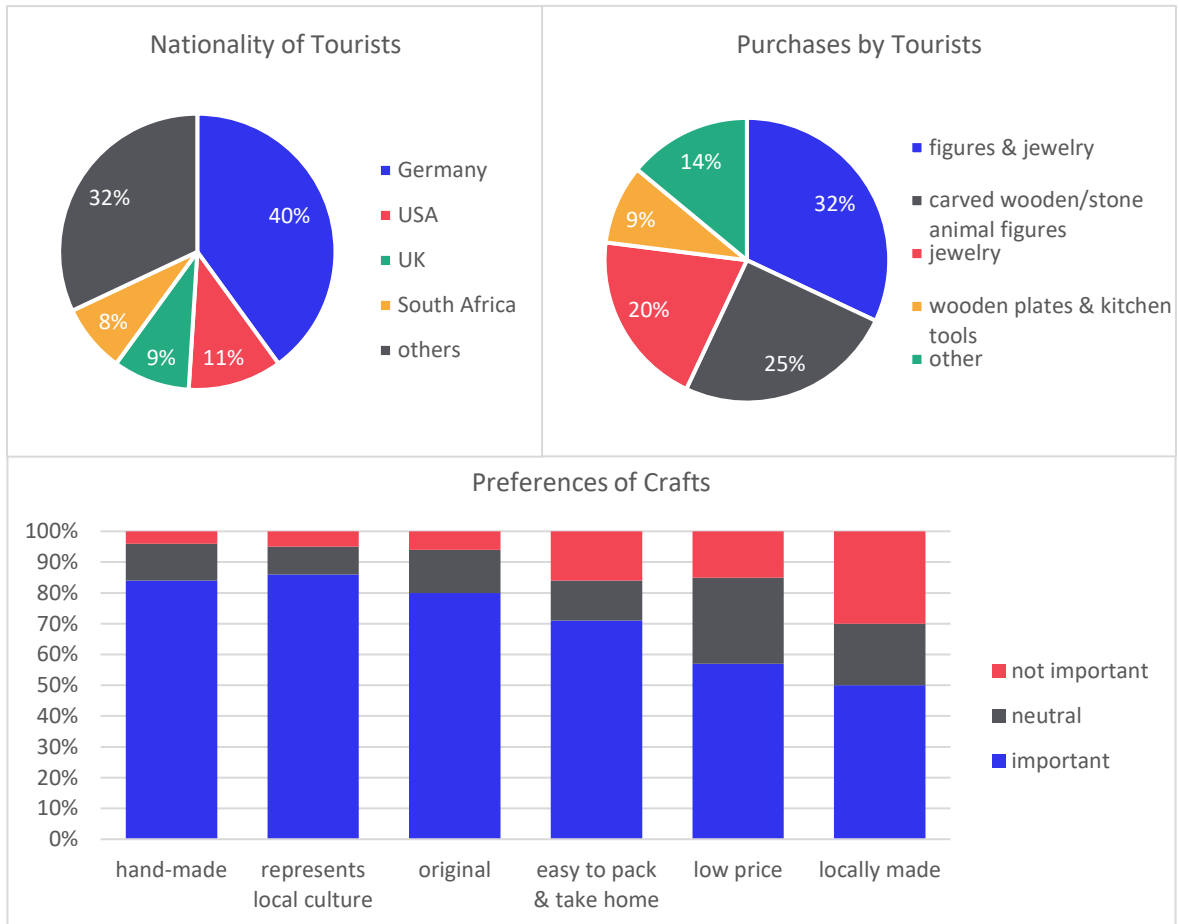
Namibian wooden craft (Source: Creative Commons)



Artisan market in Swakopmund (Source: Creative Commons)

Market

A key target group of Namibian artisans is tourists. Especially international tourists have a strong purchasing power and may show more interest in the cultural value of handcrafted products. It was found that 55 % of the visitors have bought products for an average cost of 23 USD and that 32 % of the visitors are from Germany, 11 % from the United States and 9 % from the United Kingdom (Saarinen, 2016, p. 414). Based on a case study by Jarkko Saarinen the characteristics of artisan market visitors in Namibia can be presented as follows (2016, p. 413 f.):¹



(Saarinen, 2016, p. 414)

¹ The case study included 101 semi structured interviews as well as observations at an open craft market area in central Windhoek, Namibia in 2010 (Saarinen, 2016, p. 412).

Although the data refers to the physical tourism market, it shows a profound interest in local products. The attribute hand-made and the representation of local culture are the most important attributes mentioned by the respondents with 85 % and 83 %, respectively, while a low price is only important for 53 % of the people surveyed (Saarinen, 2016, p. 414). The enormous market potential becomes clear when the experience from physical tourism sales is combined with another global trend. Developments in the last decade show that there is a rising demand for online shopping offers worldwide.

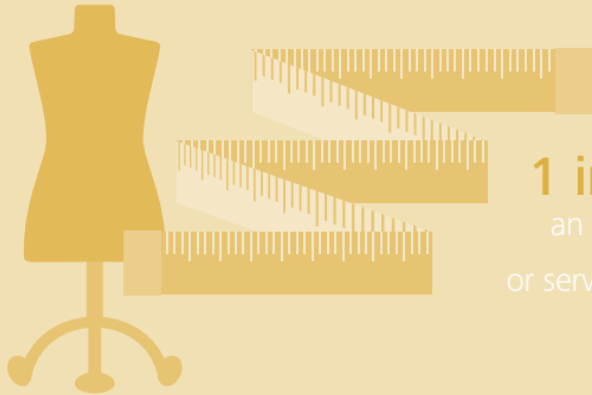
Etsy, a US-American e-commerce platform for, among other things, handmade arts and crafts, has increased its market capitalization many times over in recent years: starting with USD 0.92 Billion in 2015 it is worth USD 28.91 Billion as of December 2021. This clearly shows the potential of online platforms like this for the future. A report on e-commerce in the EU proves the frequent use of online shopping opportunities. It highlights that over 70 % of internet users made at least one online purchase of goods and services for private use in the previous 12 months (OECD, 2020, p. 65). Experts predict the e-commerce market to reach USD 27.15 trillion by 2027 (Dukurs, 2021).



Co-creation means to involve end-users in the product development process as active participants (Rasool, et al., 2017). It is an effective way of minimizing the risk of misinterpretation of end-user needs and achieving product success (ibid.). Additionally, co-creation increases the perceived value of a product (ibid.).

Leading companies like Nike or Ikea have been using co-creation as a promising opportunity to involve their customers in the value creation process (Ramaswamy, 2008, p. 9). These thereby enabled unique customer experiences are leading to competitive advantages as well as profitable growth for the company (ibid.). Closer interactions strengthen a firm's capacity to use global network resources and thematic communities to continuously identify and act upon innovation and value creation opportunities (ibid.).

Besides the co-creation approach, especially custom products will play a major role for small and medium-sized businesses in the future (Dukurs, 2021). Including this in one's business model, will increase product sales and build a continuous business (ibid.). The reason for this bright future of custom products is the high percentage of consumers that are dissatisfied with off-the-shelf products (ibid.). The Deloitte Consumer Review (2017) has shown, that about 36 % of Americans are interested in buying customized items, with 20 % of these online buyers willing to pay a premium price for such a unique product.



Price isn't the barrier

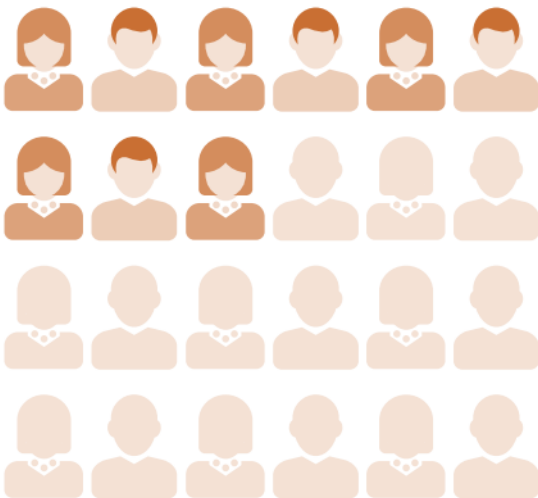
1 in 5 consumers who expressed an interest in personalised products or services are **willing to pay a 20% premium.**



The great data exchange

22% of consumers are **happy to share some data** in return for a more personalised customer service or product.

On average **36 per cent** of consumers expressed an interest in purchasing personalised products or services



48 per cent said they were **willing to wait longer** for a personalised product or service.

(Deloitte, 2017, p. 7)

Opportunities

- 1 Shaping the local market: Currently, there is insufficient infrastructure for non-local selling. “We have to rent a car or hike to deliver products outside of Namibia, where we sell our products informally” (Jeremiah K., Carpenter). Therefore, the Namibian market offers a great opportunity to pioneer the use of e-commerce in the arts and crafts sector.
- 2 Building upon trends: Digital sales channels are a big trend and increasingly popular with consumers. The huge market size allows room for growth even for niche products and offerings, which diversifies income streams and contributes to more resilience.
- 3 Business improvement: Co-creation processes enable customers to become active, provide input and share ideas, leading to innovations in product development, business models and value chains.
- 4 Cross-selling opportunities with other virtual tourism offerings: Workshops and co-created products can be a welcome extension to other virtual tourism offerings, resulting in cross-selling opportunities and collaborations.
- 5 Openness to new business areas: The precarious situation of local retailers leads to an increased willingness to try out new things and open up further business areas.
- 6 Low-language barrier: Since English is an official language and most artisans are used to speaking English to tourists, it makes it easier for them to interact with customers worldwide.

- 7 Low-barriers to entry: Compared to high costs for a physical expansion of the business, the costs for online sales or virtually offered workshops are comparatively low, which favours the entry of individual manufacturers into the market.
- 8 Customized products as competitive advantage: The co-creation approach builds upon the dissatisfaction of consumers to buy off-the-shelf products (Dukurs, 2021). The Deloitte Consumer Review (2017) has shown, that about 36 % of Americans are interested in buying customized items, with 20 % of these online buyers willing to pay a premium price for such a unique product.

Threats

- 1 Lack of digital skills and equipment: Local artisans question their resources to up-skill themselves or upgrade their hardware.
- 2 Doubts regarding the potential of online sold and co-created products: Many craftsmen remain convinced that a large share of the value of their creation process resides in the tangible experience and the tangible product provided to a customer on-site.
- 3 Price adjustments: Co-creation and customizing opportunities lead to increased prices that customers might not be willing to pay, as they are used to cheap products.
- 4 Weak standing for individual artisans: For digital workshops, preparation and format are crucial, which means that workshops organised by corporates and

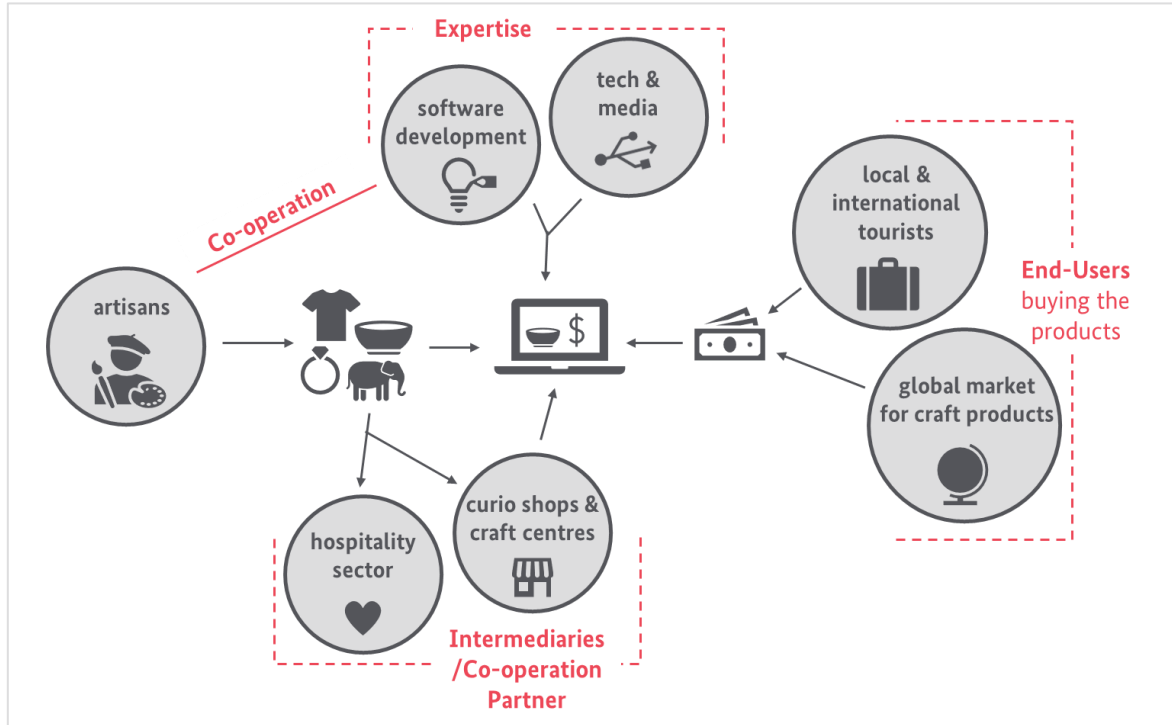
professional agencies might outperform offerings from individuals.

5 Fear of negative effects of the indirect selling processes: The involvement of intermediaries is necessary due to their market knowledge. However, it can lead to leaks, unethical encounters, and ultimately changes of representations and identities of places and, thus, consumers' understandings of local heritage and tradition (Saarinen, 2016, p. 414).

6 Cannibalisation: A major selling point is the unfamiliar appeal of local handicrafts in North America and Europe. The spread of handicrafts in the tourists' countries of origin could weaken their willingness to buy in physical tourism.

7 Infrastructural challenges: Co-created products eventually have to be shipped overseas, which can be a challenge and put them at a competitive disadvantage due to high shipping prices. In addition, the Internet infrastructure, especially in rural areas, is not reliable and needs to be improved for virtual workshops.

Possible Stakeholders & End Users



Existing Initiatives

- 1** NotOnMart – online marketplace
International, online marketplaces that connects tourists with local crafters and farmers. Partnerships with smallholder farmers across the world are cutting out the middlemen thus increasing the profit for the farmers themselves for a more just and sustainable consumption.
- 2** Aftcra – online marketplace
Community-oriented marketplace to buy and sell handmade, artisanal products. Their mission is to support local artists and artisans living in America by connecting them with handmade admirers worldwide.
- 3** Nike By You – customized products
Part of Nike’s online shop where customers can create their own shoe design and buy the product as designed.
- 4** Printify – customized products
Print-on-Demand-Service for businesses that want to create and sell custom products.

3.4. Gamified biodiversity experiences for gamers and nature lovers



How might we encourage gamers and nature lovers to engage in biodiversity-based digital and gamified experiences, that build on content provided by local communities?

The Problem

Namibia faces biodiversity loss as one of the most immediate and critical challenges of our times. At the same time, it is becoming increasingly difficult to build interest in and fundraise for nature conservation. There is a huge discrepancy in what is needed to be spent to conserve nature and what is spent. The latest global estimate of this so-called conservation gap is over USD 800 billion per year (Oberprieler, et al., 2021, p. 2). Traditional fundraising tactics, such as donation campaigns, have proven insufficient in drawing in the required resources. Conventional methods fail to engage a younger, digital-savvy generation that actively desires social change but requires transparency in their transactions. Using gamification and emerging technologies could create a new conservation marketplace, redesign conservation funding and increase engagement (ibid.).



Gamification is the use of game mechanics in non-game contexts. It is used in educational, enterprise and commercial settings. Gamification consists of game mechanics that engage and motivate real-world behaviours through a playful experience (Oberprieler, et al., 2021, p. 3).



A zebra with a QR code, Oberprieler(2021)



Cheetah wildlife game, Youtube (2020)

Market

More than 2.6 billion people worldwide play video games, and the global games market is expected to be worth USD 200 billion by 2023, up from USD 159.3 billion in 2020 (Oberprieler, et al., 2021, p. 4). In comparison, the value of the global gamification market is forecasted to increase almost ten-fold between 2017 and 2023, from USD 2.17 billion to USD 20 billion (Oberprieler, et al., 2021, p. 3). Besides their economic relevance, games can be and have been used to engage billions of people to support social and environmental projects (ibid., p. 4). Especially gamification can be very useful, as the combination of serious and fun elements create memorable and effective learning opportunities increasing engagement (ibid., p. 3).

The target group of games and gamification are predominantly digital natives. Grown-up around technology and gaming culture, these generations, starting with the millennials in the early 1980s, are used to digital offers in all aspects of life (ibid., p. 4). Therefore, they are more likely to be attracted by gamification offers in the conservation sector. Regarding the monetisation aspects of games, 63 % of mobile app developers point out the potential of free downloads with in-app purchase opportunities (Oberprieler, et al., 2021, p. 11). Free offers attract a bigger audience, and once users enjoyed the game and are engaged, they are more likely to pay for additional options or activities (cf. ibid.). In-app purchases are already driving 43 % of the gaming app revenue, a number that is likely to increase and shows the potential of this monetization approach (Wappier, 2020).

Relevant Game Mechanics

- Avatars: visual representations of players within the game, chosen/created by the player
- Customization & personalization: players modify interfaces to increase its personal relevance
- Narrative & story
- Augmented and virtual reality



(Oberprieler, et al., 2021, p. 4)

Opportunities

- 1 Exclusive content and deep domain knowledge as USP: Collaboration with biodiversity stakeholders provides knowledge and exclusive content that helps differentiate the venture from the competition.
- 2 Access to a different target group: The demographics of the gaming community are inherently different from the nature-loving community. An engagement in the gaming sector would therefore open up a new target group.
- 3 Cross-marketing opportunities: The collaboration with organisations in the biodiversity sector opens cross-marketing opportunities, new customer segments and distribution channels.
- 4 Attractiveness for potential investors: Due to its income-generating nature and stand-alone business model, biodiversity-focused gaming is attractive to potential investors. This is further amplified by the impact-oriented purpose of such an investment and the trustworthiness created by the collaboration with biodiversity organisations.
- 5 Driving the development of experiencing buying emerging technologies: Emerging technologies facilitate the accessibility and sensitivity of real-time data. This can be used to tell moving stories about wildlife conservation and create gamification offers that capture people's attention and increase engagement (Oberprieler, et al., 2021, p. 2).

Threats

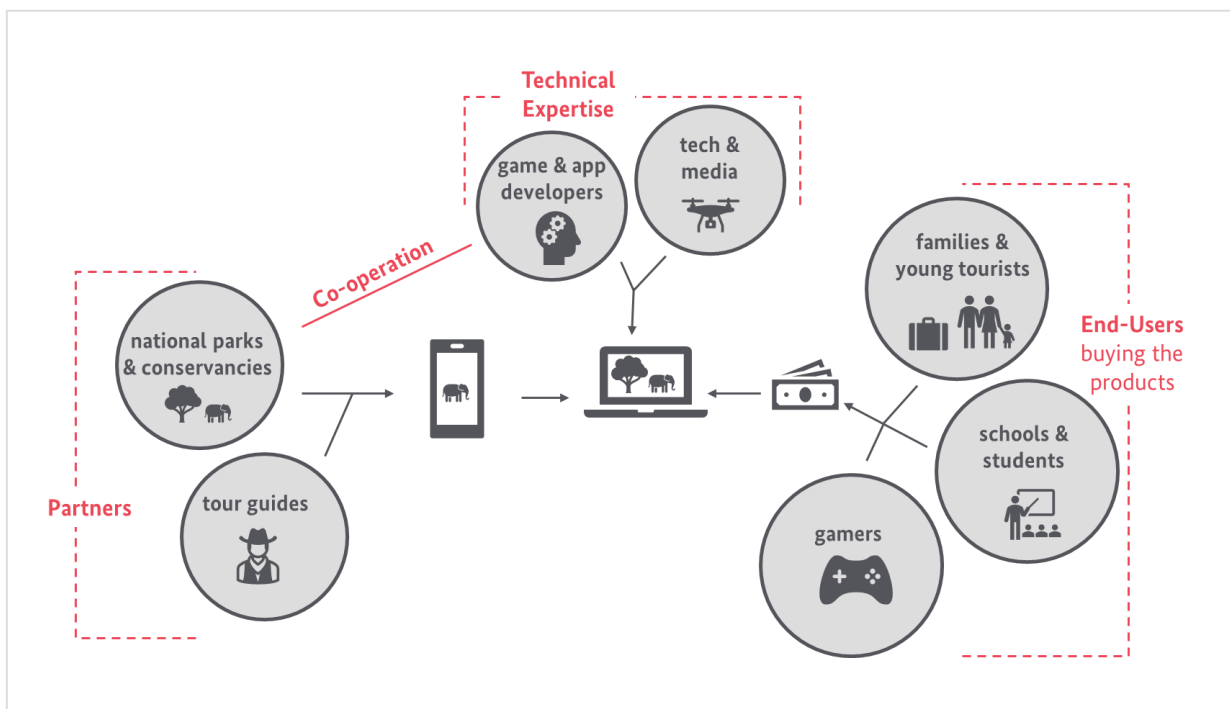
- 1 Cross-sector communication: The lack of understanding among biodiversity conservation organizations of the potential of a game-based biodiversity experience leads to a lack of willingness to adopt new technologies to increase revenue streams in the biodiversity sector.
- 2 Transparency and Accountability: Users expect transparency as they want to know where how their money is being spent. This is especially relevant for non-profit and charitable organisations. Therefore, there must be communication and information exchange between the app and the users (Oberprieler, et al., 2021, p. 11).
- 3 High development costs: Similar to the film industry, there is a trend in the games industry towards increasingly expensive and elaborate games. The challenge will be to develop lower-cost games that still accurately capture the ecosystem in a representative and appealing way.
- 4 Strong competition: The attractive and profitable market creates strong competition, some of the competitors are multinational corporations with enormous capital and development opportunities. The challenge to be met will be to find the best leverage for the existing deep domain knowledge and monetise it in a niche.
- 5 Data protection and data ownership regulations (Oberprieler, et al., 2021, p. 15 f.).

Reducing the risk of criminal activity

- Withhold sharing data on endangered species;
- Provide national parks or participating bodies with the ability to turn areas on and off depending on wildlife activity, such as breeding seasons or regeneration periods;
- Reduce the accuracy of geolocation data. For example, an app might show a species' location within a 5-kilometre radius instead of a 2-meter radius;
- Delay live data by three weeks or more. While the data is accurate for game purposes, it ensures poachers cannot access the live location of wildlife;
- For user data collection, reduce off-site collection locations or isolated points of interest to limit predators from taking advantage over players

(Oberprieler, et al., 2021, p. 16 f.)

Possible Stakeholders & End-Users



Existing initiatives

- 1** **Internet of Elephants – gamification company**
Internet of Elephants creates products to engage the consumer in wildlife conservation and protection, using storytelling, AR, and data tracking among others.
- 2** **Unseen Empire – game for desktops, phones, and tablets**
Unseen Empire brings a ten-year study on the impact of deforestation in South-East Asia to life. Users can interact with the ecosystem on the platform, place camera traps, learn about its animals and get rewards in pictures and videos of the flora and fauna.
- 3** **Playing For The Planet – institutionalized network**
Playing For The Planet is an alliance of 32 video game studios. They are committed to reducing carbon emissions and supporting environmental initiatives within the stake of their games.
- 4** **Pokémon GO – gaming app**
With the help of AR, players can search and catch fictional animals in their physical environment and interact with other users.
- 5** **Perfect Earth Adventures – gaming app**
An online game for kids to engage with nature. They explore the animal species that live in different regions of the world together with a local tour guide. The company is collaborating with national parks.

Further Information about the potential of gamification can be found here: [Using Gamification for Nature Conservation, Luc Hoffmann Institute, 2021](#)

3.5. Connecting nature lovers with nature protection



How might we digitally and directly connect nature-lovers with local communities guarding wildlife (landscape guardians) to increase spending for nature protection?

The Problem

Nature protection and conservation are very important in Namibia. However, local communities are lacking the funding to adequately manage human-wildlife conflict and preserve the fragile ecosystem. In this context, the scarcity of local income is significant, as it often opens the door to practices like poaching that have a negative impact on the environment and biodiversity. Adequate funding would thus have a doubly positive effect, not only providing protection, but also creating jobs as an alternative to harmful occupations. The upstream problem of the lack of funding is the insufficient donations for environmental protection. These often only come from zoos, museums and other institutions with a nature-loving audience.

Unfortunately, this audience is not sufficiently informed about the purpose and use of the donations, which negatively affects the willingness to donate. For instance, many zoos are raising money for wildlife projects with each ticket, but are having problems raising funds behind the compulsory donations, because visitors are missing a vision or an understanding of where the money goes. The donation process often involves many middlemen, which reduces the impact per dollar. Solutions are needed that, on the one hand, make the added value tangible and, on the other hand, are allocated to a direct purpose, which increases the impact per dollar spent. In addition to transparency, gamification is another important aspect that can increase the volume of donations. Here, new solutions would be conceivable that give the donor the feeling of playing an active role. For example, the donors could take on the perspective of gamekeepers or be kept informed of the progress and habits of an animal they are supporting through a live feed.

Market

The target audience for this sub-challenge includes two main groups, besides the passive stakeholders, who are recipients of the donations (local communities/landscape guardians). Conservation-related non-governmental organizations (NGOs) and institutions focused on the environment and wildlife that are committed to the preservation of these systems and depend in part on their continued existence and prosperity. They can be seen as a main access point to people with common interests and an increased willingness to donate. These nature lovers are also the second most important customer group and, due to their size, a powerful instrument for collecting donations. In addition, local tourists are an interesting target group, as they are less price-sensitive and better informed about the problems as well as the need for donations. Initiatives within these target groups will improve nature conservation and thus have a knock-on effect of increasing the value of secondary markets attached to nature conservation such as traditional tourism.



Which elements of gamification (see also chapter 4.4.) can you use to [increase spending for biodiversity protection](#)?

- Add elements of humour, fun and competition, such as being crowned ‘mayor’ of a conservation company, location, species or continent (using e.g. Foursquare)
- Use gamified data to provide a feedback loop to users and create a sense of connection and purpose to collective behaviour (like Ant Forest)
- Consider solutions that merge the digital gamified experience with real-world results or physical location, such as planting trees, supporting local communities and location-based advertising (Ant Forest, Foursquare)
- Explore the monetisation of feeds, chats and ranger shows or partner with local providers (like Samsung Wildlife Watch)
- Leverage existing platforms, networks, and communities through partnerships (Ant Forest)

(Oberprieler, et al., 2021, p. 8)



How do you [attract interest and motivate individuals to engage in biodiversity protection](#)?

- Reduce barriers to donate and participate in awareness campaigns (like ALS Ice Bucket Challenge, Movember)
- Use social media for friendly competition, using social currency and targeting digital natives (like ALS Ice Bucket Challenge, Movember)
- Enable users to contribute to causes in various ways, such as by using their skills or time (like Buengo, Key Conservation)
- Allow for both global and local contributions (Key Conservation)
- Provide opportunities for curiosity and learning (like Name That Fish, Samsung Wildlife Watch)
- Provide live feedback (like Name That Fish, Samsung Wildlife Watch)

(Oberprieler, et al., 2021, p. 8)

Blockchain & Cryptocurrencies

- Enabling open-source funding and ownership of virtual assets
- Providing transparency for complex networks
- Difficult to alter or hack



(Oberprieler, et al., 2021, p. 7)

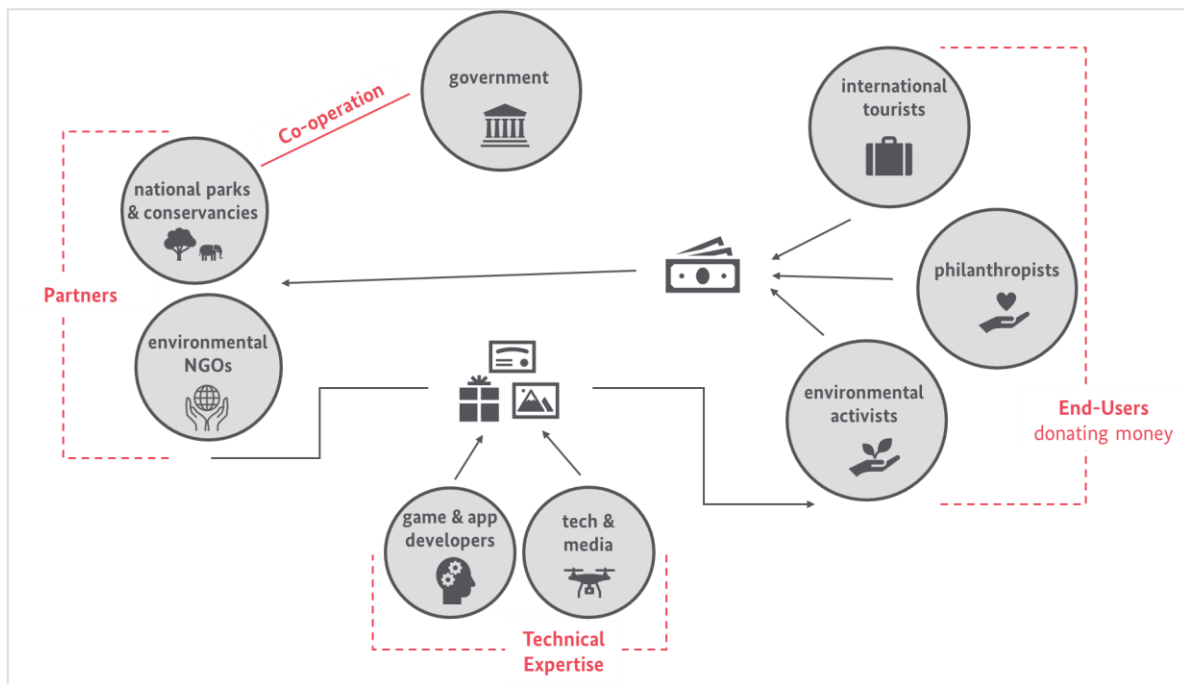
Opportunities

- 1 Untapped market with high potential for disruption: The existing donation processes are obsolete and not adapted to the current donation behaviour while digital products are rare in the biodiversity sector. This creates an innovation vacuum that can be filled with the use of modern technologies.
- 2 New Technologies: New technologies offer the opportunity to make the donation process more direct, save middlemen and thus increase the impact.
- 3 Deep domain knowledge: There is a lot of knowledge in the local populations that could be transferred to emerging digital products.
- 4 Leverage of existing Infrastructure possible: Technologies like camera traps or live streaming, that are already in use by conservation organizations can be leveraged (Oberprieler, et al., 2021, p. 10). They can be integrated into your product easily in the stake of a co-operation.
- 5 Growing market: The market for digital files, sold as non-fungible tokens (NFTs) has grown explosively in 2021 (Oberprieler, et al., 2021, p. 7). Virtual Marketplaces, like SuperWorld or OpenSea, successfully sell virtual products such as real estate and art online, showing the potential of NFTs also for the conservation sector (ibid.). Digital marketplaces could sell wildlife data as NFTs that represent endangered species (ibid.).
- 6 Cross-marketing effects: It is possible to benefit from virtual and physical tourism offers and to link concrete sights and content with appeals for donations.

Threats

- 1 Lack of regulation and control of new forms of technology: Although the use of modern technologies makes sense in terms of a direct and efficient donation process, these technologies are often still in their infancy and are therefore often inadequately regulated or subject to abuse (e.g. NFTs) (Oberprieler, et al., 2021, p. 7).
- 2 Lack of expertise for needed technologies: New technologies like blockchain require very specialized expertise, including a proper understanding of the applications and associated risks (Oberprieler, et al., 2021, p. 11).
- 3 Abuse of technology: Embedding real-time data about living animals in the product could endanger wildlife as poachers might use the data to their advantage (cf. Oberprieler, Jackson, Bo-Amponsem, & Sbright, 2021, p. 15).
- 4 Lack of information among donors: Donations rely heavily on the potential donor having a personal connection to the problem. Therefore, the right storytelling is crucial and target groups must be reached and informed about the problems. The better this succeeds, the higher the willingness to donate.
- 5 Infrastructure challenges: The equipment and infrastructure needed to provide a tangible donation experience are costly. In addition, the lack of Internet coverage and power supply is also a challenge here.

Possible Stakeholders & End-Users



Existing initiatives

- 1** **Houston Zoo**
The Houston Zoo offers the unique opportunity to observe the in-house rhinos from home. With different cameras, the visitor gets an authentic impression of the zoo from home.
- 2** **Various examples**
Compilation by the "Thrillist": Armchair Travel Experiences That Let You Explore the World From Your Living Room
- 3** **Enjoy Agriculture**
A platform promoting agritourism on the continent by connecting local agricultural actors with travellers from around the world.

Ideation Sprint

3.6. Agenda

lab of tomorrow NEW WAYS TO NEW BUSINESS		Preliminary Macro Agenda Ideation Sprint			
	Time	Monday, 28 March	Tuesday, 29 March	Wednesday, 30 March	Thursday, 31 March
Plenary Session	9:00-9:30		Review Day 1 & Welcome Day 2	Review Day 2 & Welcome Day 3	Review Day 3 & Welcome Day 4
Session with External Guests	9:30-10:30	Welcome Session Opening Speeches and Introduction to <i>lab of tomorrow</i> <i>Herbert Beck, Ambassador of the Federal Republic of Germany (tbc)</i> <i>Pohamba Shifeta, Minister of Environment, Forestry and Tourism (tbc)</i>	Expert Inputs Opportunity for venture teams to get insights from experts and supporting partners regarding their specific sub-challenges and initial ideas	Expert Inputs Opportunity for venture teams to get insights from experts and supporting partners regarding initial business model / prototype	Business Model Development <ul style="list-style-type: none"> - Translate the refined prototype into a business model using the business model canvas - Develop a roadmap for the further process after the Ideation Sprint
Session in Venture Teams	10:30-11:30		Prototyping I Develop an initial solution prototype and pilot for tackling the specific sub-challenge in the form of a business approach building on the ideation process	Testing Interview potential users and supporting partners via in-person and online interactions to discuss and test initial prototype	Pitching Preparation Prepare a concise and convincing pitch and business model / prototype demo for the public pitching contest in the evening
	11:30-12:30	Team Building Group formation and getting to know each other in venture teams			
	Lunch				
	2:00-3:00	Review of Sub-Challenge Framing Collective recap of discussion and analysis of existing sub-challenge and underlying root causes from group formation meeting 3 weeks earlier	Prototyping I Develop an initial solution prototype and pilot for tackling the specific sub-challenge in the form of a business approach building on the ideation process		Pitching Preparation Prepare a concise and convincing pitch and business model / prototype demo for the public pitching contest in the evening
	3:00-4:00	Ideation Collective initial brainstorming of solution ideas in venture teams and preparation of prototyping	Business Model Development <ul style="list-style-type: none"> - Translate the initial prototype into a simple business model using the business model canvas - Develop Strategy for Testing on Day 3 	Prototyping II Refine or Rethink the prototype based on testing results and feedback from users and supporting partners	Next Steps & Check-Out Ideation Sprint
	4:00-5:00				Public Pitching Contest and Final Celebration <ul style="list-style-type: none"> - Pitching of developed demos / prototypes to plenary and external guests - Reception with food and drinks
	5:00-6:00		Pitching Basics Introduction to Pitching Strategies	Pitching Preparation Initial Preparation of pitch deck	
		Wrap-Up and Check-Out Day 1	Wrap-Up and Check-Out Day 2	Wrap-Up and Check-Out Day 3	
	Evening	Informal Gathering Internal social event across venture teams with food and drinks		Informal Gathering Internal social event across venture teams with food and drinks	

3.7. Participants

As the list of participants shows, the lot#16 brings together stakeholders from various sectors with a wide range of knowledge. These entrepreneurs and experts have deep innovation potential combined with an open mindset, important networks and relevant product portfolios.



Who we are

Biodiversity Economy in Namibia

The GIZ project “Biodiversity Economy in selected Landscapes” is working together with the Namibian Ministry of Environment, Forestry, and Tourism (MEFT) to support a sustainable business development in conservation areas in Namibia. The lot#16 was initiated within the framework of this project as the products that will be developed, further “enhance value addition and the sustainable utilization of biodiversity”.



Hendrik Trautmann
Project Lead
hendrik.trautmann@giz.de



Marc-Alexander Gross
Project Lead
marc.gross@giz.de

Adelphi

Additional general and methodological support is given by the consulting agency Adelphi.



Jonas Restle-Steinert
Workshop & Facilitation
restle@adelphi.de



Selina Blum
shop & Facilitation
blum@adelphi.de

lab of tomorrow

The lab of tomorrow is a GIZ project and offers both the concept for the whole process as well as overall guidance during the implementation.



Eric Schütz
Methodological Support
eric.schuetz@giz.de

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