PANDA MITI KIBIASHARA

PARTICIPATORY PLANTATION FORESTRY PROGRAMME

PARTICIPATORY PLANTATION FORESTRY PROGRAMME

AFRIFURNITURE

Transitioning toward a more sustainable and resilient furniture market in Tanzania

UHURU NA UMOJA

United Republic of Tanzania
Ministry for Natural Resources and Tourism
Forestry and Beekeeping Division

Embassy of Finland
Dar es Salaam

AFRIFURNITURE

Transitioning toward a more sustainable and resilient furniture market in Tanzania

LEAPFROG PROJECTS

CONTENT

PANDA MITI
KIBIASHARA
PARTICIPATORY PLANTATION FORESTRY PROGRAMME

2021

LEAPFROG PROJECTS FOR PFP

GRAPHIC DESIGN INA FIEBIG

LEAPFROGPROJECTS.COM

HELENA@LEAPFROGPROJECTS.COM

UHURU NA UMOJA

Embassy of Finland
Dar es Salaam

EXECUTIVE SUMMARY

A market-driven approach

There are three (synergetic) strategies for transitioning toward local and more sustainable wood production: The *first strategy* is to support the wood and furniture production capacity of smallholder farmers and certified producers (the main focus of the PFP program so far). The *second strategy* is influencing legislation (and law enforcement capabilities) around certified wood. The *third strategy* is increasing market demand, which is the main focus of our work. In this paper, we explore the local furniture market.

Our aim

This paper addresses the question: How might we support a transition toward a more resilient furniture market dynamic that meets the needs of the urban middle class and creates rural jobs without devastating effects on the biosphere.

Problem framing

Within the current furniture market dynamic, natural forest cover declines, rural poverty prevails and unsustainable import feeds the growing local demand. At the same time, current furniture supply does not meet the needs of the urban middle class.

Findings

We enhanced secondary quantitative data with extensive ethnography, in-depth interviews and prototyping to sketch a map of a potential future value chain.

We conclude that there are desirable and feasible opportunities to create a market around sustainably produced wooden furniture.

1. A major shift is taking place in the furniture preferences of the urban middle class. While older generations preferred heavy-built darkwood furniture, younger generations are longing for lighter affordable designs.
2. Achieving a competitive price point is possible by substituting hardwood with sustainable options such as pine and eucalyptus.
3. High-quality and affordable timber is being produced in the Southern Highlands but is currently not available to local carpenters scattered across the region.
4. Local carpenters would benefit from better organization, greater specialization, access to high-quality raw materials and technology as well as improved skills—from design to production, branding and marketing.

Recommendations

We go on to argue that a transition requires the application of four sets of interventions (described as work packages) to be carried out in two consecutive phases. The first phase aims to test our assumptions in the real world and get some quick wins. The second phase focuses on supporting and stabilizing the market to favor sustainably produced furniture.

In the first phase, we recommend the creation of an e-commerce platform for high-quality design furniture, to be carried out by a new startup company (work package 1). In addition, we propose a design apprenticeship program to build local carpenter capacity to create a number of furniture prototypes that can be sold in the new digital marketplace (work package 2). We further recommend the initiation of a governance model (work package 3).

In the second phase, we recommend the initiation of a governance model (work package 3) and diverse value chain enhancement activities (work package 4) to help shift the furniture value chain toward self-organizing and sustainability.

Impact potential and future considerations

Beyond the obvious benefits for the furniture market, it is important to emphasize that the ultimate goal of this work is to improve the livelihood of local smallholder farmers (especially in the Southern Highlands) through growing market demand for sustainably produced wood. Once the proposed model is validated, its impact can be leveraged by adapting our approach to other sectors as well (e.g. construction).

1 THE BIG PICTURE

IN THIS CHAPTER YOU WILL FIND:

THE BIG PICTURE

The project background is presented, including project aim and key questions to be addressed. Next, the parties behind the initiative are introduced and the reader is reminded of the three project phases as anticipated in the spring of 2020. Next, our methodology, frameworks for understanding sustainability, as well as global considerations and anthropological perspectives on consumer culture are outlined. Finally, we provide and overview of wood types used for furniture production in Tanzania.

REIMAGINING THE TANZANIAN FURNITURE INDUSTRY

The Participatory Plantation Forestry Programme (PFP2) aims to strengthen the forestry sector in the Southern Highlands. This is done by mapping, identifying and addressing challenges and opportunities throughout the value chain.
For the long-term success of PFP2, it is paramount that new local markets are created for sustainably produced wood in a way that value is captured locally, in the Southern Highlands of Tanzania. In this paper we will dive deep into the Tanzanian furniture market.

The aim of this initiative is to create a local market for socially and environmentally produced wooden furniture.

While the main focus of earlier PFP initiatives have been on earlier stages of the wood production value chain (plantation, sawmilling, processing, logistics etc.), we will take an opposite approach and consider the local consumer market for furniture first. The rationale is that furniture constitutes the product segment for local wood with the biggest realistic opportunity for added value per unit sold.

In this initiative, we aim to address some of the following questions:

- What would a furniture service concept look like that would address the future needs of the rising urban middle class in Tanzania?
- How do we make sure that as much of the value as possible is captured locally, especially in the Southern Highlands?
- How can we shift demand to more sustainable furniture consumption (e.g. negative attitudes toward softwood)?
- What kinds of specific furniture designs would be desirable, technologically viable and economically feasible?
- What interventions would have to be made throughout the value chain (e.g. new skills, technology, market actors, ways of collaborating, business models etc.) in order to secure sufficient quality of furniture?
- How could all of this be done in a way that promotes environmental, social and cultural values?
- How could we create a set of solutions that both minimize the likelihood of unexpected negative externalities while being able to effectively deal with them once they emerge?

AFRIFURNITURE

AfriFurniture is the working title for a potential design-driven market platform that provides beautiful, sustainable, and affordable furniture for the growing middle class in urban Tanzania (and East Africa). This market platform is intended to bring together local sustainably grown wood and innovative production technology with the leading Nordic and local design, marketing, and wood processing talent in a way that further strengthens local capacities. The key anticipated impacts are atmospheric CO_2 reduction (through sustaining plantation forest cover and reducing pressure on natural forests by making planted wood desirable) and poverty reduction (through quality job creation in rural areas such as the Southern Highlands).

All stages of the value chain will be designed for inclusion of underprivileged[1] groups in the value capturing activities. Participatory methods will be used throughout the work, enabling continuous capacity building. When a dynamic market pull is identified, several new and existing local companies could potentially thrive along the new value chain and thus provide job opportunities locally.

1 social or economic condition

THE PARTIES BEHIND THE INITIATIVE

THE PRIVATE FORESTRY PROGRAMME (PFP) / PARTICIPATORY PLANTATION FORESTRY PROGRAMME (PFP2)

The collaboration between Finland and Tanzania goes back 50 years. Following several bi-lateral forestry projects, the Finnish Ministry of Foreign Affairs and the Ministry of Environment and Resources in Tanzania co-initiated the 16 year PFP that aims to build the industry based on smallholder forest owners. The first 4 year period of the project was implemented by Indufor, a Finland-based consultancy.

The PFP operations are initiated in the Southern Highlands of Tanzania. During the first phase, the focus was on planting trees. Tree Growers Associations (TGA) were formed locally, and through them the smallholders received training on how to manage their forests. In addition, PFP initiated relations to a wide range of stakeholders, including private companies, local authorities and NGOs. They established relationships, but with the longer-term aim that the TGA will eventually manage such relations.

AALTO UNIVERSITY / NEW GLOBAL

The New Global research project (based on which Leapfrog Projects was established in 2018) entered the picture when PFP was planning how to engage the international private sector. New Global initiated a field study to deeply understand the activities of PFP. New Global also became advisors together with forestry investors, and supported PFP in organizing an international forestry conference in Tanzania that brought all stakeholders together. One of the participants of the conference was the Finnish sawmill company Slidetec. New Global's researcher Tatu Lyytinen also initiated a startup called Pikotech that offers affordable and efficient sawmilling and bioenergy solutions for remote pine forest owners in developing countries.

INDUFOR GROUP (INDUFOR)

Indufor is one of the world's leading forest consulting service providers. Indufor provides high-quality knowledge and services for clients along the forest and forest industry value chains, adding value to clients and to all the affected communities. Indufor's headquarters are based in Helsinki, Finland.

LEAPFROG PROJECTS (LEAPFROG)

Leapfrog is a mission-driven consultancy specialized in transition design. We rely on a transdisciplinary approach to address how people, communities, institutions and market actors can coordinate more effectively within planetary boundaries. Leapfrog Projects is the initiator of the AfriFurniture project and will be responsible for carrying out the project's activities.

Moreover, a number of other actors have been central in helping us synthesize the insights presented in this paper. It is together with them that we have arrived at the conclusions and *creative concepts* that are presented. We would like to thank:

The Embassy of Finland in Dar es Salaam, RLabs in Iringa, Neema Crafts, Sao Hill Industries/Green Resources, Tanganyika Wattle Company (TANWAT), *Tanganyika Plywood, MW Limited, the Furniture Association and Producers of Njombe, the Furniture Association in Mafinga, the Tanzania Woodworking Federation* (TAWOFE), *the Furniture Hub in Chang'ombe, Nyumbani designs, as well as Jacqueline Mushi, Jumanne Mtambalike, Kemi Kalikawe, Suvi Nenonen, and Jussi Hinkkanen.*

INITIAL PROJECT OUTLINE

The AfriFurniture initiative has been designed to be carried out in three phases. The first of which is covered in this paper. As the project is highly explorative by nature, it is to be expected that the scope described here is going to change as the project progresses.

Phase 1: Market insight and service concept (6-8 months)
The first phase of the project studies unmet customer needs, wants, and aspirations in the Tanzanian (and East African) urban cultural landscape. In this phase, we combine ethnographic and other qualitative methods with quantitative (longitudinal when available) trend data. Key questions are: *What are the current unmet needs of the young upcoming middle class in Dar es Salaam? How is the target group likely to consume 10 years ahead? What is the price sensitivity? What is the relationship to online market services? What does the competitive landscape look like?*

Phase 2: Prototyping (12-18 months)
The second phase of the project focuses on prototyping based on the in-depth market understanding from phase 1. To explore the viability of the service concept, "spearhead products" are developed and tested alongside the marketing platform and business model. These prototypes are co-created with selected local partners. Top Nordic design talent is combined with local top talent. Key questions are: *What business/revenue models work best? What are the "spearhead" products? What does a minimum viable product* (MVP) *look like? What marketing and engagement strategies work best? What does the creative concept look like?*

Phase 3: Implementation (TBD)
The third phase focuses on optimizing the entire value chain (from raw materials to market). Depending on the outcomes of phase 1 and 2, this means the creation of new companies and/or new collaboration networks. Here Leapfrog Projects collaborates closely with PFP2 to support capacity building along the new value chain on both business and design, and supports cooperation across organizational boundaries. Key questions are: *How do we optimize the value chain in a way that is economically, socially and environmentally viable? How do we work across organizational boundaries? How do we engage and motivate relevant stakeholders? How do we build capacity where it is needed along the value chain to create high quality products?*

ABOUT THE METHODOLOGY

At Leapfrog, we take a complex systems approach to address sustainability challenges (more on this in the next section). A systems approach differs from a traditional analytical approach in many ways. In an analytical (and inherently reductionist) approach, the aim is to pick apart a system and analyze each component separately, whereas in a systems approach there is a primary interest in the relationships between the parts. In addition, we understand that the challenges we are dealing with are complex—not merely complicated[2]. Among other things, this is why we emphasize the explorative and interactive nature of our methodology. This is also why we recommend a portfolio approach (applying several simultaneous and coordinated interventions in the system), as we understand that in order to transition toward sustainability, an array of different solutions is required to effectively influence the system on all levels. This is important so that the improved state does not "bounce back" after a while. It further encourages all actors to become involved in addressing challenges and then maintaining the improved state in the future.

2 To properly explain the distinction between complex and complicated systems, it would require an entire thesis of its own. However, a good way to think about it is the following: A complicated system is entirely predictable and calculable (say a computer or an airplane). You do X and Y happens. A complex system does not work this way. All "living" systems are complex: a cell, a human being, a family, a city or the entire biosphere. A complex system is not predictable or calculable because it has something called emergent properties (e.g. oxygen and hydrogen—none of which are liquids in room temperature—come together in a specific way and you get water). In addition, complex systems are nested in one another in a (seemingly infinite) number of layers that are all affecting each other and are all co-evolving. Hence, thinking that our models—however elegant—are capable of holding complexity is simply hubris and a central reason why we continuously fail to solve some of our most pressing issues.

Our research and fieldwork for phase 1 is conducted in Dar es Salaam and the Southern Highlands in Tanzania. The fieldwork in Dar es Salaam mainly focuses on furniture demand, while the fieldwork in the Southern Highlands focuses on the supply side of the equation. With combining the two focus areas, we hope to be able to paint a picture of a potential future value chain.

The insights in this paper build a synthesis from both qualitative and quantitative methodologies. The quantitative research data, mainly focusing on the Tanzanian furniture market, is gathered through desk research including literature reviews. The qualitative research is collected through participatory methods such as ethnographic interviews and design probing.

We conducted 10 interviews with Tanzanian middle class in Dar es Salaam, including visual documentation of their furniture. We further collected design probes (in the form of Pinterest boards) from another 20 middle class participants in Dar es Salaam.

Quantitative sources and references are cited. Qualitative research is presented in the form of quotes or how otherwise mentioned (not all materials are included in this paper, however, available if needed).

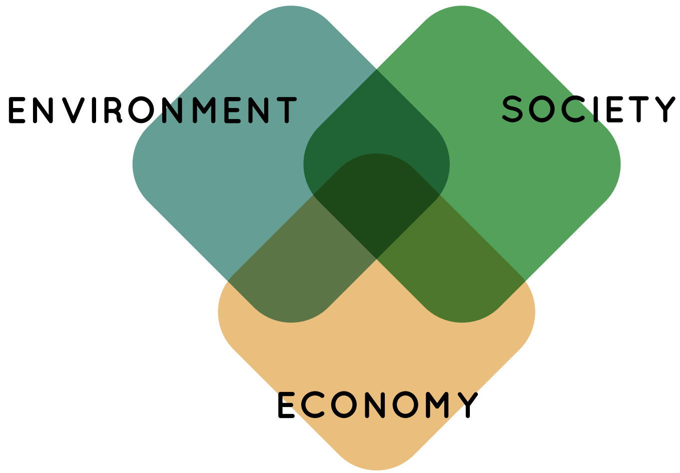
It is worth noting that parts of available statistics (secondary data) is conflicting or lacks reliable references (e.g. market size data, income levels, price sensitivity etc.). Therefore, a lot of this data has been excluded from the paper. If we have decided to include any conflicting or “uncertain” data, we will mention the reason for doing so separately case by case.

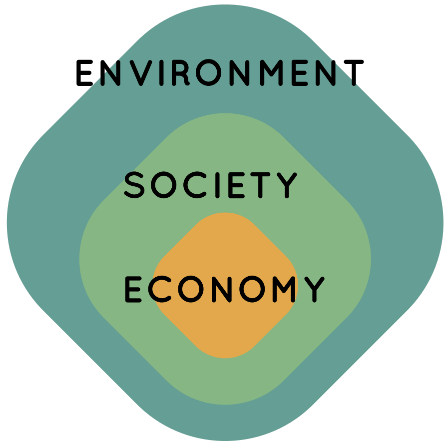
FRAMEWORKS FOR UNDERSTANDING SUSTAINABILITY

Throughout the paper we will make reference to *sustainability*. Therefore, we want to present the frameworks we consider when talking about it (including relevant background information). We start with looking at the field of sustainable development.

Humanity has been striving for sustainable development to guide human development on a planet of limited resources. Sustainable development has been traditionally approached from an intergenerational point of view. This view [1] defines sustainable development as limiting the use of natural resources in such a way as to ensure that future generations will also be able to meet their needs. The three pillars of economic, social, and environmental development [1] are still widely considered the core of sustainable development [2]. In this model, the three pillars are usually given equal weight, and sometimes sustainability is considered independently from each viewpoint [3]. Due to the increasing intensity and impact of human development, however, the intergenerational goal of ensuring human well-being now and in the future is at a serious risk to fail [4]. Scientists are urging to reconnect human development to the biosphere.

Human societies are already embedded parts of the biosphere: Simultaneously, human societies shape the biosphere, and are shaped by the biosphere [3]. This interconnectedness is approached with the concept of social-ecological systems, where the *social* entails all facets of human society, both individuals and communities, as well as cultural, economic, technological, and political aspects, and the *ecological* refers to the biosphere that supports life on planet Earth [3]. From this perspective, considering the environment, society, and economy separately and defining sustainable development as their confluence is unfounded. Instead, the economy should be considered as an inseparable component of society, of which it is only one aspect among many others. Likewise, human society cannot be considered separately from the environment, on which it is dependent. This results in a new perspective of sustainability, where the environment is not an externality but a precondition for human existence, well-being, and prosperity.





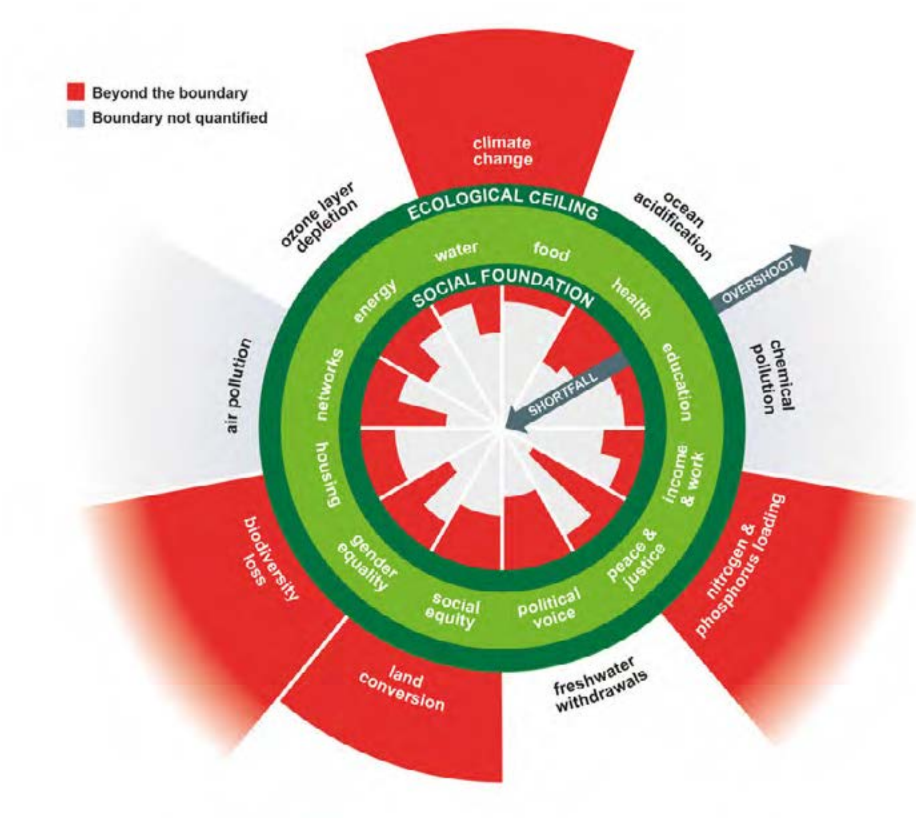
Sustainable development as it is traditionally depicted: three overlapping circles of environment, society and economy.

In the new model of sustainability, human development is reconnected to its natural precondition, the environment, or the biosphere.

The biosphere as the foundation for human societies is the basis for the planetary boundaries framework, which has aimed at defining a safe operating space for humanity on Earth [5,6]. This model has been further developed to define an ecologically safe and socially just space for humanity to thrive in [7]. In the updated version of this model, known as the Doughnut (next page), the social foundation is divided into twelve dimensions based on the minimum standards for human well-being established in the Sustainable Development Goals. The Doughnut acts as a compass in eliminating simultaneously the shortfalls in human well-being and the overshoots of planetary boundaries; it emphasizes the dependence of human well-being on planetary health [7].

Image credit: Azote Images for Stockholm Resilience Centre, 2016. [9]

Biosphere-based sustainable development has also been illustrated with the Sustainable Development Goals established by the United Nations [8]



Adapted from Raworth, 2017. [10]

The Doughnut defines a safe and just operating space for humanity based on the Planetary Boundaries as the ecological ceiling, and requirements for human well-being as the social foundation.

The planetary boundaries framework is an example of resilience thinking which underlines the importance of considering systems as integrated wholes instead of separated parts–resilience thinking is systems thinking. It builds upon the assumption that humans and nature are an intertwined entity and should be considered as one social-ecological system, and resilience is key to achieving sustainability in these systems [9,11].

Resilience is widely defined as the capacity of a system, community, or society to resist and absorb disturbances, to adapt to change, and to keep developing while maintaining its core characteristics [9,11,12]. Social-ecological systems are complex adaptive systems, which means that they change in a non-linear and often unpredictable way [11]. Resilience improves a system's capacity to deal with these uncertainties. Recent research has identified seven principles for building resilience in social-ecological systems: (1) maintain diversity and redundancy; (2) manage connectivity; (3) manage slow variables and feedbacks; (4) foster complex adaptive systems thinking; (5) encourage learning; (6) broaden participation; and (7) promote polycentric governance [13]. Resilience in and of itself is neither good nor bad, which is why it is crucial to consider whose resilience is built and against what, to avoid strengthening vicious cycles or increasing inequality, for instance.

SOME GLOBAL CONSIDERATIONS

Since we will concentrate on the Tanzanian furniture market and some of its unexplored opportunities in the remainder of this paper, it is worth keeping in mind that the Tanzanian market is not isolated from global advances in culture and technology. This is most obviously the increasing emergence of automation and robotics (as well as other emerging technologies), which will at some point in the near future outcompete even the cheapest of African labor in every conceivable task that is mechanical by nature. This inevitable evolution of smarter and more powerful technology further creates an urgency for emerging economies, such as that of Tanzania, to climb the value chain.

TANZANIAN CONSUMER CULTURE: CREATING IDENTITIES AND FUTURES

This section is primarily intended for the more avid reader who wishes to explore the Tanzanian cultural context in which all market activities will play out.

Involvement by the colonial powers and missionaries in education, politics and economics have shaped the consumer culture in Tanzania. Early European missionaries encouraged consumption of European products as a way of fostering new ideas and markets. While the local churches have since been growingly critical towards consuming western made products, the focus on material fashion as a way of conveying spiritual beliefs has continued into the 21th century. [1]

Trade liberalization in the mid-1980s and post-socialist changes facilitated international evangelization in Tanzania. [1] According to fieldwork conducted in the 90s [1], Tanzanian youth joined in the evangelist movement largely because they believed it meant becoming a part of a global world of schooled and church-educated people and as such, they could change their position in society.
Consumerism became important as a way of conveying this new upward-moving identity in appearance. Importantly, existing local values affected the way people approached it. Instead of holding on to individual ownership, Tanzanian youth were creating a communal identity through exchanging and sharing of clothes and things. Even if these values might be changing, ideas like communal sharing and identity as a process in creation are probable to have continuity. [1]

In present day Dar es Salaam, many members of the popular Pentacostal churches belong to the urban low and middle classes. They are hoping to benefit from the churches' gospel of health and well-being, as well as the social services it has started to provide [2]. Scholars in anthropology widely regard Pentecostalism as the future form of Christianity, less and less dominated by westerners. They also note Pentecostalism's unique relationship with capitalism that makes consumption into a religious practice. [3]

The African Pentecostal churches widely embrace the so-called prosperity gospel according to which spiritual blessings will in time manifest in abundance of food, quality housing, and clothing. Also, a person's appearance and material possessions are seen as reflections of their spiritual state. Big part of going to church is collectively sharing certain patterns of consumption. [3] This means that religious meanings are to be seen as potential factors affecting consumer choices.

Consumers are also affected by the Tanzanian state's ideals and goals of development. These are communicated in a way that they are to be taken also as individual aspirations for achievement. Personal development should manifest in things such as improved housing, increased standard of living, and taking on enterprises and urban middle-class identity. Economic changes that national strategies demand are set in motion in the daily practices of ordinary citizens. [4]

On the other hand, displaying too much wealth can also be seen in negative terms. One reason for this is the socialist past. During that period, accumulation of property was concealed. As a consequence, people still tend to downplay their income. After the election of John Magufuli to the Presidency in October 2015, there was a resurrection of Julius Nyerere's political philosophy of ujamaa[3] and conspicuous consumption has again become politically sensitive [5].

This is one reason the middle classes do not want to be associated with the small group of Tanzanian elite, who are commonly seen to have accumulated an unacceptable amount of wealth [5]. These are also ethical values that may affect the middle class' consumer choices, for example, in the form of preferring some moderation in style and local production.

Contemporary African states are likely to be seen in opposition to the past that's perceived as "traditions and customs" and a future of planned development. [4] A strong national culture with its national language (Kiswahili) coexists in Tanzania with over 100 different ethnic groups with their own languages and customs. Despite political attempts to stifle traditional beliefs, notions of witchcraft (uchawi) are present in daily life in all social settings and in all locations. [4 p.373] Also, the popular Pentecostal churches confirm the belief in witches in terms of the ongoing battle between good and evil in society. [4]

Witches are often seen as the enemy of modernity. They can, for example, attack individuals striving to achieve good housing, western style clothing or technologies. For this reason, also anti-witchcraft businesses are modernizing their services in the same way as traditional kiosks are renovating to serve the transnational supermarket experience. [4]

Seeing traditions and some aspects of the cultural past in opposition with modernity and a desired future can have implications on consumer choices and preferred fashion. Such a trend would probably be stronger in demographics that are actively pursuing a way out of poverty and could mean mainly preferring styles that are perceived as modern, urban or transnational.

3 literally "familyhood" in Swahili, and in this context often translated as "African socialism"

In the 21 century Dar es Salaam, building construction styles and consumer goods serve as key materials for middle class' self-construction and expression of identity. Consumer behavior offers a way for people to differentiate themselves from the poor and the super-rich. This is done by highlighting lifestyle, values, aesthetics and socio-economic position that the middle classes share. The middle class is defined mainly through urban lifestyle, formal waged work and higher levels of education. [6,5]

Fieldwork conducted in Dar es Salaam shows that in addition to consumerism, the middle classes have also formed through building. Middle-class neighborhoods have emerged as people have taken on lengthy house building projects and expanded the city in the form of suburbs [5]. Displaying contemporary urban lifestyles have also led to adopting new ways of organizing the domestic space, transforming the presentation of domestic public space from the yard to inside the house, where large sofas are used for receiving guests. [6]

The aspects of the consumer culture mentioned here are reflected in the interiors and furniture choices that we discovered during our ethnographic studies in homes in Dar es Salaam. They are presented in chapter 2.

OVERVIEW OF TANZANIAN WOOD TYPES USED FOR FURNITURE

As we are going to make references to different wood types throughout this paper, we want to briefly outline the basics.

The reader will come across references to hardwoods and softwoods. Even though it might be tempting to associate these types of wood with softness and hardness, dividing species into these categories is based on their reproductive ways. This means that some hardwoods can also be light or soft and some softwoods can be hard and relatively durable. Hardwoods are still generally more dense and sturdy than softwoods. They are also more difficult to cut and to work with. Importantly, hardwood trees also take a longer time to grow than softwood trees. [1]

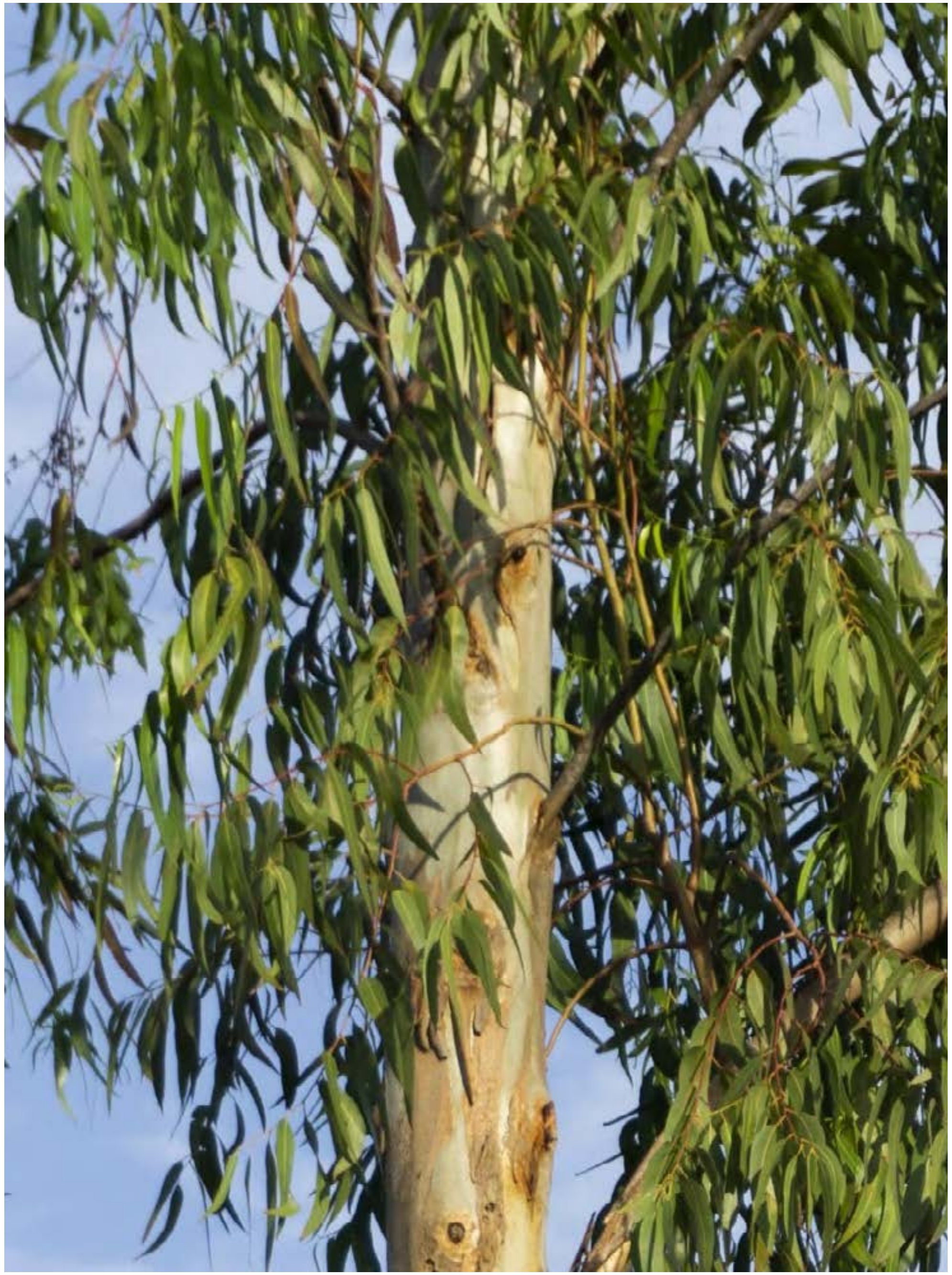
The reproduction process of hardwoods is a lot more complicated than for softwoods. Hardwood originates from trees that shed leaves during winter while softwood comes from "evergreens" that don't shed their leaves but bear cones or uncovered seeds that they drop to the ground. The seeds of hardwood trees will instead have a shell or a fruit. The flowers of these trees need insects and birds to pollinate them so that they can bear fruit. The naked seeds drop to the ground or get carried by the wind. [1]

According to the Tanzania National Carbon Monitoring Centre report of 2018, the country's annual forest loss is estimated to be 469,420 ha, which is a 20.7% increase from the state of the environment report of 2014 [2 p.331]. This loss is largely influenced by four drivers which are energy demand, poverty, population growth and unsustainable farming practices. Some of the indigeneous hardwoods have been harvested near extinction. This has led to different strategies and policies, by which the government has tried to protect diversity of the natural forests and end illegal harvesting. One strategy has been heavy taxation, which combined with scarcity of species has made some traditionally preferred wood types for making furniture expensive and unavailable. [2,3,4]

As the demand for timber has grown, the government-owned plantations struggle to meet it, leading to the increasing need of private plantations. Improving forest management and adjusting the harvestable volume to sustainable levels is urgent in both public and private plantations. Pines are the dominant species in most of the government and private plantations with about 78% and the remaining 22% is shared among hardwoods and other softwood species. The most important plantation species are various pines (Pinus patula, P. elliottii and P. caribaea), cypress (mainly Cupressus lusitanica), eucalyptus (many species) and teak (Tectona grandis). [5]

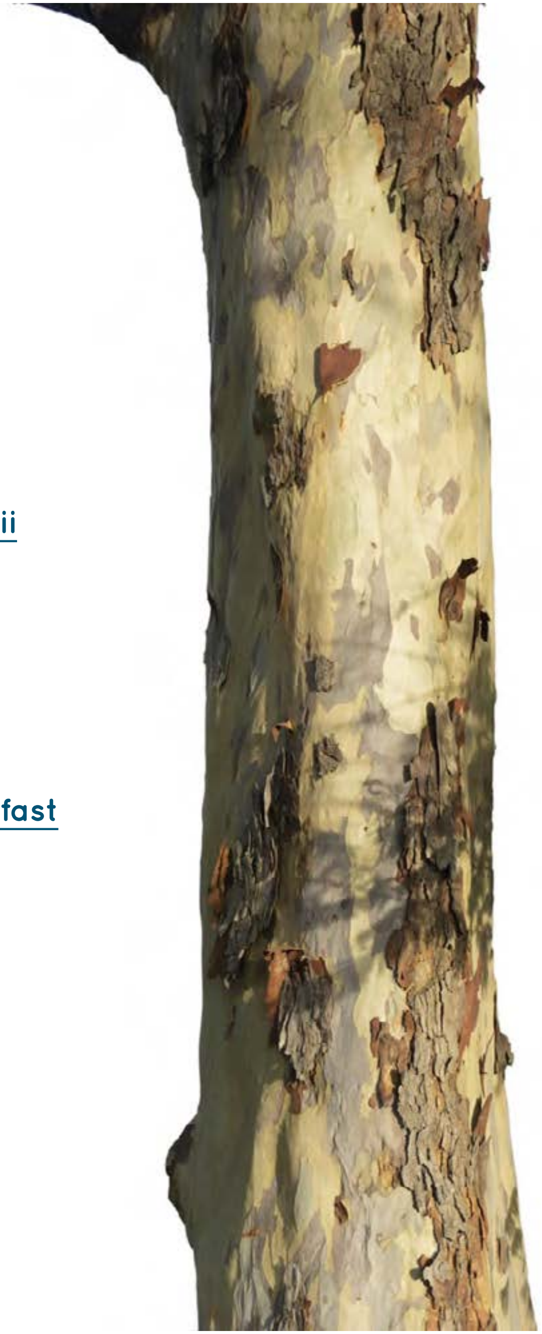
This project focuses on supporting and utilizing sustainably-grown wood such as Pine and Eucalyptus from smallholder farmers in the Southern Highlands.

Some of the main wood types and very rough estimations on their sustainability, availability and prices are presented in Annex A.



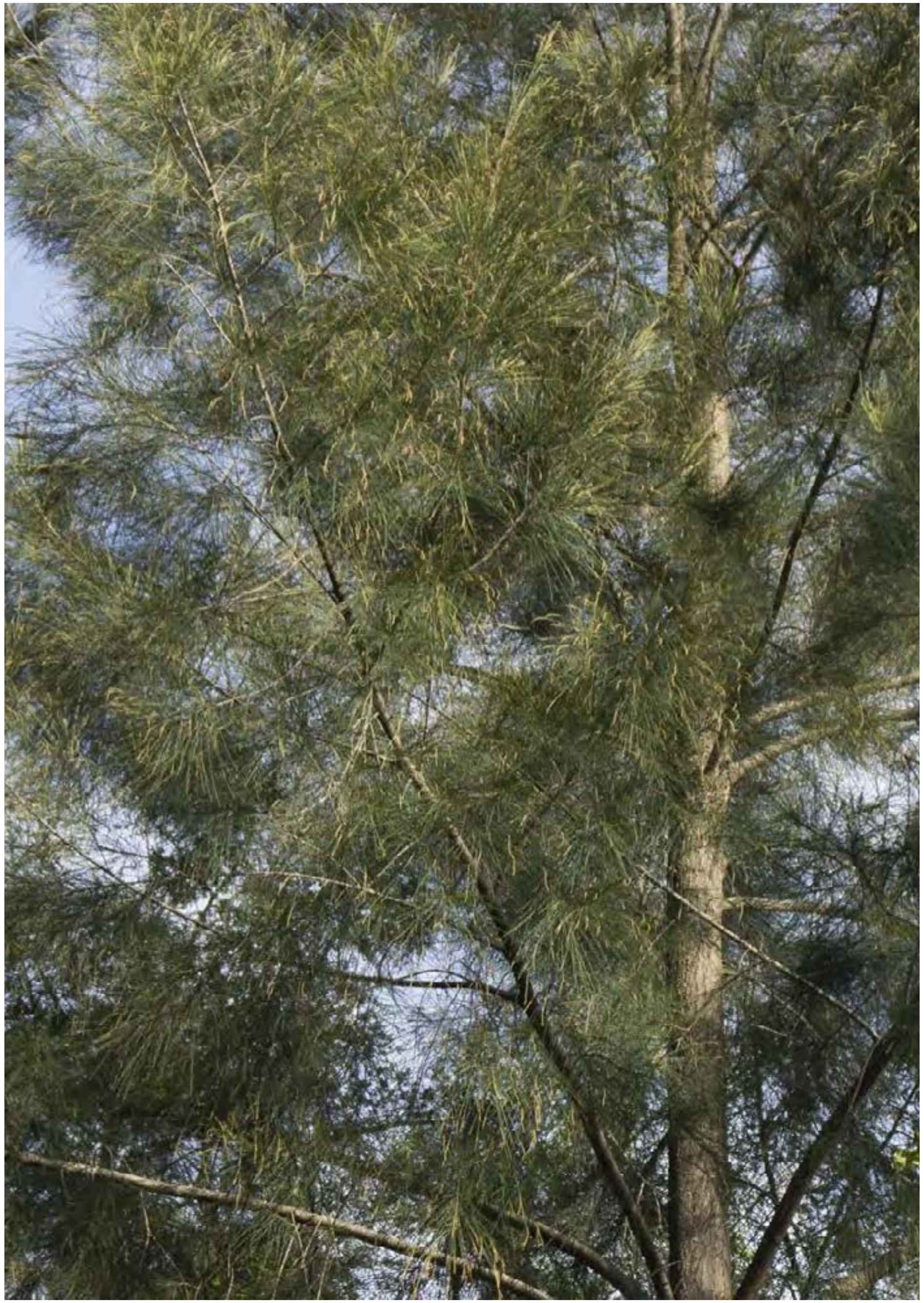
Eucalyptus maidenii
Eucalyptus grandis
Eucalyptus saligna

Sustainable
Affordable
Cracks if not dried fast
and properly



Pine –
Pinus Patula

Sustainable
Bends easily if not
properly dried
Might be attacked
by insects



Teak –
Tectona grandis

Less sustainable
Popular
Expensive


Eye protection must be worn when operating this machine

2 MAKING SENSE OF THE TANZANIAN FURNITURE MARKET

IN THIS CHAPTER YOU WILL FIND:

THE GROWING URBAN MIDDLE CLASS DRIVES FURNITURE DEMAND

THE ROLE OF STYLE, AFFORDABILITY AND LOCAL EMPOWERMENT IN
MARKETING ETHICAL PRODUCTS TO TANZANIAN MIDDLE CLASSES

EDUCATED URBAN YOUTH ARE MOST LIKELY TO USE
THE INTERNET AND HAVE GOOD DIGITAL SKILLS

CHANGING CONSUMER DESIRES FUEL THE POPULARITY OF IMPORTED FURNITURE

COMPETITION WITH CHINESE FURNITURE AND PROTECTION
OF NATURAL HARDWOOD CREATES PROBLEMS FOR LOCAL MANUFACTURERS

IMPORTANT FURNITURE PURCHASING CRITERIA FOR THE URBAN MIDDLE CLASS

THE URBAN MIDDLE CLASS IS UNHAPPY WITH THEIR CURRENT OPTIONS

MIDDLE-CLASS CONSUMERS WANT FURNITURE THAT
REPRESENTS MODERN URBAN LIFESTYLE

CONSUMERS MOSTLY BUY FURNITURE FROM SMALL LOCAL WORKSHOPS

SOME LOCAL FURNITURE MAKERS OFFER THEIR PRODUCTS ON
SOCIAL MEDIA AND ONLINE

LOCAL FURNITURE PRICES AND WILLINGNESS TO PAY

FROM SEEKING INFORMATION TO MAKING THE PURCHASING ORDER

MAKING SENSE OF THE TANZANIAN FURNITURE MARKET

We begin by describing the growing middle class, which is the most significant consumer group for the sustainable local furniture market. We consider their consumer habits, economic circumstances and life situations. We also consider their ethical values in relation to consumer goods as well as their digital skills. After this foundation, we then focus more closely on the character and workings of the existing furniture sector and middle class furniture needs and desires.

THE GROWING URBAN MIDDLE CLASS DRIVES FURNITURE DEMAND

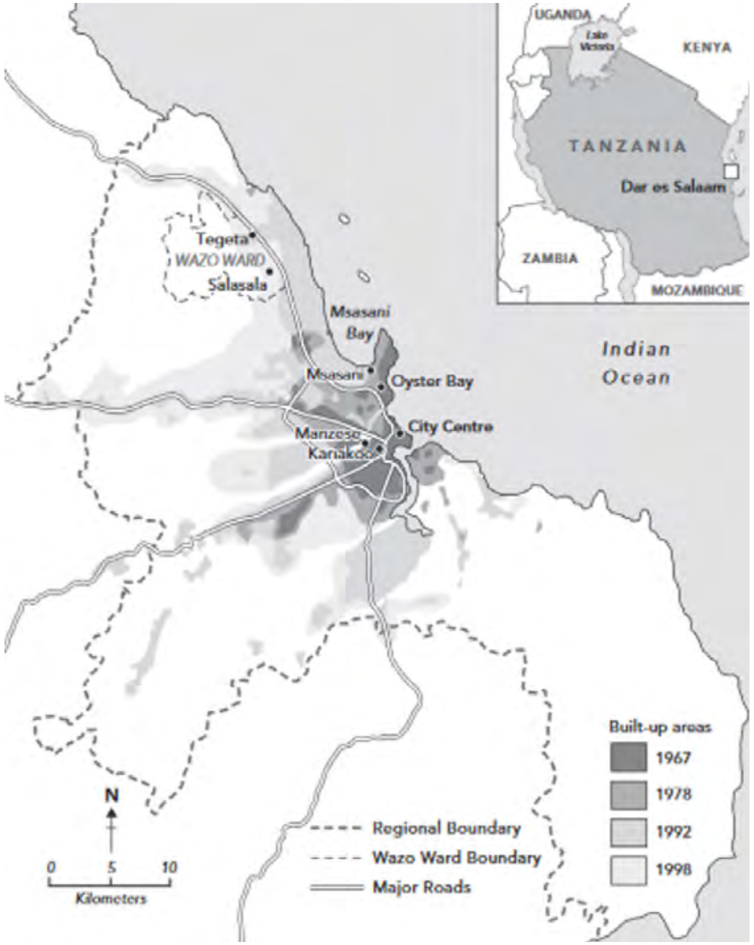
The Tanzanian urban middle class has been identified as the most potential market segment for high-quality and locally produced furniture. We look at the Tanzanian furniture market through their eyes and open up why this market segment is key.

Africa is projected to see its largest relative increase in population size over the next 15 years. At the current growth rate, the continent will hold almost 1,7 billion people in 2030. During the same period, more than 500 million Africans are expected to move to cities [1].

Tanzania is no exception. Despite the country being predominantly rural (like most other countries in Sub-Saharan Africa), it has some of the fastest growing towns and cities. In 2020, roughly 37 % of 60 million Tanzanians resided in cities.

With a population of 6,7 million, Dar es Salaam is by far the largest city in East Africa as well as the third-fastest growing city on the continent (second only to Luanda in Angola and Yaounde in Cameroon). Since 1978, Dar es Salaam's population has increased more than sixfold. It is also an important economic and trade center for the larger region. New suburbs, extending up to 30km from the city center, are being established resulting in constant construction of both residential housing and commercial premises occupied by the middle class [2].

Urban households have an average household size of 5.3 persons per household (with average Tanzania's household size being 4.85 [3]). Female-headed households were more than twice the size of male-headed households, and nearly one third of households in urban areas were headed by females. [4]



Wazo Ward, Dar es Salaam (source: LSE Design Unit 2018, based on maps in Briggs and Mwamfupe, 2000 and Andreasen, 2013)

The expansion of Dar es Salaam, including Wazo Ward suburban area [5]

Different sources have different takes on what constitutes an African middle class. Most of them agree that it is a growing demographic that is characterized by its consumer habits. The middle classes are spending money on land, houses, cars, home decor, private schools and imported goods [2]. The size and actual purchase power of the African middle class is harder to define accurately, and the estimations vary.

The World Bank and African Development Bank rely on defining the middle classes based on consumption. According to them, African middle class consists of consumers that spend 2-20 USD per day. Defined like this, approximately 6 million Tanzanians are middle class. [6] Standard Banks economist Simon Freemantle states that this estimation is in reality too optimistic by far [7].

A 2-20 USD definition has also been criticized by social scientists from the point of view that by this definition, anyone who is just about over the poverty line is seen to represent the middle class. In reality, these people have fluctuating income levels and may fall back into poverty. In any case, a big part of middle-class consumers are managing tight budgets and are prioritizing family obligations and status related visible consumer goods. [8]

Freemantle studied the middle class using South Africa's Living Standards Measure (LSM) that takes into consideration, for example, ownership of cars and major appliances. Fremantle's definition based on living standard narrows middle-class household consumption to be roughly 15 USD daily. [7]

According to Freemantle, in a typical African middle-class home the heads of the household are employed at least on a part time basis and they are also twice as likely as the national average to have at least a tertiary education. These households are also more likely to have a television, shop in a supermarket and use the internet regularly.

Counted by this standard, the Tanzanian middle class included approximately 1,5 million people (315,735 households) in 2014 and was estimated to grow to 6,5 million people (1,4 million households) by the year 2030. Kenya had 815,500 middle class households in 2014 and was expected to have 2,6 million middle class households in 2030. Uganda had 355,100 middle class households in 2014 and was expected to have 1,6 million middle class households in 2030. [7]

In the course of a life, the income levels and purchasing powers of the Tanzanian people are likely to grow. Statistics show that there is a significant disadvantage in wages for women and employees under the age of 30. Salaries are likely to increase significantly from 30 years to 42 years of age. On the other hand, families are formed usually in the mid 20s. There is also a problem with highly educated youth's unemployment, because the civil sector jobs that are valued most by the middle class are not available for everyone. Low-income jobs may also negatively affect employment opportunities in the future, which can lead to voluntary unemployment for a period of time. At the same time, there is a connection between initial earnings and education that will lead to eventual increase in income. [9-15]

The middle class in Dar es Salaam is relying on different economic strategies such as mixing formal work, casual labor and self-employment, renting property, selling agricultural produce and receiving income from relatives [5] . While the exact purchase powers of the different middle-class groups at different moments in life are hard to estimate, based on research and statistics it can be said that urban residents holding a tertiary degree education in their thirties and above are most likely to be able to live a comfortable middle class lifestyle marked by the 15 USD average daily consumption.

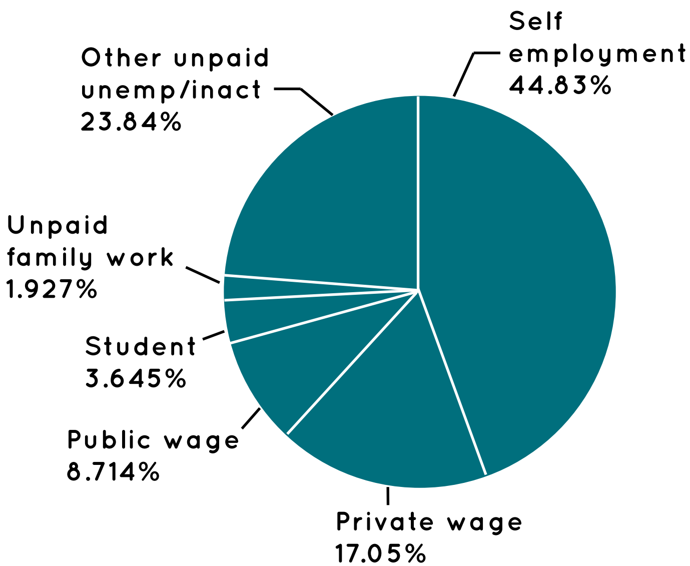
Saying this, it has to be acknowledged that the middle classes in East Africa form a highly heterogeneous group. Also, new economic opportunities such as growing youth and women entrepreneurship using digital platforms may add diversity into the more traditional dynamics attached to formal salaries and government.

Level of Education	Starting Monthly Salary (TZS) Up to 100,000	100,001-150,000	150,001-300,000	300,001-500,000	500,001-1,500,000	Above 1,500,000	Total
Tertiary University	268	131	846	2,287	7,144	2,162	12,838
Tertiary Non University	323	276	1,082	2,324	2,316	104	6,425
Teacher's Education/College	746	1,875	1,504	5,151	1,434	175	10,885
Vocational Education	1,721	2,201	3,281	3,710	1,210	382	12,505
Secondary Education: A-level	274	309	416	111	204	-	1,314
Secondary Education: O-level	2,104	2,220	2,875	922	501	-	8,622
Primary Education	5,117	10,047	1,420	406	60	-	17,050
Total	**10,553**	**17,059**	**11,424**	**14,911**	**12,869**	**2,823**	**69,639**

Number of newly recruited employees by level of education and starting monthly salary, Tanzania Mainland 2015/16 [9]

Monthly Wage Rate (TZS) Group	Adult (36+ years)			Youth (15+35 years)		
	Male	Female	Both Sexes	Male	Female	Both Sexes
Up to 100,000	6.1	5.7	5.9	6.6	10.9	8.4
100,001 - 150,000	16.0	14.9	15.6	13.5	13.2	13.3
150,001 - 300,000	20.8	16.4	19.2	20.1	15.9	18.4
300,001 - 500,00	15.8	15.8	15.8	23.4	23.5	23.4
500,001 - 900,000	19.7	23.2	21.0	26.3	26.3	26.3
900,001 - 1,200,000	9.7	12.7	10.8	5.5	5.9	5.6
1,200,001 - 1,500,000	5.6	6.2	5.8	2.2	2.4	2.3
Above 1,500,000	6.2	5.1	5.8	2.4	1.9	2.2
Total Percentage	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total Employees	**962,447**	**544,770**	**1,507,218**	**518,411**	**363,265**	**881,676**

Percentage distribution of regular citizen employees bu monthly wage rate (TZS) group and sex, Tanzania Mainland, 2016 [9]



Modes of employment in Tanzania [16]

Using money where it matters the most is a way to express belonging to the middle class. For example, building the right kind of house in the right kind of neighborhood or buying the right kind of sofa can be seen as a key mechanism that the middle classes use to index what they have in common among themselves. Dar es Salaam's middle classes attempt to distinguish themselves both from the urban poor and the rich. They are also taking on building projects that are expanding the city by forming new middle-class suburbs characterized by particular styles of construction, making the neighborhoods and their middle classes constitute each other. [5]

The consuming habits and increasing purchase power of the middle classes with its emphasis on housing makes the middle classes the most significant market segment for the furniture industry.

THE ROLE OF STYLE, AFFORDABILITY AND LOCAL EMPOWERMENT IN MARKETING ETHICAL PRODUCTS TO TANZANIAN MIDDLE CLASSES

In the Northern countries, consumers are mobilized into ethical choices on account of privilege and a sense of global responsibility. Southern middle-class consumers are unlikely to identify as privileged or equally responsible for global inequalities. Even relative privilege among the emerging middle classes is often experienced in terms of uncertainty of individual circumstances. [1,2]

As has been remarked, consumer practices are a way for the emerging middle class in developing countries to express their class identity by separating themselves from the poor. This may contradict the motivation to benefit people that are geographically close, but socially distant. The example of Bagladesh retail brand Aarong (focused on home interior and fashion) shows that in this context, “mainstreaming” ethical brands can be a good strategy. Aarong is widely associated with urban style, uniqueness, value and localness. These are its selling points to the middle classes, not ethicality. This strategy allows people to consume for the benefit of people closest to them, while positively affecting more distant others as a consequence. [2]

Goals of local and national empowerment mobilizes ethical consumers in the Global South. Research indicates that ethical brands succeed better in this market when they focus on local issues and adjust their message according to local ethical values [1]. For example, South African people are practicing ethical consumerism in the form of thrift: the wise use of money and resources for the benefit of the family [3]. In this framework, using more money for a “green” product can be seen as wasteful and unethical. On the other hand, people are seen to prioritize in some departments so that they can afford to buy good quality things for family, friends and visitors.

Consumer research conducted in Johannesburg and Cape town led the Southern African Sustainable Seafood Initiative (SASSI) to develop a logo, pocket guidebook and mobile application that gives the users information on the sustainability of a purchase. Importantly, they also allowed educated urban people to publicly display their ethicality. This means that among this particular middle-class group, there is interest in global environmental themes and that to-be-seen-"doing the right thing" can be used to create social status. [1]

While there is not much research to be found about ethical consumer practices in Tanzania, there is good reason to believe that many of the phenomena described above apply among the heterogeneous East African middle classes.

First of all, research [4,5,6] shows that the emerging urban middle class in Dar Es Salaam is consuming to separate themselves both from the very poor and the very rich. A lot of them are also managing tight and fluctuating budgets and dealing with unemployment among highly educated youth. This will mean having to prioritize financially in order to display an appearance of middle-class lifestyle and taking care of one's family.

Research also indicates that consumer practices have been influenced by traditional values of communal sharing of goods [4], although this might be changing into a more individualistic direction. Studies [4,7] also describe ethical ideals (such as simplicity and modernity) about outward appearance in the religious groups that are popular among the emerging middle class. These notions would need to be investigated further in the present-day urban context, however.

The government has strongly advocated entrepreneurship and personal success as a way to the nation's financial development [1]. This can be seen to create an ethical framework that produces aspirations to modernity and middle-classness.

These findings support the thinking that in the East African context, a big part of the emerging middle class may respond better to brands associated with style, value and localness, than global sustainable values or responsibilities.

On the other hand, the university-educated urban Tanzanian youth expresses environmental and social concerns and shows an interest in empowering peers in lower-income rural settings [8]. These youth also have excellent digital skills and they are using social media to gain status and form connections. This would mean that among the upper middle-class youth, it might be possible to mobilize ethical consumerism based on so-called "cool ethics". This group is also probably significantly bigger in Kenya than in Tanzania.

EDUCATED URBAN YOUTH ARE MOST LIKELY TO USE THE INTERNET AND HAVE GOOD DIGITAL SKILLS

According to the World Economic Forum data from 2016, less than 5 percent of the population in Tanzania uses the internet [1]. Other sources give a much more optimistic number around 45%. The percentage of mobile subscribers is nearly double as much. Majority of users access the internet through their mobile phones. [2,3]

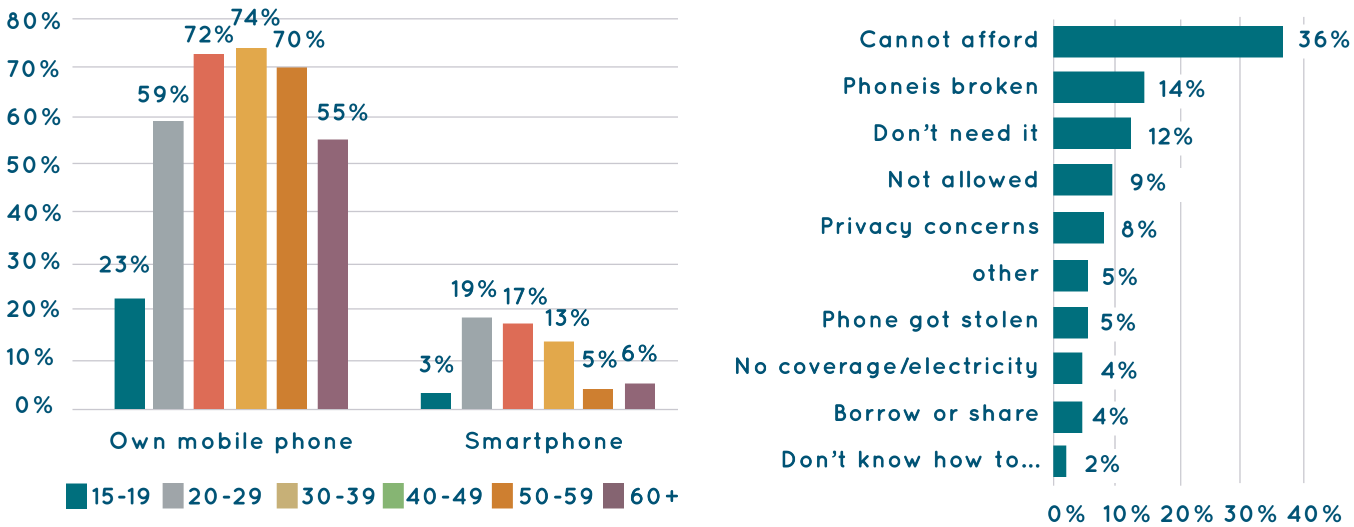
There are significant inequalities and differences when it comes to digital skills of different demographics of Tanzania. Youth are much more likely to use the internet than adults. In 2016, 89% of youth in Tanzania and 86 % in Kenya had at least weekly access to the internet. The ones that do not connect to the internet using their own device describe going to internet cafes or borrowing devices from family members or friends. [5]

There are unequal possibilities for learning digital skills and using the internet for women compared to men and people living in rural areas compared to people living in urban areas. Main difficulties are bad connections, poverty, and quality of teaching available. Another big problem is the lack of content available in local languages as well as the lack of locally-produced, relevant and relatable content. [6]

	2015	2016	2017	2018	2019	CAGR
Internet users	17,263,523	19,862,525	22,995,109	23,142,960	25,794,560	29.9%
Mobile subscribers	39,665,600	40,044,186	39,953,860	43,497,261	47,685,232	24.0%

Note: CAGR=Compound Annual Growth Rate. Source: TCRA, 2019.

Internet users and mobile communications subscribers in Tanzania, 2015-19 [4]



Mobile phone ownership, by age group, and reasons for not owning a phone, 2017 [4]

Source: World Bank (2020a) Household survey findings on mobile phone adoption: Has the digital revolution come to Tanzania?

Source: World Bank (2020a) Household survey findings on mobile phone adoption: Has the digital revolution come to Tanzania?

Smartphone ownership, between urban and rural areas, and between men and women, by income quintile, 2017 [4]

The group of youth who are using digital media daily describe the importance of social media in their relationships and information seeking/sharing. Facebook is clearly the most popular social media in use. [5]

In Sub-Saharan Africa, smartphones and the internet are comparatively expensive. Youth that access the internet multiple times a day on their smartphone are aware of communication apps, payment services and shopping sites, and are likely to be middle class or high-income. [4]

While the highly educated youth in urban areas identify as very skilled users of digital media, they recognize negative attitudes and disbelief among their friends and family towards the value of these skills. The ones that are running their businesses online also talk about the need for initial face-to-face meetings and social networks for finding new clients and gaining their trust. [2]

The emergence of digital payment systems like M-Pesa[4] have made generating an informal income by selling goods or services businesses using social media accessible to any young person with a smartphone [5].

"I generate an income by advertising my products on social media and selling them by using m-Pesa. I put my mobile number in the advert so people can transfer money to me, and then I deliver the item." *– Tanzania, male, age 25-30, urban, self-employed [5].*

Payment options are income-sensitive and mobile money is seen as the most viable way to extend financial inclusion in the Tanzanian digital economy. Still, mobile money is not yet widely used. There is a rural-urban gap as well as gaps by gender and age groups in users of mobile money, but affording a mobile phone is still the main issue. High costs for small transactions are also making it less practical for people with less money. [4]

There are still other issues that affect the digital economy in Tanzania, such as lack of laws for data protection that supports consumer trust and low data quality. The table below presents the assessment of components of a digital economy in Tanzania. The red color shows what needs to be addressed urgently while orange shows progress but also a need for strategies. [4]

4 A mobile phone-based money transfer service and payments and microfinancing service which was launched in 2007 by Vodafone Group and the largest mobile network operator in Kenya, Safaricom.

Components			Assessment	Status
Enabler	Connectivity Platform	First Mile	High prices have resulted in lower usage.	
		Middle Mile	Regulatory and political obstacles prevent investment and network rollout.	
		Last Mile	Inaccurate data on network coverage undermine planning. High prices on usage baskets of 5GB and below limit usage.	
		Invisible Mile	Regulatory interventions are poorly implemented and can have a negative impact on usage.	
	ID Platform	National IDs Passport Driver's License	Implementation problems with the National ID mean that a more flexible approach is needed that incorporates other forms of identification.	
	Payment Platform	Bank Account Credit Cards Mobile Money	Use of mobile money is relatively low. Strategies to reduce transaction fees to zero for small amounts should be considered.	
Trust Building	Law and Regulations	Data Protection	No data protection law has been passed.	
		Consumer Protection	Need for independent Consumer Protection Act.	
		Cybercrime	Current implementation reduces rather than supports trust in digital trade.	
		Intellectual Property	Not clear if IP can be protected	
		Electronic Transactions	Registration requirements should be expanded to include recognition of providers autherized in other jurisdictions.	
	Enforcement Mechanisms	Dispute Resolution	No online dispute resolution system is available.	
		Cybercrime Enforcement	This is the responsibility of the police, but no specific division has been created, leading to the possibility of weak enforcement.	
Digital Economy	Trade	Digitally Delivered Imports Digitally Delivered Exports	Data show opportunity for expansion of digital trade, Digital trade exports have been declining for the past few years. Reasons for the decline need to be investigated and addressed, especially in light of the reduction in physical trade due to COVID-19.	
	Economic	Contribution to GDP Jobs	Tanzania can make better use of the digital economy to drive growth, productivity and job creation as a response to COVID-19.	

Source: World Bank staff.

Components in Assessment of 'the Digital Economy" [4]

Bank accounts or credit cards, Tanzanians 15 years or older, 2017, Percentages [4]

	Rural	Urban	Male	Female	Total
Do you have a credit or debit card?	2.8	14.9	7.2	6.2	6.7
Do you have access to a bank account?	5.1	23.4	12.7	9.7	11.1

Note: Nationally representative surveys from Research ACT Africa.

Mobile money statistics, 2014–19, year end [4]

	2014	2015	2016	2017	2018	2019	Change (%)
Active users (million)	13.86	19.01	17.03	19.38	23.3	23.96	11.6%
Mobile Money Agents	238,461	270,974	371,132	427,445	483,283	560,043	18.6%
Monthly Mobile Payments (TZS Billions)	3,570	4,762	5,342	6,639	7,648	8,213	18.1%

Note: CAGR= Compound Annual Growth Rate.
Source: BoT. 2019 statistics for November; all other dates for December.

CHANGING CONSUMER DESIRES FUEL THE POPULARITY OF IMPORTED FURNITURE

The local demand for furniture is growing due to continued urbanization [1] and increasing middle-class spending power [2,3]. A problem is that local manufacturers are struggling to meet the current market demands and compete against imported furniture that is flowing to Tanzania [4,5,6].

Over 90% of local furniture production goes to domestic markets [5]. The main products of the furniture industry are wood and metal household and office furniture, garden furniture made from tropical hardwoods, and handmade furniture made from tropical hardwoods [7]. Exports are mainly to Africa while imports are mainly from China. [2]

The furniture sector is dominated by the informal sector, because being formal increases expenses. [2] The majority of wood-products and furniture producers are small or medium-sized enterprises located in clusters, such as the Keko and Buguruni-Malapa clusters in Dar es Salaam. Most of these enterprises are using hand tools and dated technology and employ a small number of regular employees. This makes it difficult to improve quality and meet the standards of international markets [2,7].

The flow of Chinese furniture to Tanzania has grown steadily until 2015. Since then, it has dropped due to policies enacted by late President John Magufuli's regime toward strict collection of taxes and eliminating corruption. Still, Chinese furniture remains very popular because of its comparatively cheap prices and fashionable designs. [5]

Urban middle-class consumers in developing countries are widely showing a preference for global, modern designs over traditional and heavy styles, which is influencing furniture, woodworking and woodcraft industries. [8 p.17]

Also in Tanzania, the increasing interest and exposure to global trends and lifestyles among middle-class consumers has fueled the growth of the imported furniture market [2].

According to research, the majority of Tanzanians prefer imported furniture because it is thought to be cheaper, have a better level of finishing, and more varieties in styles than locally produced furniture. As it is ready-made it also saves the trouble of putting in an order and possibly waiting for a long time. On the other hand, locally-made furniture is considered to be more durable. [8]

Research also indicates that consumers who want modern styles prefer imported furniture. Their decisions may be less affected by the price since they were also found to be more educated and have larger income. On the other hand, traditional and casual styles may be associated with low prices and are preferred by most low-income consumers. [2,4] Here it is good to note that “imported” may also refer to high-quality furniture produced in western countries.

Referring back to what we know about the emerging middle-class groups, many people still have to prioritize between consuming for the desired lifestyle and managing financial constraints. This means that interest in a variety of styles is probable to meet with the interest of making a good bargain and thinking about durability in addition to fashionability. [2,4] This is where the questions of market demand and presently available options come together.

COMPETITION WITH CHINESE FURNITURE AND PROTECTION OF NATURAL HARDWOOD CREATES PROBLEMS FOR LOCAL MANUFACTURERS

Chinese furniture currently meets the market demand for fashionable styles, good finishing, and affordability better than local enterprises. It is cheaper because it is made from low-quality timber and alternative materials. However, this also makes it not as durable as the local furniture traditionally made out of hardwood that sustains in the conditions of Tanzania. Small-scale Tanzanian furniture makers rely on customer relationships that are based on trust, which is why they cannot as easily reduce costs by changing to cheaper materials. [1].

The most popular wood used in furniture is *Mninga*. It is a hardwood with a red-brown color that does not absorb moisture and is resistant to insects that damage wooden furniture. However, this kind of wood has become scarce due to destructive harvesting. It has led to attempts by the government to protect natural resources through regulations such as heavy taxing, which makes it expensive to use [2].

Other kinds of relatively durable wood types which are easily attainable are *Mjakaranda* (Jacaranda mimosifolia) and *Eucalyptus*, but the best kind of Eucalyptus is also expensive [1]. Also plywood is used to supplement timber, but it is pricey and needs machinery to process [2]. Further, softwoods such as *Pine* and *Cypress* are used for parts of furniture, like the frames of sofas.

Customers are still seen to widely prefer furniture made from Mninga, which is why small entrepreneurs have even started to paint soft wood in a red brown color so that it resembles Mninga and sells with a higher price. Some of them deceive customers into buying painted furniture as Mninga, but as these businesses rely on good reputations, this is not regarded as a sustainable strategy. Most furniture makers are honest about the wood type they use even if they are giving it the aesthetic appearance of Mninga. [1]

Some manufacturers use Mninga for the most important parts and then to lower the costs of production, they use softwood for other parts and then paint it to match. Chinese furniture purchased by Tanzanian traders often resembles Mninga in its color, which is seen by local manufacturers as a strategy for selling in Tanzanian markets. [1]

Another strategy that manufacturers use to compete with Chinese furniture is copying the designs of the imported furniture while still making it durable with hardwood. However, due to the decreasing availability of this kind of wood and consumer preference for lower prices, this is also difficult. [1]

Producing the level of finishing that can match imported furniture is also a major challenge for small local enterprises. This can lead to customers with more spending power preferring imported furniture from Europe or South Africa.

Our own ethnography confirmed many of the findings presented above. Interviews further showed that locals tend to categorize home furniture available in Dar es Salaam under three categories: “Chinese furniture”, “imported furniture”, and “local furniture”.

“Chinese furniture” is understood as imported furniture from China or other countries outside of Europe or South Africa, which offers various styles and designs at an affordable price. This makes it popular but is also noticeably of poor quality. This furniture tends to not last under the humid Dar es Salaam weather.

“Imported furniture” often refers to furniture with an origin from western countries such as European countries or South Africa. This type of furniture is perceived as high quality, well designed, beautiful, and mostly durable.

“Local furniture” is produced by local manufacturers. The quality of this type of furniture is seen to vary greatly depending on the type of wood that is used, the manufacturer’s skills and tools, and their desire to produce high-quality furniture as opposed to simply make “quick” money. People in Dar es Salaam understand that in order to get a good quality and well-designed furniture product, they need to find a skilled and trustworthy local manufacturer or carpenter.

IMPORTANT FURNITURE PURCHASING CRITERIA FOR THE URBAN MIDDLE CLASS

Six criteria emerged during our research which the middle class strongly considers and weighs when choosing and buying furniture. The criteria are outlined next and are in line with the consumer research presented above. Preferences for Mninga wood are shown as well as an interest in a variety of styles and fashionability. Further, trust in a customer-seller relationship and balancing desires with price and practicality are crucial.

STYLE & DESIGN. Consumers have different tastes and desire to have a range of choices: from simple and minimal to luxurious, unique, and decorative styles. Independent of the style, good design is highly valued. Consumers are interested in buying furniture that meets their taste (style), works for them (design), and gives a good impression when receiving guests.

"it is really good and attractive, the design, the finishing. it is attractive. If I had money, I would give it all to buy this furniture. It is classy, it looks like the kind of furniture you would find in rich people's homes." (about a dining table set)

- Tanzanian middle-class representative

"I would ask the carpenter to design something simple with low price" *- Tanzanian middle-class representative*

"I love simple but nice designs, I have some simple and good designs I like from Ikea." *- Tanzanian middle-class representative*





Furniture that Dar es Salaam middle-class representatives own and love.

PRICE, AFFORDABILITY, VALUE FOR MONEY. After style and design, affordability of the product, the consumers' life situation, and their perception of value for money play a huge role. Consumers thoroughly assess their ability to pay for a desired product. Where possible, consumers save money until they can afford the desired furniture piece. Otherwise, consumers compromise on style, durability and quality in order to still be able to afford to buy furniture.

"Everything is available here nowadays, it is only the affordability that makes it possible or impossible to own what one needs." *- Tanzanian middle-class representative*

DURABILITY: QUALITY & FINISH. Furniture needs to be fit for the urban environment of Dar es Salaam (humid, hot, insects, etc.) and it should be of quality materials and finish so it stands the test of time. Therefore, furniture made of "strong wood" is desired by consumers. When consumers buy furniture which includes metal or softer wood, it tends to not be perceived as stylish nor as comfortable or durable.

"some insects eating it all the time, it causes a lot of dust"
- Tanzanian middle-class representative

"I do not like my sofa, because there is a space under them, rats are always coming in there to eat the fabric and destroy the sponge." *- Tanzanian middle-class representative*

Consumers mentioned these wood types and ascribed the following features:

Mpodo—**"best wood to make furniture out of it"**
Mninga—**"most costful wood", "strong and quality"** - it has been a favorite, but there is short supply & it is expensive
Mkongo—**"brown", "more costful that Mtondoo", "second quality wood after Mninga"**
Mtondoo—**"reddish"**
Breadfruit tree from Zanzibar
Blackwood—**"very durable as very hard wood"**

A DESIRE TO UPDATE FURNITURE. Consumers like to change their furniture every few years if they can afford it. A key reason for that is a desire to keep up with fashion or to "keep it interesting". At times, furniture is replaced due to poor quality. However, when consumers have acquired a quality piece which is durable and remains attractive to the owner, it can stay with them for tens of years. Furniture pieces are less often repaired than replaced. If repaired, specialists may be called to exchange the sofa foam or repaint the furniture.

A DESIRE FOR MULTI-PURPOSE FURNITURE. Consumers desire multipurpose items such as sleep couches, sofa beds or alike (for the homeowner's usage but also for guests).

SERVICE. Another criterion for buying or not buying a piece of furniture concerns the whole service around the furniture product. This may relate to service and price transparency and reliability, the possibility of assembling furniture at home, transport, and other service-related aspects.

THE URBAN MIDDLE CLASS IS UNHAPPY WITH THEIR CURRENT OPTIONS

Our interviews confirm that middle-class consumers are overall not satisfied with available furniture options in Dar es Salaam. In line with previous research, people experience difficulties in finding furniture agreeable in style, quality of finishing and durability of climate that is still affordable. Big furniture stores are described to offer various imported furniture with different styles, but they can be expensive (especially when imported from Europe) or a lack of durability (especially when imported from China).

I love the TV cupboard a lot, it is an imported furniture. It is very unique.” - *Tanzanian middle-class representative*

“When you go to buy imported furniture you find different options especially on designs.” - *Tanzanian middle-class representative*

Liked furniture piece imported from Turkey

Imports from China

"She told me a joke that the furniture made in China does not consider the nature of Africans who most of them are heavy." - *Tanzanian middle-class representative*

"it is an imported piece, but it did not last long" - *Tanzanian middle-class representative*

"The day I bought it, even before using it, it started breaking." - *Tanzanian middle-class representative*

On the other hand, skillfully-made local produce from durable wood can also be expensive and it tends to come with less variety and innovation in styles. The skills of carpenters and available technology affect the outcome. Consumers report being frustrated with the difficulty in knowing beforehand whether the local manufacturer they choose will produce a quality product or not. Local furniture is said to lack imagination, innovativeness and creativity. There is a lot of furniture of the same type and nature because manufacturers imitate each other.

"The problem with most carpenters here is that year after year they do not come up with new things, they are not innovative, you find that they still make the same beds we used when we were born." *- Tanzanian middle-class representative*

Nonetheless, there are also exceptions that describe innovativeness and initiative which are valuable to study:

"These days furniture makers here are very innovative, they would sometimes find designs online for example on Pinterest and make the exact same." *- Tanzanian middle-class representative*

Consumers further experience difficulties in finding special types of tables, bookshelves or sofa beds. The best workaround with these unmet furniture needs currently is to find a local manufacturer that has the capability and tools to produce such products custom-made, but then likely for a high price.

"I wish to get a Sofa bed, they do not make those here, they are not popular." *- Tanzanian middle-class representative*

"I would wish to have a new bookshelf, a quality one, but you cannot easily get those here. we have good carpenters but most of them choose to make products that sell more often and faster for example beds, sofa, it is very rare to find things like a bookshelf especially a good one"

- Tanzanian middle-class representative

Examples of bookshelves and tables selected on Pinterest by Tanzanian middle-class representatives. These kinds of products are currently not available on the Tanzanian market.

MIDDLE-CLASS CONSUMERS WANT FURNITURE THAT REPRESENTS MODERN URBAN LIFESTYLE

Underlying social and cultural values affect furniture demand in addition to practical concerns of affordability and availability. We compare previously presented findings with additional data on furniture desires. This allows us to identify desires and practices shared by the local middle class. For example: aspiring toward a modern, urban lifestyle and using consumer goods as building blocks of social identity as well as one's own future.

Beds and sofas are essential furniture pieces which are usually bought first when starting a new home. Other furniture pieces that are classified as important by consumers are coffee tables, TV stands, cupboards, and dining tables. Let's dive a bit further into what these different furniture pieces and the rooms in which they are placed mean to the middle class.

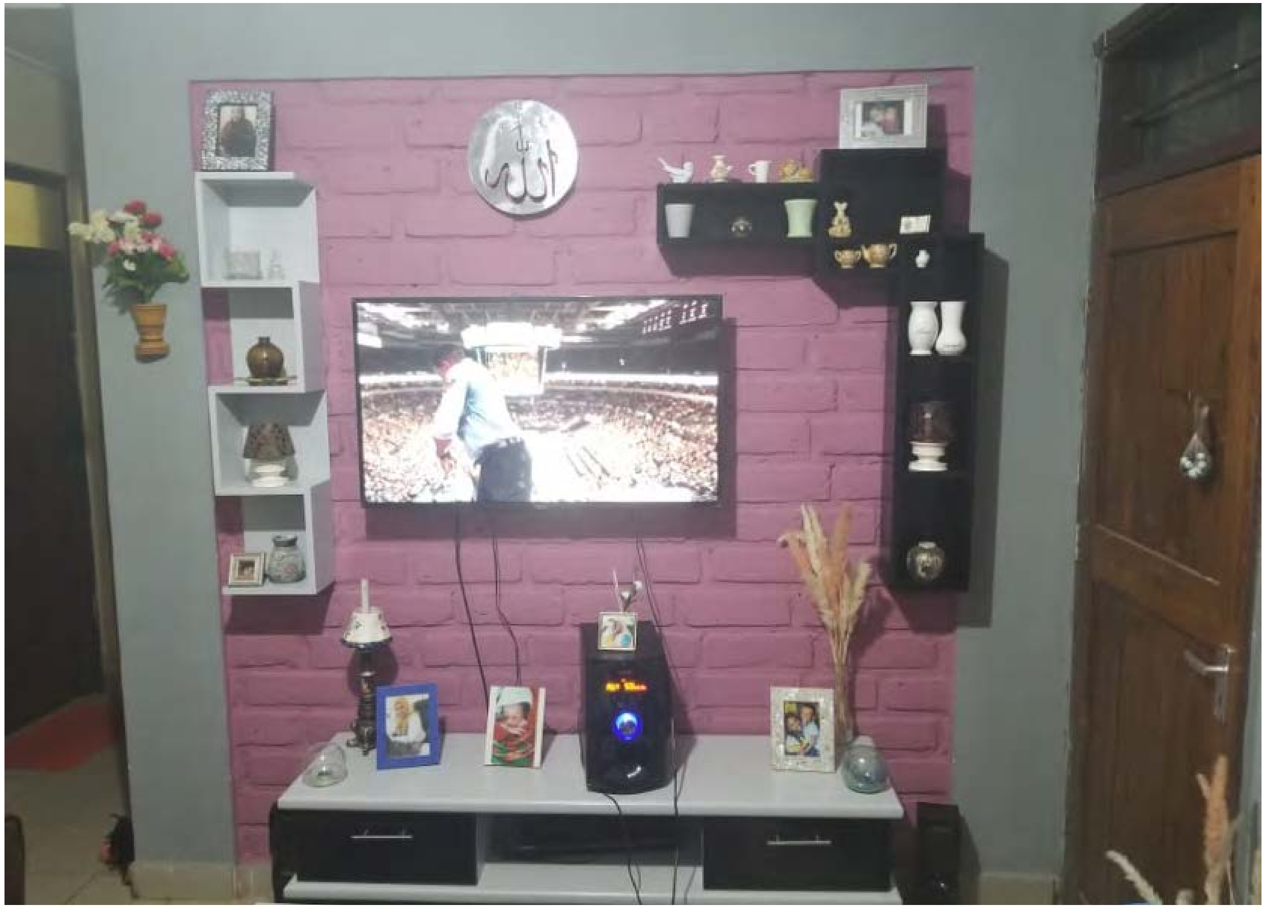
Furniture pieces desired and wished for by Dar es Salaam middle-class consumers:

- Wooden beds
- Double decker beds for kids
- Stylish and royal bedroom set including bed, closet and dressing table
- Sofa sets, leather sofas
- Coffee tables
- TV cabinet/table (TV often hanging above, and table used for decoration)
- Wooden dining tables
- Varnished kitchen cabinets attached to the wall
- Shoe racks
- Bookshelves
- Multipurpose furniture

While consumers consider bedrooms as private, the sitting room with sofas and possibly other furniture pieces is seen as a “mirror of the whole house”[5]. It is the place where guests are entertained and where they could be impressed through displaying consumer goods attached to a middle-class identity and standard of living. Furniture that presents decorations and other objects that are considered as valuable—such as TV-cabinets, shelves and coffee tables—are placed in the sitting room. Coffee tables can be used as a place to “keep a remote controller and newspapers”, or to serve visitors, but mainly they are purely decorative. At times, sitting rooms can equally function as study rooms or office spaces.

Consumers often describe furniture they like as “simple” and “standard” (meaning good standard). They emphasize the importance of cleanliness and organization. On the other hand, in contrast with valuing simple convenience and quality, consumers also appreciate uniqueness. They prefer furniture that can be “conversation-starters”, that draw attention and that can separate the owner from everybody else.

5 This quote and the following were collected from middle class research participants who selected and commented on desired furniture on Pinterest.



The favorite furniture in a research participant's home: a TV showcase which "attracts guests" with its unique design and allows for changing decorations.

Consumers clearly prefer pieces they associated with a transnational urban middle-class lifestyle, as research presented earlier above also indicated. For example, a chair made out of cardboard was described as an “honourable place” to “refresh mind” and drink a “cappaccino coffee”[6]. A dressing table was seen as “good for doing make up therapy”. Consumers also collected pictures of design furniture made of raw-looking recycled material (image on the right).

Furniture that people dream about expresses their visions of life. Consumers describe how they could see themselves “thinking about the next step” while sitting in a certain chair or sofa. These findings match the above-mentioned idea of a mobile identity constantly moving towards new achievements.

Image taken from Pinterest

“How they made it be honourable for me to re-fresh mind and take some capachino Coffee” - *Tanzanian middle-class research participant*

6 A research participant’s way of writing cappuccino

Consumers want multi-use furniture. This can be explained with the small living spaces in urban areas. Additionally, it can also be an indication of the need and desire to rethink domestic space for many different purposes in a way that matches changing life situations. Spaces should be able to be flexibly used for family time, office work, or for entertainment.

Consumers appreciate furniture that is seen as innovative. This can mean fresh and out-of-the-box thinking, using old and available materials in a new way, or expressing creativity in uncommon design choices. Consumers also describe wanting to change or repaint furniture to update the style regularly, while also hoping to find durable furniture that would look stylish for a long time.

NOTE

Preferring durability (which is also a strategy identified for saving) and trying to keep in fashion (which pushes people to buy new products regularly) can be conflicting values. Innovation in how to enable sticking with the same furniture for a long time would be important from both a consumer perspective and in supporting sustainability. Consumer interest for new kinds of innovation may indicate possibilities for changing the traditional attitudes toward wood types. Trust in the quality and durability of the product can be more essential than the wood type itself, even if it has previously been a kind of guarantee for good quality.

Consumers express an acceptance of local products and some sense of pride in local markets and talent. However, the local style is often considered to be old fashioned and not transforming with time. Additionally, the quality of finishings is sometimes critiqued. One participant used the word “local” as a negatively-charged adjective for style that she did not like. Many state that the local producers would benefit from learning new skills, while others emphasize their talent in taking any idea from Pinterest and executing it professionally.

Overall, local production seems to be preferred to some extent, which, in the light of research presented earlier may be due to lower prices in some cases, trust in face-to-face service relationships, and associating “local” with durability. However, the desired styles seeme to reflect transnational urban middle class styles with a wish for unique and creative self-expression.

NOTE

Considering the popularity of imported furniture, it is important to take the existing positive attitudes toward local manufacturers as a foundation to build on when aspiring to add variation in style, better quality, and sustainable materials into the equation. Supporting localness should also be based on informing more people on the social and economic benefits of using local resources, as this was connected in our research and ethnography with increased motivation to use local products.

Annex B shows more images of furniture owned by the middle class in Dar es Salaam, differentiating between furniture that owners are happy with (liked), that owners are unhappy with (disliked), and furniture that is owned but evokes no special feelings for the owners.

"Healthy food from this simple kitchen"

"The creativity makes the furniture look great"

"How they made it be honourable for me to re-fresh mind and take some capachino Coffee."

"Look cool for just do make up therapy"

"The study room furniture is wonderful. I would love if it is me sitting right there and taking of official duty"

"This sofa is more for relaxing and thinking for new ideas"

"It's my dream to have a big house with quality furniture"

"My chilling place. This is the one which I would prefer after a long day of work. Come here and sit in swing sofa its more of relaxing and thinking on the next step to take"

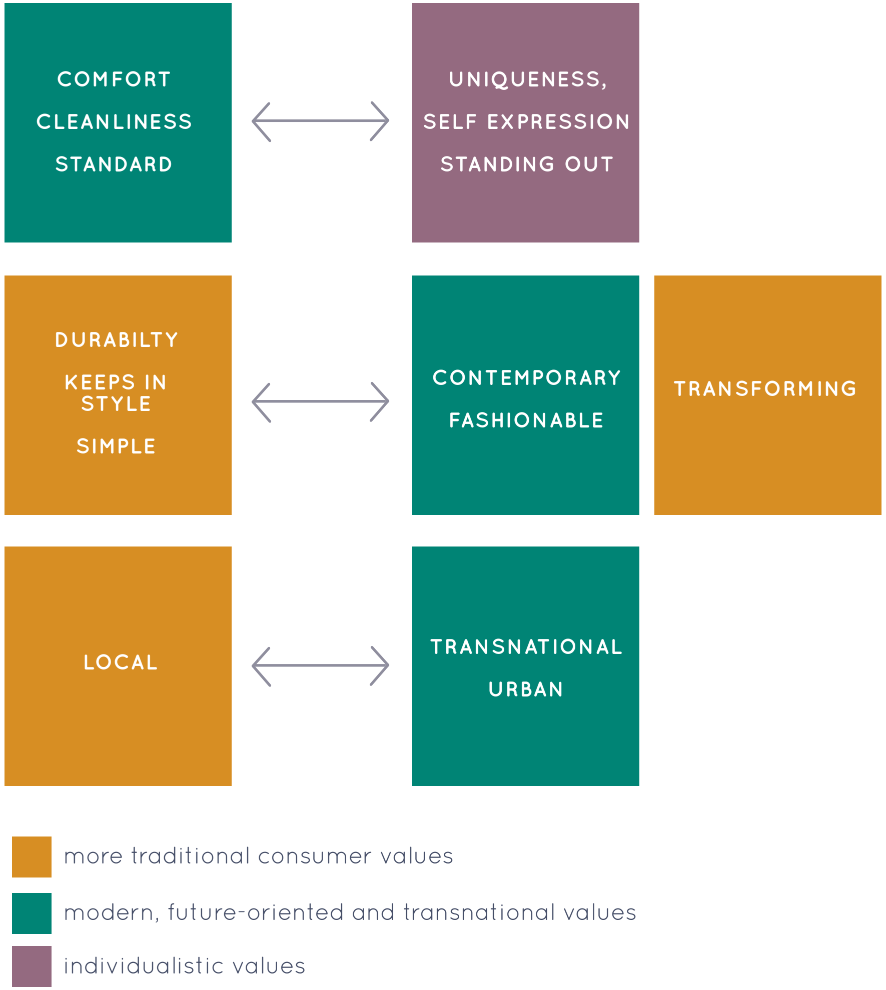
"For me a piece of furniture has to be unique and interesting conversation starter"

"Super clean and standard"

"It's attractive...even when visitors come, they will fill at home and that they are welcomed"

"I love the design, it's good for outdoor events like meetings, birthday parties and other"

Tanzanian middle-class representatives' comments on furniture that reflect Tanzanian middle-class values and their associations of the urban transnational lifestyle.



Lower-middle-class values. Some of these values are contradictory but they can exist simultaneously in consumers.

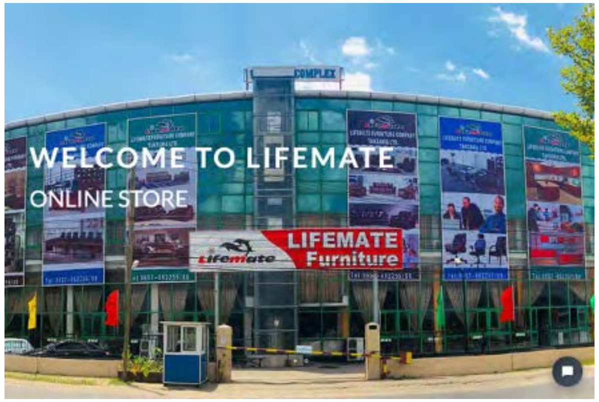
CONSUMERS MOSTLY BUY FURNITURE FROM SMALL LOCAL WORKSHOPS

The local manufacturers are the most widely used furniture providers for middle-class consumers and they are mostly smaller local workshops and shops. The few large firms do both local manufacturing (locally made furniture with some modification and improvements) and importing of furniture for the local market [1]. This import mostly falls under the above-mentioned category of "Chinese furniture". The local furniture shops are organized in geographical clusters with Keko Cluster in Dar es Salaam being the biggest and oldest cluster to start furniture manufacturing since 1970 [2]. "Imported furniture" from Europe is locally available through expats selling their furniture and other second-hand furniture sellers.

A benefit of the widespread small local furniture manufacturers is that furniture can be easily ordered "next door". Consumers visit the workshops and look at available furniture or discuss ordering furniture customized to the customer's wishes. Often, transportation services are available, whereby already fixed furniture is, for example, transported on lorries (image on the right).

A lorry transporting furniture in Dar es Salaam, image taken from Instagram

FEW LARGE FURNITURE FIRMS IN DAR ES SALAAM



Known big firms include TLR (tlr.co.tz), Life Mate Furniture (tz.lifemate.com), and the Furniture Center (furniturecentre.info).

SMALLER LOCAL WORKSHOPS AND SHOPS

Stores and smaller workshops that were mentioned by Dar es Salaam middle-class consumers: Showrooms such as Monalisa, Suma Jkt and Magereza, local carpenters & showrooms in Magomeni area, Makumbusho area, Mbezi area, Kariakoo area, Manzese area, Sinza area, furniture shop in Pugu Mall, Discount Centre at Mlimani City Mall, Royal Centre, Homemart, Danube, Orca Décor Home furnitures at Buguruni (orcadeco-tanzania.com), Alicia furnitures, Amorette (amorette.co), and a private second-hand seller in Msasani. Street sellers such as Dio Marco furniture (image above) represent many of the kind.

There are several challenges mentioned by consumers regarding the services of local manufacturers. Some manufacturers have been reported to get easily annoyed by consumers explaining their furniture wishes or visions. Further, order delays are common. Most local furniture is ready-made and therefore, it cannot be assembled and disassembled by the customer themselves. Consumers worry about buying pieces of furniture (especially cupboards and dining tables) because they are living in small houses which cannot accommodate ready-fixed furniture.

"You know the kind of furniture you want also depends on the space you have" - *Tanzanian middle-class consumer*

"it is heavy, it was hard to get it inside the house" - *Tanzanian middle-class consumer*

"Can I get a small one that fit my home?" - *Tanzanian middle-class consumer*

"It is durable but it has one challenge, it is not movable as you cannot dismantle it." - *Tanzanian middle-class consumer*

SOME LOCAL FURNITURE MAKERS OFFER THEIR PRODUCTS ON SOCIAL MEDIA AND ONLINE

While most shops do not showcase and offer their products online, some do. Most small workshops that showcase their products online do so via social media platforms such as Instagram and Facebook. They exhibit and market their products, and only to some extent take orders for furniture and interact with the consumers through these channels. Examples of shops on Instagram and Facebook in Dar es Salaam that we observed can be found below.

In general, these social media accounts have a reasonably big number of posts and followers, but engagement through the commenting function is minimal. Furniture products presented in video format have more viewers than the photos. Sofa and beds are viewed more than other products.

One of the main issues for consumers considering products and sellers on social media is a general lack of transparency and reliability. This relates to product quality and features, price, but also service-related issues such as transport and order process.

"Will I find my order ready or I will have to order when I visit. I fear what happened to me with kingdom furniture"

- Tanzanian middle-class consumer

The biggest issue consumers report regarding shopping through these accounts is that the prices presented on social media are often high or not mentioned at all. Other worries expressed by customers came connected to furniture home-assembly, durability, design, and value for money.
Consumers are also concerned that product photos presented online may be modified and so they feel the need to visit the dealers and manufactures to check the exact designs and quality. This may be partly due to the practice of painting furniture to resemble Mninga, when in fact it might be made from something else.
Customers from the Northern parts of the country were visiting the platforms most frequently. They expressed concern about how the furniture products would be delivered and transported. Most of these customers were from Dodoma, Arusha, Morogoro and Pwani.

Overall, only few customers seem to make orders directly online.

Samples of furniture offered in Dar es Salaam via social media channels [7]

7 Shops: @vee_thriftstore (used furniture), @alisiafurniture, @sammy_furnitures, @derma.tz, @sachques_furniture, @vunjabei_furniturez, @cheap_furniture, @melondesigncompany, @Sofa furniture gideon arusha, @homesdesire, @furniture_bei_nafuu_tz, @lecabra_furniture, @marcelo_arts_and_decor, @mkombozifurniture

LOCAL FURNITURE PRICES AND CONSUMER WILLINGNESS TO PAY

Price ranges seem to vary widely for both local and imported furniture. Prices vary depending on the design, quality and materials.

To give a relative idea of the price ranges, a recent study from Arusha shows how some companies display high-end imported furniture in big showrooms in the city center, while in the smaller shops the imported furniture sells at a similar or lower price than the locally made furniture. For example, an imported dining set sells at 180,000 TZS, while the price for an equivalent set that is locally produced is at least 350,000 TZS.

For a locally produced bed made of wood, the price is 200,000-550,000 TZS depending on the materials and type of wood that is used. While beds made out of *Mninga* and *Mvule* are expensive, some local online stores have started to sell super cheap furniture made out of all kinds of materials such as aluminum, vinyl, cloth and medium density fiberboard. A wardrobe made out of these materials costs only 50,000 TZS. [1]

The table below represents price differences in locally-made sofa sets of different quality and imported high-quality sofa sets.

The numbers presented in the second table below are from fieldwork data collected by the Finnish embassy on prices of Fine Wood Words Ltd. This is one of the bigger local furniture stores. They manufacture a variety of furniture and sell them in a three-story furniture store. They use domestic hardwood. [3 p.2]

Type of furniture	Locally made or imported	Quality	Durability	Price (TZS)
Sofa set	Locally made	Low	Medium	300,000-450,000
Sofa set	Locally made	Medium	High	550,000-750,000
Sofa set	Locally made	High	High	750,000-1,000,000
Sofa set	Locally made	Very high	Very high	950,000-1,900,000
Sofa set	Imported	High	Medium	2,500,00-3,500,000
Sofa set	Imported	Very high	High	3,500,000-7,800,000

Figures reported in an assessment report on the carpentry sector commissioned by the National Economic Empowerment Council (2008)

Sofa set prices [2]

Type of furniture	Average price range in TZS
Beds	>450,000
Dining Table	800,000-2,500,000
Dining Chairs	80,000-300,000
Doors with Frame	550,000-850,000
Office Table	>850,000
Sofa set	>650,000
Coffee Table	>80,000
Wardrobe	>1,200,000
Kitchen Cabinets	Per square meter 850,000

Source: Field data (2012)

Types of products manufactured by Fine Wood Works Ltd [2]

The first table on the next page shows a snapshot of price ranges mentioned on furniture manufacturers' Instagram pages. Compared to prices that Dar es Salaam middle-class consumers have identified in our ethnography (see further below), these here are rather on the high end.

The rich and upper middle class are likely to consider prices less than other middle classes and low-income groups. As has been noted, most middle-class consumers are likely to compromise between different financial investments and be aware of their budget. The earnings of a person are likely to grow in the course of life as a result of education, permanent employment, age and experience (unless one is very poor initially). There is a wage disadvantage for women and people under 30. According to statistics, most people start families and have children before they are 30. At this time, their income is still comparatively low and likely to increase significantly from 30 years to 42 years of age. These findings indicate that first-home-buyers' purchasing powers may still be lower than later on in life.

The second table below presents purchasing price histories of middle-income households according to field work data collected by the Finnish Embassy. Comparing this data with our own ethnographies (table on page 78) gives a rough idea of the acceptable price ranges of different products through the Tanzanian middle class consumer perspective.

Furniture type	Digitized online furniture
Bed	850,000-3,495,000
Shelves	795,000-3,195,000
Table (Cafeteria table)	350,000-695,000
Coat Hanger	270,000+
Dining Chair set	350,000-695,000
Door without frame	595,000-860,000
Dressing table	1,885,000-1,995,000
Show rack	566,500-827,000
Sofa set (one piece)	695,000-1,540,000

Product prices ranges in TZS collected from furniture manufacturers' Instagram pages

Type of furniture	Year of purchase	Price in TZS
Sofa Set locally made	2003	700,000
Kitchen Cabinet locally made	2011	2,000,000
Wooden Dining Table locally made	2011	400,000
Metal table for the living room locally made	2010	90,000
Single bed locally made	2006	45,000
Aluminium sliding window	2008	3,200,000
Bedroom closet locally made	2009	350,000
Cupboard locally made	2009	480,000
Curtain poles locally made	2000	36,000

Source: Field data (2012)

Purchasing prices of a middle-income household [2]

Furniture purchase history and willingness to pay based on our consumer ethnographies

Price ranges that were paid for furniture by consumers, in TZS	• Sofas and sofa sets: 300,000 - 1.6 million • Beds: 250,000 - 3 million Bedroom set 5 million, imported from Turkey • Dining table & dining table sets: 300,000 - 3 million • TV cabinet 200,000 - 800,000 • Coffee table 200,00 - 600,000 • TV showcase together with her coffee table 450,000 • Cupboard 300,000 - 1 million • Two closets 3.1 million • Two closets 3.1 million
Price ranges for what consumers would be willing to spend (based on their monthly earnings), in TZS	• Dining table set 800,000 - 5 million • Sofa/couch 800,000 - 3 million (1090e), one person even 10 and 20 million • Bed 400,000 - 1 million • Coffee table 200,000 - 600,000 • TV cabinet 100,000 - 150,000 • Dresser 300,000 - 500,000 • Closet 1.5 million • Good table 300,000 - 1.7 million • Cupboard 1 million • Kitchen cupboard out of black wood by local carpenter 300,000 to 400,000
If price was of no concern at all, consumers would spend these price ranges, in TZS	• Sofa set 1.5 million - 13 million • Quality and good looking coffee table 300,000-400,000 • Wooden dining table with four chairs 400-000-700,000 • Kitchen cabinets 6-7 million • Bed 12 million

FROM SEEKING INFORMATION TO MAKING THE PURCHASING ORDER

We now briefly outline an example process through which perhaps a majority of Tanzanian middle-class consumers go to choose and order their desired furniture.

STEP 1 Consumers tend to first browse furniture through their phones on social media for inspiration. They are hereby exposed to the local and global furniture market (e.g. through Instagram, Facebook, Pinterest). Products on social media are a big driver for their desires. Consumers may also do "window shopping" at the local showrooms or second-hand sellers (who often sell imported furniture). At times, consumers may see a desirable product at their friends' (or family) homes.

STEP 2 Consumers inquire and compare prices from local shops, carpenters and online/on social media. Once they have some idea of what they want and can afford, they continue to Step 3.

STEP 3 Consumers either engage a local carpenter to try to replicate a desired design or product (however, this can at times not be very reliable depending on the carpenter, but prices can be negotiated and the product may end up being more affordable), or they buy a ready-made product (either locally made or imported/"Chinese') that was seen in one of the smaller or bigger shops (generally speaking more expensive) or online. Overall, it is hard for the consumers to judge beforehand if the product will be of good quality and thus durable.

STEP 4 Consumers buy their furniture mostly with saved money or in installments. While big furniture firms offer online order and payment, customers rarely order online. Challenges related to that can be the need for a credit card (only a small percentage of people have credit cards) or to pay in full upon order. Consumers prefer to see and touch the products first, before paying in cash and/or installments. Usually, the consumer receives their product only after the last installment has been paid.

Ordering furniture online is not very common as of today. Aside from the above-mentioned reasons, disappointments from when a product differs from what was expected, and bad experiences with purchasing items over the internet add to this. Consumers find it much easier to consider products and designs online and then go to the local store or workshop to view or discuss the item.

In contrast, when consumers order "Chinese" furniture which is yet to be imported for them (independent sellers organize this, for example, through WhatsApp groups), they accept not having been able to see the product first, as the low price might make up for this need. However, disappointments about the low quality tend to follow.

We explored the Tanzanian furniture market from our target group's perspective. We learned more about the Tanzanian middle class, opened up the furniture that is available on the Tanzanian market, and how the middle class perceives their options. Finally, we explored how social media is used by manufacturers and sellers to market their products to the consumers and presented a sample process from selection to purchase. Next, we step away from the consumer focus to explore the furniture ecosystem and value chain.


Peak
Performance
Est. 1986

3 FROM PLANTATION TO MARKET

IN THIS CHAPTER YOU WILL FIND:

THE TANZANIAN FURNITURE SECTOR HAS GREAT POTENTIAL BUT IS UNDERPERFORMING

THE CURRENT FURNITURE ECOSYSTEM—SOUTHERN HIGHLANDS AND DAR ES SALAAM

THE LAND OF A MILLION FUNDIS

FROM PLANTATION TO MARKET

In this chapter, we aim to describe the entire value chain for locally produced wooden furniture. We present a map of the current furniture ecosystem in the Southern Highlands and Dar es Salaam (to the degree that it is relevant). We finally dive a bit deeper into the lives of carpenters (fundis) as they are an essential part of the furniture ecosystem.

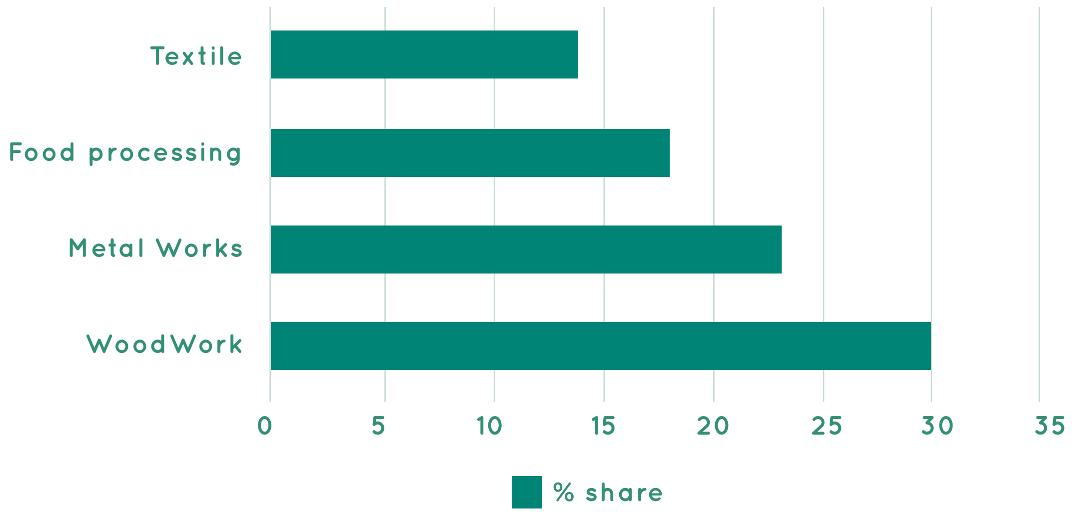
THE TANZANIAN FURNITURE SECTOR HAS GREAT POTENTIAL BUT IS UNDERPERFORMING

The furniture value chain has great potential in promoting growth and reducing poverty in Tanzania. Many emerging economies have used the furniture industry as a way to diversify economic structures and promote economic growth. [1]

Manufacturing forms the largest (78%) sub-sector of all industrial production establishments in Tanzania. The furniture manufacturing's share of these establishments is 10%. The wood furniture industry employed around 8000 people in 2016 which equals to 6% of all employment generated by the manufacturing sector. The employment in the industry had grown 2.5 times since 2008. The sector's total value added was estimated at 110 million dollars, or 4% of total manufacturing value added. [2] However, taking into consideration the high percentage of informal businesses, estimations based on reliable official data are hard to make [1].

The furniture sector is dominated by micro and small enterprises operating in the informal sector [1]. The SME sector in Tanzania comprises several sectors. Woodwork is the largest sub-sector constituting about 30% of SMEs activities, followed by metalwork (23%), food processing (18%) and textile (14%). [3]
Despite the socio-economic importance of the SME sector, it has been severely underperforming due to barriers such as "high costs of doing business, weaknesses in the legal structure, poor infrastructure, inadequate entrepreneurship skills, labor market barriers, low access to finance and foreign direct investment, non-supportive institutional framework" [1 p.8].

In brief, the timber supply value chain consists of sawing of logs in the forest, transporting wood to the roadside or village, coordinating production activities, trading of timber locally, transporting it to the city, retailing it in the city (such as Dar es Salaam) and using it in furniture [1 p.3].
Over half of the wood plantations in Tanzania are owned by small and medium-scale tree growers. The remainder consists of large private plantations, public plantations, and informal lumberjacks who cut natural trees for timber, sometimes illegally, to sell to the furniture industry [2].



Contribution of sub-sectors to SME sector in Tanzania [3]

Wood species	MAIN PRODUCTS/ DIMENSIONS/DESCRIPTION	Price in TZS per piece
Pine	1”x6”x4m	2800-3500
Eucalyptus	2”x3”x4m	2800-3500
Cypress	2”x4”x4m 2”x6”x4m	6500-7000 8000-8500
Pine (Green Resources)	mainly 2”x2”, 2”x4”, 2”x6”, 2”x8”, 1”x8”, 1”x10”	217,000-400,000 per cubic meter

Source: Fieldwork (2012)

Price of timber in Mufindi, Iringa [1]

The challenges of the timber supply chain are plantations not supplying enough wood, poor quality of forest products due to things such as inadequate drying, storing facilities and machinery in use, high prices of products, poor infrastructure, corruption and lack of trade policy [1 p.4].

As has been mentioned earlier, except for some larger firms which import and manufacture furniture for the domestic market, the majority of furniture producers are small and medium-sized enterprises (SMEs) that are organized in clusters, such as the Keko and Buguruni-Malapa clusters in Dar es Salaam [2]. Besides clustering, actors in the furniture sector are linked together through modes of alliances and networking. Subcontracting is a popular form of alliances among especially informal enterprises and between friends and kinsmen. Interaction between firms is often based on networks and two-person relationships, often without formal contracts. Most timber suppliers have developed long-term relationships with furniture companies.

Clustering of businesses working in the same sector can be beneficial. For example, it can help attract traders, address shared problems or create access to machinery and other needed services. However, the cluster should have good internal and external networks and division of labor that helps the businesses be more effective. In the case of Tanzania, clustering has not produced the positive effects it could. Instead, it has led to the formation of many tiny and inefficient enterprises in competition with each other [1].

One reason for the active forming of new companies is that cluster firms traditionally rely on unskilled labor and trainees that are paid very badly. The lack of decent salary motivates the workers to set up their own firms as soon as possible. Most of the workforce only have a primary level of education [1,4] and while some workers have also had formal training in carpentry, vocational education is mostly conveyed in traditional informal apprenticeship relationships.

Formal vocational training of carpenters has been reported to have significant issues. One consequence this produces is a mismatch of skills of the workforce and skills actually needed by the labor market. The training can also fail to offer the more specialized skills needed in modern furniture making and can lack practical experience. [5] On the other hand, while informal training can equip workers to meet the demands of the job market better than formal training, it can also produce a narrow set of skills and experience with different technology as well as problems caused by lack of legal protection of trainees [1].

The firms in the furniture sector have relatively low labor productivity, which is mainly related to the outdated and rudimentary technology in use, together with the very small scale of production of firms [2]. Most of the small-scale informal businesses working in clusters in Dar es Salaam have a small number of regular employees and employ dated technology and hand tools [3].

Challenges preventing firms from expanding their businesses involve access to finance and credit as well as inconsistent access to electricity. Problems are also caused by difficulties in accessing affordable local quality timber. [2] Issues presented here have led to local producers having to struggle in competition against huge amounts of wood products being imported to Tanzania (see chapter 2).

THE CURRENT FURNITURE ECOSYSTEM—SOUTHERN HIGHLANDS AND DAR ES SALAAM

After having considered the furniture sector in Tanzania from a literature perspective, we now focus on the current furniture ecosystem (snapshot) in the Southern Highlands and partly in Dar es Salaam (as relevant for the project). The map on the next page shows a map of the ecosystem with the Southern Highlands being represented on the left side, which is also the beginning of the value chain for our project, and Dar es Salaam being represented on the right side, which would be the end of the value chain with the middle-class consumers.

In the following, we describe the Southern Highlands and Dar es Salaam furniture ecosystem in a bit more detail, while including important actors as well as insights gathered from our research. First, we cover the beginning of the value chain: raw materials. We then look at the furniture production and capacity building in the Southern Highlands. Next, we briefly consider logistics before looking at furniture production and sales (the market) in Dar es Salaam.

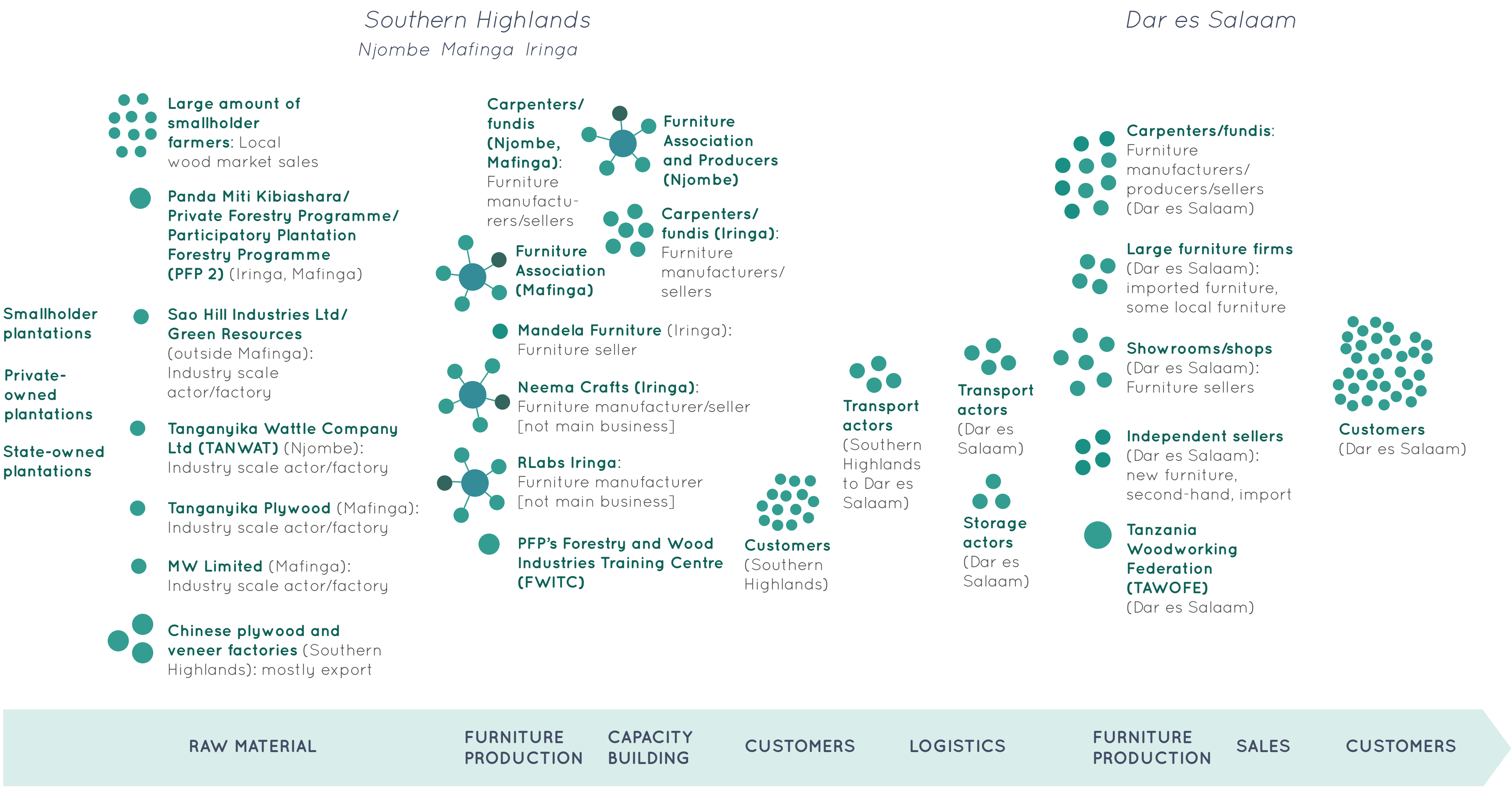
Our mapping does not cover all actors, but provides a picture of the landscape. See Annex C for descriptions of the presented market actors.

Wood plantations and processing in the Southern Highlands

There are privately-owned and state-owned tree plantations in the Southern Highlands.

Industry scale actors such as Sao Hill Industries Ltd (Green Resources) outside of Mafinga and Tanganyika Wattle Company Ltd (TANWAT) in Njombe, for example, source their raw materials partly from state-owned plantations and partly from their own plantations. The numerous smallholder farmers in the area source wood from their own plantations and are supported by the Participatory Plantation Forestry Programme (PFP2) in growing their plantations and productivity. Additionally, hardwood for carpentry is sourced from local indigenous forests, which can be illegal without a proper certificate. Hardwood is also imported from, e.g., Mozambique (in this case often also uncertified).

Furniture ecosystem map (snapshot) of Southern Highlands and Dar es Salaam



Sao Hill Industries Ltd operates two sawmills and a pole plant, producing and selling high-quality sawn timber and treated timber. Tanganyika Wattle Company Ltd (TANWAT) produces high-quality plywood and blockboards. Both actors are foreign-owned. Local factories are, for example, Tanganyika Plywood LTD who produce hardwood eucalyptus core veneer and plywood[8], as well as high-quality timber for local and export markets. MW Limited in Mafinga is the only actor in the area who utilizes finger jointing technology. They mainly produce plywood and blockboards.

In recent years, numerous Chinese veneer and plywood factories have been established in the Southern Highlands, mostly sourcing wood from local farmers and actively marketing their products in East Africa as well as servicing their home markets.

Smallholder farmers process the raw material with available technology into timber, which they then sell on local timber markets.

INSIGHTS

TIMBER SOLD ON LOCAL WOOD MARKETS

The timber sold on local wood markets is often not properly dried due to a hurry to sell the timber and make profits or due to a lack of know-how on how the timber should be properly dried in order not to crack or bend. Kiln machines are costly and not available to smallholder farmers. Timber buyers (often carpenters) cannot know if the timber they are buying has been dried properly and so the quality of their produced furniture is unreliable.

PROPERLY-DRIED TIMBER

Sao Hill Industries sells properly dried timber which is essential for producing high-quality furniture that does not crack. Currently, they only sell in large quantities and source their raw materials from large plantations, not from smallholder farmers. Additionally, there are some other smaller enterprises producing quality dried timber. The PFP2 program has a small kiln and can produce small quantities of good quality wood for carpentry.

8 Plywood is a type of manufactured wood panel. It is made by gluing together plywood layers, also called veneers. Veneer refers to thin slices of wood that are practically peeled of the wood

Southern Highlands Furniture Production and Capacity Building

At this stage of the value chain, furniture manufacturers have acquired quality dried timber and now go into the furniture production process. With available workshop spaces, technologies and tools, they often produce a range of wooden furniture such as beds, tables, cupboards, shelves, sofa sets, etc., depending on customer wishes.

Next to the many independent carpenters in Iringa, Mafinga and Njombe, two furniture associations were brought to our attention. The Furniture Association in Mafinga and the Furniture Association and Producers in Njombe bring together numerous carpenters to help each other out in fulfilling orders and supporting another. However, they all produce a whole range of furniture and each piece from beginning to end. Thus, they are not specializing or building their capacity in any section of the field.

Other furniture producers in the Southern Highlands and specifically Iringa are Mandela Furniture which sells traditional but slightly lighter furniture with quality finish, Neema Crafts whose furniture is light, mostly produced by teak, has a Western design, is of high quality and expensive compared to local pieces, and RLabs Iringa which is starting up, with a contemporary touch to the design, often copied from Pinterest, and still in the process of improving their quality. Neema Crafts' main mission is to provide training and employment opportunities for people with disabilities. The center has eight different handicraft workshop areas, among which a woodwork workshop has been recently established. The workshop is producing high-quality furniture. RLabs Iringa initiates social innovation programs and entrepreneurship training to empower young people and improve their possibilities to earn their living, which solves tensions in the community. Recently, they have further established a workshop where they experiment with adding value to offcuts (*mabanzi*) as a potential way of generating value from what is essentially discarded as waste.

Furniture production capacity building is done in small scale by the above-mentioned Neema Crafts and RLabs Iringa. PFP's Forestry and Wood Industries Training Centre (FWITC) has a plan to establish a vocational program and start training young people in producing furniture from sustainably-sourced wood such as eucalyptus and pine from smallholder farmers. This training program is included as work package 2 presented later in this paper.

INSIGHTS

LACK OF SPECIALIZATION

The furniture production in the Southern Highlands is shaped by a lack of specialization. Each carpenter or workshop creates the whole range of furniture products as well as doors and window frames instead of specializing and building their capacity in one section of the production line. This is understandable since the customer base mainly consists of locals with a wide variety of needs. Carpenters also oftentimes lack formal organization which could enable more collaboration and consequently specialization.

CARPENTER NEEDS: BETTER TOOLS, DESIGNS, AND SKILLS

Many carpenters in the Southern Highlands find their operations limited by the low quality of affordable timber for their productions. Aside from that, tools and technologies that are available to them are often outdated, if available at all, which limits the creation of high-quality products. More furniture designs would be needed as well as more skills development and training. At current, carpenters would benefit from improved skills in everything from design to woodworking, branding and marketing.

LACK OF CAPITAL TO SCALE

Capital to scale furniture businesses is not available.

PRODUCTS ABOVE SERVICES

In general, manufacturers focus on producing products. They do not have showrooms, nor do they do any marketing (exceptions are Neema Crafts and Mandela Furniture). There are no signs of service orientation. There is room for a more service-oriented mindset that would focus more on the customers and their needs.

Southern Highlands furniture customers

The customer base for carpenters in the Southern Highlands is largely composed of people living close to the furniture manufacturers and their shops. Other customers can be the government or alike, who will place bigger orders such as tables and chairs for schools, for example.

Some manufacturers have reported having been able to get orders from Dar es Salaam through word-of-mouth, but they remain exceptions. Neema Crafts is selling their products in Dar es Salaam through one reseller and is now in the process of opening up their own showroom in the Slipway shopping center. They are also currently building an online shop for their products.

INSIGHTS

NEIGHBORS

Key customers for furniture producers in the Southern Highlands are the communities in which the producers operate. Exports are rare.

INCREASING FURNITURE DEMAND

The demand for good to high quality and well-designed furniture is high. Customers are aware of quality and seek durable furniture. This might be the reason for furniture becoming bulky, as ther perception might be that “the heavier a chair, the more durable it is”. This leads to production of chairs that can be barely moved due to their weight.

Logistics

Part of the ecosystem and value chain are logistics partners, such as for transportation of goods and storage of goods. We have not focused on this aspect yet but are aware that it is part of the value chain and furniture ecosystem.

Dar es Salaam Furniture production

In Dar es Salaam, the local furniture production is equally shaped by carpenters. The Tanzania Woodworking Federation (TAWOFE) keeps a database of woodworkers in Tanzania. A few larger firms also produce furniture but mostly focus on imports.

Dar es Salaam Sales

Locally produced furniture in Dar es Salaam is sold by the carpenters themselves, workshops, furniture shops, or independent/individual sellers who source furniture from the open market and sell it through, e.g., WhatsApp groups or other social media channels. Apropos, while most furniture is still sold without online marketing, a good amount of sellers do use social media to market and sell their products (as also mentioned in chapter 2).

Dar es Salaam Furniture consumers

At the end of the day, everyone needs furniture for their homes and houses. While there are consumers who are looking for luxury furniture and are willing to play high prices, most people in Dar es Salaam are careful with their money and look for affordable furniture, either new or otherwise also second-hand furniture that can be refurbished if needed.

INSIGHTS

AFFORDABLE, WELL-DESIGNED AND HIGH-QUALITY FURNITURE
Consumers in Dar es Salaam want well-designed high-quality furniture they can afford to buy. Locally produced products are preferred but often do not meet their needs and desires. Increasingly smaller living spaces raise the demand of lighter furniture that is possible to assemble at home and disassemble when moving.

RELIABLE SERVICE
Consumers wish for more reliable furniture purchasing processes and services.

THE LAND OF A MILLION FUNDIS

The word *fundi* is a Swahili word that has multiple meanings in the language. Literally, it translates to technician, but it is commonly used for a person who is skilled in handicraft, repair, or maintenance. Thus, a carpenter, a mechanic, a tailor, a builder, a painter, or a plumber, for instance, can be a fundi. It has a positive connotation, as a fundi produces something needed, repairs something broken, or maintains something that would otherwise cease to function.

We believe it is relevant to present the most common furniture manufacturers in a bit more detail as they are at the heart of the Tanzania furniture industry. These local carpenters have been trained in a vocational school, in the family business, as apprenticeship, or have learned themselves to become furniture makers.

Fundis often operate out of small workshops and serve their immediate neighborhoods. Customers may know about a specific fundi, because they may have seen the workshop in their neighborhood and liked the furniture pieces that were displayed. They may have also heard from friends, family or acquaintances about a fundi who has done satisfactory work. Fundis usually do not engage in a lot of marketing (although some are actively showcasing their work on social media). They normally find their customers through word-of-mouth and by drawing customers in through their displayed pieces.

A fundi can be working alone, but often there are a handful of other fundis or younger apprentices working for the master craftsman (often not more than a handful, as the workshop spaces are seldom very big). One can also find many family businesses. On some occasions, fundis work together with each taking a different part in the production process of furniture pieces.

Fundis usually operate at a small scale as accessing enough capital to grow is difficult. Their workshop spaces are often small, and technology and tools are usually limited and often outdated. They make do with what is available and affordable. Furniture designs are often traditional designs they have had for many years or generations, copied from the internet, or based on customer wishes and their imagination, if possible.

Carpenters (fundis) in Mafinga, Njombe, and Dar es Salaam

We roughly mapped the current furniture ecosystem of the Southern Highlands and partly Dar es Salaam, where our target group resides. We presented our research insights and provided a glimpse into the lives and work of local carpenters (fundis).

After considering the current state of the Tanzanian furniture market and the middle class in Dar es Salaam in chapter 2, and the value chain and furniture ecosystem in the Southern Highlands and Dar es Salaam in chapter 3, it is now time to narrow the project scope and make decisions on how to move forward.

Photo by James Kasela

4 OPPORTUNITIES

IN THIS CHAPTER YOU WILL FIND:

IDENTIFYING INTERVENTIONS IN THE SYSTEM

TOWARD SUSTAINABILITY

NARROWING DOWN OPTIONS

DESIGN CRITERIA SUMMARY

PLEASED TO MEET YOU—OUR IDEAL CUSTOMERS

COMMUNICATING TO CUSTOMERS: SHOP FOR STYLE AND
CREATE LOCAL PROSPERITY

OPPORTUNITIES

In this chapter we start narrowing the project scope. First, we present several interventions in the ecosystem we have been able to identify, which would support the current ecosystem and improve sustainability. We then systematically document and analyze the various options that are present in the furniture market arena. We explain the decisions we make to frame the scope of the opportunity on which we will focus next. Finally, we present three of our potential customers in the form of personas, as well as how to optimally communicate to them.

IDENTIFYING INTER-VENTIONS IN THE SYSTEM TOWARD SUSTAINABILITY

During our research, we identified several intervention points in the furniture ecosystem. Identified interventions with potential are briefly presented next. While some of the interventions can be undertaken by our project, others might be covered by different actors. Nonetheless, all interventions are potentially powerful actions for supporting the overall system and improving its sustainability.

SOUTHERN HIGHLANDS

RAW MATERIALS

Entrepreneur / Intermediary
Buys large amounts of quality and properly dried wood from, e.g., Sao Hill Industries, and sells it in smaller quantities to local carpenters. This could partly solve the bad quality wood issue that carpenters struggle with.

Smallholder farmers & kiln-dried wood
A mobile kiln machine could be offered as a service to smallholder farmers and communities, so properly dried and high-quality timber can be sold by them.

Kiln business
An entrepreneur who has a proper sized kiln and potentially provides transport from the smallholder farmers to the kiln to get wood dried within the required time frame.

SOUTHERN HIGHLANDS

FURNITURE PRODUCTION

Shared spaces with better manufacturing tools
Acquiring better tools and furniture manufacturing technologies is expensive for carpenters. Sharing tools among carpenters hasn't worked at times, unless there is a common space where carpenters come in to do their work. (More) spaces like that could be established in Njombe, Mafinga, Iringa.

Tool rental or "tool library"
As an alternative to shared spaces, there could be a tool rental business or a "tool library" financed by the project.

Capital provision/low interest rate loans
For carpenters and manufacturing businesses to scale, by acquiring better tools and technologies, next to investing in skills development and training, and marketing, etc..

CAPACITY BUILDING

Apprenticeship program/Specialization
Skills training for individuals at the PFP2 workshop and with PFP2 technology. These individuals then pass on their skills in their communities. Each individual (and cluster of carpenters) would focus on one product type to master it and be able to create a high-quality product. Altogether, one product line (and later more) is created which could be sold under one brand or no-brand.

Local and Nordic design collaboration
In order to develop beautiful product lines and high-quality products, local and Nordic design talent (possibly also woodworking talent) collaborate.

Service mindsets
The trained individuals are introduced and trained in service-centric thinking to provide excellent service for their customers, stand out, and pass on that knowledge.

Entrepreneurship training
Carpenters get extra capacity building through entrepreneurship training to, on top of producing products for this project, also be able to improve their own businesses.

Vocational schools
In general, vocational schools could be utilized as training places, next to PFP2's training center.

SOUTHERN HIGHLANDS

DAR ES SALAAM

CUSTOMERS

There is no intervention identified so far. However, through the improved quality of the furniture produced locally, also the current local customers will benefit.

LOGISTICS

Entrepreneur
There will be a need for transport of furniture from the Southern Highlands to Dar es Salaam. This could be provided through a logistics service, potentially also providing packaging and package materials.

Entrepreneur
Either the same entrepreneur or another could handle delivery and potentially assembly in Dar es Salaam.

FURNITURE PRODUCTION / SALES

Higher quality locally produced furniture to meet the demand
In order to boost and support the local economy, local furniture demand should be met locally. As there is high demand, which is currently covered through imports, an opportunity is to introduce sustainable locally produced furniture to the market.

Boosting the local economy through a local impact startup
A new impact startup based in Dar es Salaam can sell sustainable, well-designed, high quality and locally produced furniture. This furniture could be produced in the Southern Highlands and sold to the Dar es Salaam middle class.

DAR ES SALAAM

CUSTOMERS

Service and user centricity
It has become clear that a user-and service-centric approach to selling furniture to consumers is needed and would allow us to stand out from the crowd. This can be implemented through a startup.

Storytelling and marketing that speaks to the Dar es Salaam middle class
The sustainable and locally produced furniture and product lines from the Southern Highlands carry a valuable story which can be told to the consumers in Dar es Salaam. Proper communication and marketing to address the needs and desires of the middle class in Dar es Salaam is needed. This can be implemented through the startup.

NARROWING DOWN OPTIONS

There is a need to prioritize the identified opportunities/interventions. The table (next page) shows an overview of the furniture market arena considered through 16 categories. In the following, we outline the available opportunities per category and explain the reasons for choosing the ones we have decided to focus on (dark green) for this project and at this stage.

APPLICATION In this project, residential furniture is the focus. This decision has been made based on the initial intention to develop affordable furniture for the middle class in Dar es Salaam (and possibly other bigger cities in Tanzania/ East Africa) and the market analysis for this area. It also aligns with the available scope of the project. This was signed off by the project's steering group in December 2020. Other furniture applications in the arena are offices, public spaces, outdoor furniture, or governmental institutions, which we are not including.

CUSTOMER Customer groups are the general public, luxury-focused consumers, and governmental procurement. During the first steering group meeting, it was confirmed that the Tanzanian government as a customer is challenging and limiting. Customers focusing on luxury furniture already have a good selection in Tanzania. Hence, we focus on the general public.

CONSUMER SEGMENT The targeted consumer segment is the Tanzanian urban middle class, specifically young to middle-aged people (see more details on this in chapter 2). The option of potentially also addressing low-income or high-income consumers (in the future) is kept open, depending on production possibilities and business model developments.

GEOGRAPHY Opportunities are generally available in various geographies: Tanzania, Tanzania & Kenya, East Africa, or the Global North. While all are considerable options, Tanzania is focused first to support the local economy and benefit the Tanzanian people.

MATERIAL In this project, wood, blockwood, or plywood is utilized to produce furniture. Currently, wooden furniture is predominantly made of hardwood. However, utilizing indigenous slowly growing hardwood is not a sustainable option (unless sustainably grown and certified). Therefore, possibilities of producing furniture from sustainably grown eucalyptus (fast-growing hardwood) and pine (as available, grown, suggested by PFP2) are explored. As slowly growing hardwood of various species is still in high demand by consumers, the option of using small amounts of certified hardwood, or hardwood covered plywood needs to be kept open, if it seems necessary in the beginning to get the project on its feet. For now, hardwood as well as other materials such as bamboo, rattan, or similar are excluded.

Metal and textile as materials are considered to complement the wood furniture. It is practical to combine wood with metal (to make the furniture more stable and easier to assemble by the consumer) and soft materials such as textiles for customization (this metal or textile could be recycled). The usage of plastic, except for filling in pillows or softening, is definitely excluded as it is neither desirable nor ecological.

CATEGORIES	OPPORTUNITIES					
Application	residential / homes	offices	public spaces			
Customer	general public	luxury	governmental			
Consumer segment	middle-class, young middle-age	middle-class	low-income	high-income		
Geography	Tanzania	Tanzania & Kenya	East Africa	Global North		
Material	wood	block wood/plywood	metal	textile	plastic	
	Eucalyptus	Pine	certified hardwood	bamboo/rattan/ similar	hardwood	
Product range	Sitting room	Office	Sleeping room	Kitchen		
	sofa sets/chairs/beds	desks	beds	cupboards		
	shelves	chairs	wardrobes			
	coffee tables	shelves	dressing tables			
	TV tables/shelves	dividers	drawers			
	dining tables					
	dining chairs					
Price point	affordable	medium	luxury			
Production	new training center/ workshop	existing workshops	new factory	custom-fabricated		
Variety	new production	resale	second hand r efurbished			
Product specifics	functional / light / plain (Scandinavian)	modular	decorative alternatives	heavy	highly decorative	romantic/kitsch
Channel	new online	new off-line (show-room / shop)	social media	existing online	existing offline (shops)	
Brand	own	no-brand FUNDI	carpenter collectives	carpenters' names	existing local brand	existing foreign
Service	self-assembly	showroom	assembled			
Logistics	centralized ware-house	transport to Dar es Salaam	self pick-up from warehouse	home transport		
After life	return	recycling	upcycling	re-selling	throw-way	
Backward integra-tion options	carpentries	stores	online platforms			

The market arena in which we are operating. The most saturated color indicates our focus, the less saturated color indicates that we are considering this (in the future). No-color (white) indicates that we exclude these options in this project.

PRODUCT RANGE Furniture in Tanzanian middle-class homes is needed in the sitting room, in sleeping rooms, office spaces (if available), and potentially also kitchens. Sitting rooms are where the family gets together, where guests are welcomed, where people eat at times or even sleep. Sitting rooms were considered the most important rooms in the homes. Therefore, sitting rooms will be the focus, which also aligns with the consumer segment (including young middle-class families and new homeowners). This entails sofa sets, -chairs, -beds, shelves, coffee tables, TV tables and shelves as well as dining chairs. Office desks, chairs, shelves and sleeping room beds are also considered to meet the consumer needs. At this point, office dividers, sleeping room wardrobes, dressing tables, drawers, and kitchen cupboards are excluded.

PRICE POINT Furniture price points can range from affordable to medium to luxury. In alignment with the decisions on the customer and customer segment, low to medium price points are addressed (affordable), excluding luxury.
For this project, the consumer perception further needs to be shifted so that consumers are willing to pay similar prices for pine/eucalyptus furniture as they would otherwise pay for hardwood furniture. The pricing of the designed furniture should be aimed to be cheaper than local currently produced hardwood furniture offered on the market. The quality of the designed products needs to be excellent in order to achieve as high durability as comparable hardwood products. Consumer trust needs to be built and marketing needs to address possible consumer doubts. The startup e-commerce platform which will be mentioned in the next chapter, will provide means for testing price points and price sensitivity. It must be noted that such an online platform would need to compete with local carpenters who do not charge VAT (18-20%) or additional margins.

PRODUCTION Furniture production will take place at a new training center and workshop (PFP2) as well as local existing workshops in the Southern Highlands. This has been identified and deemed feasible during our research. At this point, the options of building a new factory or developing custom fabricated furniture are excluded.

VARIETY In this project, the furniture which is produced will be new. Existing furniture can be resold to develop the value chain while the new furniture is in development. Second hand or refurbished furniture is excluded in this project.

PRODUCT SPECIFICS The furniture that is going to be produced shall follow strict design and quality guidelines, which will be co-developed. The furniture should be functional, light and plain ("Scandinavian" style), as well as modular, with decorative alternatives to meet various customer desires. Heavy, highly decorative or romantic/kitsch furniture (styles) are excluded.

Example of a simple, light table/stool which can easily be self-assembled, sold by AllModern.com.

CHANNEL A new online channel (e-commerce platform) is created to reach the customers. With time, a new physical showroom or shop should be established in Dar es Salaam to meet consumer needs for being able to touch and look at the furniture before buying it. This also allows for a fully “branded” and experiential environment. Social media channels (Facebook, Instagram, WhatsApp) should be included to guide consumers toward the web shop and spread the word. The option of utilizing existing online platforms or shops for selling the products is excluded.

BRAND A new brand is developed, which is, however, a no-brand[9]. This means that the products will not visibly have a brand logo or alike. Instead, the craftsmen and craftswomen (carpenters) or collectives, who have produced the individual furniture pieces, will have their own stamps which will be placed in a subtle place on the product. This stamp indicates who has produced the piece and when and gives credit to the individual craftspeople instead of the overall brand. This also emphasizes the purpose of the project and stands out in between many of the existing brands. It celebrates the local carpenters and tells a/their story. All the stamps will have a similar structure to connect them to the no-brand. Some existing strong local brands such as Neema Crafts will also be part of the brand. We exclude using a foreign or existing brand.

SERVICE Customers can self-assemble the furniture at home, which provides greater flexibility, solves transport and fitting problems, and brings costs down. The products are showcased in a showroom in Dar es Salaam so that trust can be established with the customers. Offering ready-assembled furniture or assembly service, as this might still be desired, is still considered.

LOGISTICS Transport from the Southern Highlands to Dar es Salaam will be needed. Two options are possible. First, products are transported to a centralized warehouse in Dar es Salaam (potentially, the warehouse could be estab-

9 such as Muji whose name derives from the first part of *Mujirushi Ryōhin*, translated as No-Brand Quality Goods. Muji’s design philosophy is minimalist, and it places an emphasis on recycling, reducing production and packaging waste, and a no-logo or “no-brand” policy.

lished in collaboration with TAWOFE, the Tanzania Woodworking Federation). From there, customers can pick up their orders themselves, which would bring down costs on that end, and be easy if the furniture was flat-packed and could be self-assembled. Home transport options can be considered. This option of products being in stock requires investment and means higher costs on that end. Products could be built-by-order, which might be less attractive for consumers as there is a risk of losing customers due to extensive waiting times. It also requires a lot of coordination. Fabrics would need to be stocked either way, however. Both options (in stock & built-by-order) require thorough considerations, also for the startup's business plan. Research into consumer's willingness to wait and current waiting times as well as other aspects need to be conducted before finalizing the business plan. Timeline agreements with producers might be needed if built-by-order is selected.

AFTER LIFE A significant factor to consider is what happens when the customer no longer desires the furniture they have bought. In the name of sustainability, options for them would be to independently recycle, upcycle, or re-sell the item. Optimally, the customer would be able to return the product to the brand so that the piece and material is recycled or upcycled and resold (such as Artek 2nd Cycle or Franckly). Cases where customers throw away furniture after usage need to be prevented by all means in order to create a sustainable product life cycle. It needs to be made as easy as possible for them to return the used pieces. At this point, however, more research on this has yet to be done before making a decision on how to approach this.

BACKWARD INTEGRATION OPTIONS At a later stage, it will be considered which aspects of the business will be owned by the brand itself and which services are outsourced. Outsourcing options are carpenters, stores, or other online platforms. This needs further exploration on how it would affect the business model and brand/products.

DESIGN CRITERIA SUMMARY

This section gives an idea about the general look and feel of the furnitures which shall be designed and produced. The design criteria are intended primarily for designers and people involved in the design process to provide guidance in the design process later.

Design criteria are a set of criteria that need to be met in designing a product or service (or system for that matter). The thinking goes that with markets constantly evolving, one can never exactly know from the onset which kind of products or services will have market fit, or in other words, what a sufficient design is. However, we can know with some certainty what kind of design characteristics are necessary (although not sufficient). The design criteria described in this section are a set of characteristics of the envisioned service (system) that provide clarity and direction for designers in the future. The criteria deal not only with "product-market-fit", but also with the broader aim of long-term capacity building and market creation around the local furniture industry.

The product design criteria:

1

OUR PRODUCTS ARE MADE FROM SUSTAINABLY PRODUCED MATERIALS (PLANET)

In full alignment with this project's mission, sustainably-grown wood from the Southern Highlands in Tanzania is the key material from which our furniture is produced. Other materials used to make the furniture more flexible, durable or desirable, such as metals or textiles, need to be sourced carefully and in alignment with the sustainability value. Options here are to make use of recycled materials, for example.

2

OUR PRODUCTS ARE DESIGNED TO FIT SMALL URBAN LIVING SPACES (FUNCTIONAL)

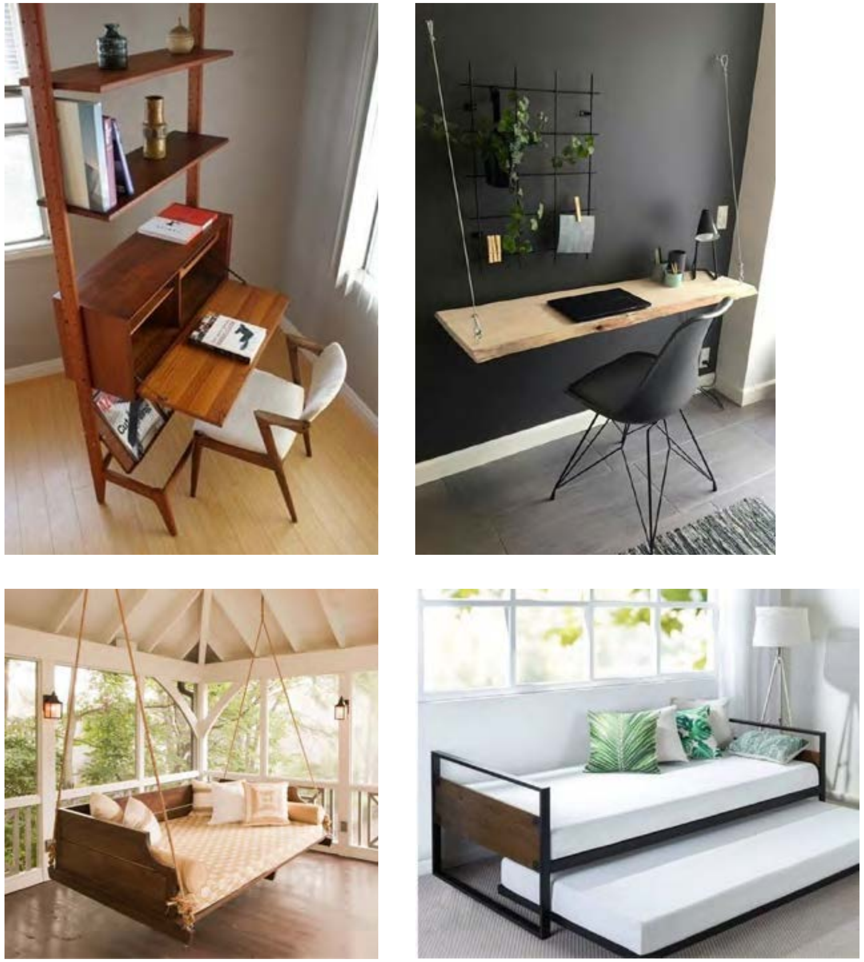
Our target group is looking for smaller and lighter furniture that can be modified according to personal needs and changes in their environment. This means:

1) *possible to disassemble*–to allow for home assembly to accommodate the small urban homes, *foldable*–to save space–or *modifiable multi-functional* pieces of furniture; for example, the same sofa could be sold with legs, with a box underneath (that could be utilized as an extra bed) or with ropes to hang, as options;

2) *open* shelves and cupboards to accommodate high humidity in Dar es Salaam;

3) *durable* furniture with *quality finishing*, and which is *easy-to-clean*;

4) while being *functional*, the furniture still needs to be *comfortable* and have a cozy feel to it.



Examples of desirable furniture selected by research participants on Pinterest.

3

OUR PRODUCT DESIGNS ARE WHAT THE TANZANIAN MIDDLE CLASS IS LOOKING FOR (DESIRABLE)

Our Tanzanian middle class representatives desire either big, bulky and heavy furniture, with dark colors, carved wooden decoration, and “kitschy” items combining metal and glass, or on the other hand, “lighter” furniture with more simple styles and designs and lighter colors. We focus on the simple side of the spectrum as it aligns the most with our functionality and production requirements mentioned above such as light weight, possibilities for modification, as well as home assembly. Words that define this choice of style: *simple clean cuts, modern, cool, geometric forms*.

Overall, *unique furniture* is highly desired by middle class Tanzanians in order to stand out. This can be solved by providing optional choices. For instance, a simple wooden sofa structure can be sold in its basic plain form, or with one panel painted by a local artist, or carved by a skillful local carpenter, making it unique. Likewise, the same sofa can be sold with pillow covers in black, pastel colored velvet, bright patterned local textiles, or locally handicraft embroidery for a more luxurious style (potentially for export).


Examples of geometric forms in furniture, selected by research participants on Pinterest.


Research participants further selected furniture produced from recycled materials as desirable, which supports design criteria 1.

Examples of geometric forms in furniture selected by research participants from Pinterest.

4

OUR PRODUCTS DO NOT REQUIRE HIGH-TECH EQUIPMENT TO BE PRODUCED (FEASIBLE)

We offer relatively simple furniture designs that can be easily produced with simple production tools, as high-tech equipment is not available most of the time. Combining wood with metal will make the joints more simple and strong and ensure stability of the furniture, also in consideration for the self-assembly aspect. Simple structures and standardization will further enhance the quality of the product, next to quality finishings.

5

OUR PRODUCTS CAN BE FLAT PACKED TO BE DISTRIBUTED ECONOMICALLY (VIABLE)

Products should be tight and/or flat-packable for transportation from the Southern Highlands to and within Dar es Salaam in order to reduce costs and allow customers to handle the products easily themselves, if they decide to self-assemble them at home. This further supports the consumer need for affordability without compromising quality and durability.

Additional design aspects and considerations in Appendix D.

PLEASED TO MEET YOU— OUR IDEAL CUSTOMERS

While our target group has been roughly described in earlier chapters, we now present personas of our ideal customers. This is to help understand the representatives of the target group in a more concrete way and to support the development of the solution concept. We are introducing Joy, Menart and Miriam below.

JOY, 37 YEARS OLD

Digital-savvy | 700 000 | Simple + quality | Renting an apartment

Joy works in a government ministry. She has studied economics in University of Dar es Salaam. Her monthly salary is 700 000 TZS. Her husband John is doing casual work in the informal sector and selling agricultural produce. They live in Dar es Salaam. They have a 4-year old son who goes to kindergarten. They are renting an apartment in a good area, but they don't have much space. They are looking to decorate their home little by little. They want simple, beautiful designs. While they are ready to spend a little bit more on style especially for living room furniture, they are still managing a budget and want to make the best bargain. They also want the furniture to last for a long time, that's why good quality is the number one priority. They would prefer local businesses using quality wood, if they were able to find the right style and level of finishing.

MENART, 32 YEARS OLD

Digital- savvy | 1200 000 | Unique + modern | Building a house

Menart is originally from a village in Northern Tanzania, but he now lives in Dar es Salaam with his wife and two daughters. Menart works for his father's successful import company, and he is likely to take charge of it one day. His monthly earnings are 1 200 000 TZS. His wife sells self-made clothes and jewelry online. They have purchased land and are building a house in the popular suburban area of Wazo Ward. They usually hire a carpenter to make things that they want based on inspirations found on Instagram. They like modern style with some unique stand-out details. Now they are considering buying imported furniture to find more variation in styles and a better level of finishing. They are going to showrooms to look for styles, but they still want to keep it affordable, because they are prioritizing paying for education for their children and helping out their close relatives.

MIRIAM, 27 YEARS OLD

Digital- savvy | 600 000 | Urban + affordable | Rents a house

Miriam has studied marketing in the university. She is doing volunteer work for an NGO and is working for different TV-productions. Her monthly earnings are around 600 000 TZS. She has a strong presence on social media. She uses her smartphone throughout the day for entertainment, pleasure, work and making connections. She is looking for furnishing her house in Dar es Salaam. She wants to buy something of her own. She likes urban and creative style, but she is having trouble finding furniture that fits her house, has an interesting style and that she could afford at this stage of life. She thinks that Chinese imported furniture would be affordable, less heavy and fashionable, but would break sooner than the locally made.

COMMUNICATING TO CUSTOMERS: SHOP FOR STYLE AND CREATE LOCAL PROSPERITY

Based on our target group research and with our ideal customers in mind (see above), a few things stand out which need to be considered when communicating to and addressing our Dar es Salaam middle-class customers. We are highlighting them next.

Style, quality and affordability should be the brand's key selling points, while local well-being should be highlighted as the brand's key ethical value.

First, communicating and storytelling should most importantly be about connecting with urban, transnational and contemporary East African middle-class lifestyles.

Second, we should stress making the most of local resources for the benefit of the community, more than global environmental goals or consumer responsibilities.

Finally, the brand could aspire to engage with the cultural ethos of actively creating a future of prosperity and well-being and use that as a framework to promote sustainable environmental and socio-economic development.

By focusing on local ethics, identities and aspirations, we could speak to different middle-class groups in a way that would not be immediately rejected as privileged Northern ethics, while still inviting and associating sustainable values and actions even more into the desirable future.

The online content would benefit from being locally produced, relatable and accessible (available in local languages). In the future, digital possibilities such as apps could be explored from the perspective of "cool ethics" that can speak to educated higher middle-class groups. On the other hand, a physical showroom would benefit gaining customers that are not skilled users of digital media and who are not used to online shopping.

In the course of this chapter, we identified and narrowed down possible interventions and opportunities that would support sustainability in the system. We also presented the customer personas and a framework for communicating the brand to them. In the next chapter we will present our solution vision and the concept in detail.

5 A HOLISTIC APPROACH FOR TRANSITION IN THE TANZANIAN FURNITURE MARKET

"You've got to start with the customer experience and work your way back toward the technology, not the other way around... The customer, not the technology must be the core of your strategy."

\- Steve Jobs

IN THIS CHAPTER YOU WILL FIND:

A HOLISTIC APPROACH FOR TRANSITION IN THE TANZANIAN FURNITURE MARKET

In this chapter, our solution vision and concept are presented. We specifically envision a potential future value chain and then detail four sets of interventions in the form of work packages. The chapter closes with an action and funding plan.

THE VISION: A POTENTIAL FUTURE VALUE CHAIN THAT IS INHERENTLY SUSTAINABLE

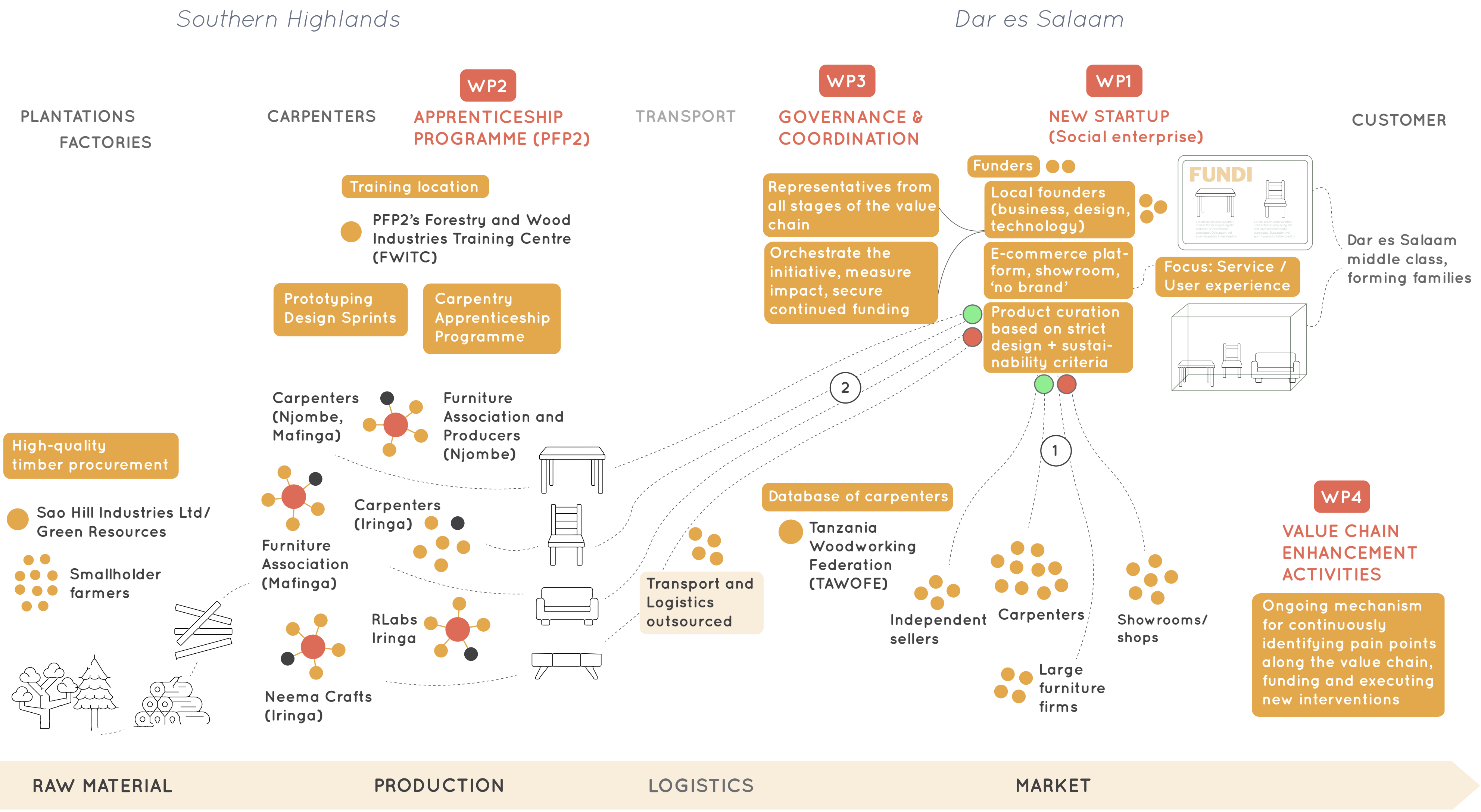
The geography of the proposed value chain spans from the Southern Highlands (Iringa, Mafinga, and Njombe) to urban Dar es Salaam. Generally speaking, the Southern Highlands entail the Raw Material and Production phases of the value chain, whereas the primary Market is located in Dar es Salaam. We will explain the desired value chain and selected interventions that are necessary to make it possible next.

THE FIRST SET OF INTERVENTIONS includes the founding of a new *Startup* company, located in Dar es Salaam. Our market analysis confirmed the assumption that there is an untapped need for high-quality, affordable design furniture. However, there is currently no marketplace where we can reach the target consumers. The primary role of the startup is to create a brand (or *no-brand*) and launch an e-commerce web service around high-quality design furniture for the urban middle class. The business model is at first based on sourcing (or curating as we will come to call it) existing furniture directly from the best local carpenters and workshops in Dar es Salaam. This allows the startup to attract consumers as quickly as possible without having to deal with the costs and uncertainties related with production. In the meantime, our own design and woodworking capacities are ramped up. (See work package 1)

THE SECOND SET OF INTERVENTIONS relates to how furniture production in the Southern Highlands is improved through an apprenticeship program. We propose this to be established through PFP2. The *Apprenticeship Programme*[10] trains carpenters from the Southern Highlands and offers apprenticeship through participatory practices. The carpenters and their colleagues are trained and incentivized to manufacture specific co-designed furniture pieces for the sustainable furniture line sold by the startup. (see work package 2)

10 British English is used for program names to align with PFP's working language.

Vision of the future furniture value chain

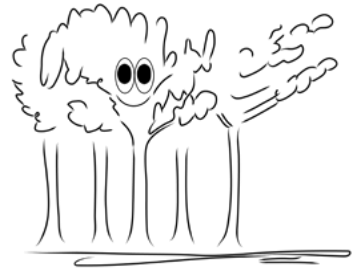


THE THIRD SET OF INTERVENTIONS relates to the implementation of new governance models. At the core is a proposed multi-stakeholder steering group, where all value chain actors are represented, and a project coordinator. Initially, we propose that the steering group (a legal entity itself, e.g., a cooperative) would have the mandate to allocate some future budget. In addition, it could be a significant equity owner in the startup, exercising decision-making to ensure optimal impact and control of potential power grabs. (see work package 3)

THE FOURTH SET OF INTERVENTIONS deals with ongoing activities to continuously identify pain points and new impact opportunities along the value chain as well as directing resources to back new interventions. We call these *Value Chain Enhancement Activities*. For example, part of the Apprenticeship Programme's activities could be to procure quality timber of eucalyptus and pine that has been properly kiln-dried. This kind of high-quality timber is currently scarce. (see work package 4)

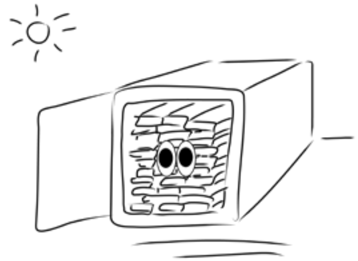
From plantation to home: A future furniture journey.

Unlike previously, there is now demand for sustainably-grown wood by smallholder farmers.

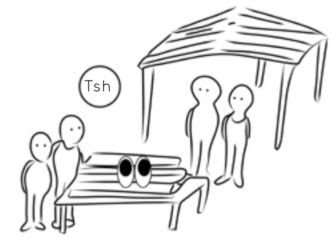


1 The journey starts with a tree on a smallholder plantation in the Southern Highlands, Tanzania.

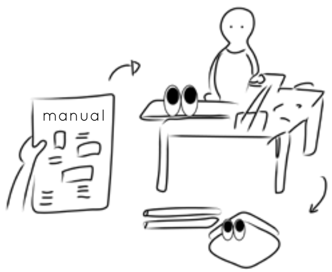
2 The tree is felled and processed into sawn timber with the available technology.



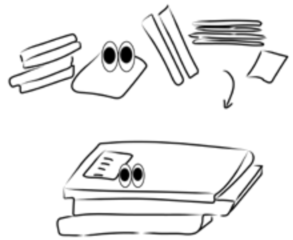
3 The timber is properly dried (several options) according to the Startup requirements. The timber quality is high.



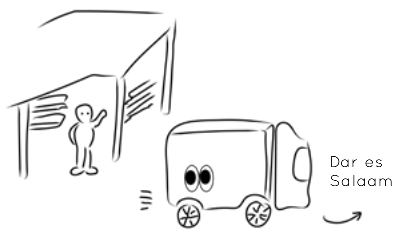
4 The sawn timber is sold to local carpenters that have gone through the PFP2 Apprenticeship Programme.



5 Local carpenters use to-them available technology to manufacture the sawn timber into crafted furniture pieces as per the design & manufacturing manual by the PFP2 Apprenticeship Programme.



6 The disassembled pieces for a product—in this case a chair—are flat-packed and stored until pick up.



7 A logistics partner picks up the flat-packed product from the carpenter/PFP2 Training Centre and transports it to Dar es Salaam.

8 In Dar es Salaam, the flat-packed furniture product is stored in a warehouse (located on the TAWOFE/Tanzania Woodworking Federation's plot).

9 The customer purchases and orders her favorite piece of furniture design online (while learning about the origins of it).

10 Last-mile delivery takes place according to customer preference (pick-up or home delivery).

11 At home, the customer unpacks the flat-packed package and easily assembles the furniture (unless they ordered the assembly service).

12 The customer experiences a sense of fulfilment and joy having self-assembled the stylish and light new chair.

WORK PACKAGE 1: FOUNDING A NEW STARTUP & E-COMMERCE BRAND

The pathway to offering high-quality, sustainably grown wooden furniture

The new startup builds a brand and online furniture store (e-commerce platform) for local quality design furniture made from sustainable wood, with a main focus on service and user experience. This is done in stages:

First and as briefly mentioned above, the startup curates existing furniture directly from local workshops at a profit and sells it on the online platform. It starts with sourcing existing products that are curated by a recognized and skillful local designer (with eye for detail and based on a common vision) to ensure enough platform users before introducing the startup's own product and design lines.

Next, once the Apprenticeship Programme in the Southern Highlands and associated carpenters and workshops start delivering high-quality pieces of furniture for the startup and brand, the focus of the online platform is steered toward these new product lines. The startup has a person employed who executes quality control for these products, locally in the Southern Highlands or at the Dar es Salaam warehouse.

When existing products are sold on the platform as well as the startup's new furniture lines, we will be able to see how desirable the new furniture designs (prototypes) are in comparison to existing and somewhat similar furniture on the market.

The choices of consumers, which will be documented through the online platform, will be indicators for what prototypes and designs work well, which ones need adjustments, and which designs are not working at all. If the first set of products does not sell, there will be new designs developed according to a similar design sprint program as the one that originally resulted in the products. Competitive price points and price sensitivity will also be tested through the online platform.

The startup, supported by the steering group and the project coordinator (work package 3), needs to further consider various business aspects.

For example, order options such as product-in-stock or built-by-order (which were briefly touched in the previous chapter) need to be mapped and thought out.

While the local market is small and people do not buy furniture often, continuous revenue needs to be ensured to keep the startup running and the carpenters employed so that they gain from the project. The idea is to start small with a few products (next to the curated products from Dar es Salaam) and grow along with the demand. A project coordinator (see work package 3) could keep carpenters and demand in balance.

Mechanisms to prevent "bleeding" (carpenters selling the startup's products outside of the platform) need to be developed. Consumers might try to contact our carpenters directly in order to save money. Penalties for carpenters selling outside of the platform could be an option. If noticed, they would be excluded and lose their rights to sell products on the platform. This might not prevent this fully, but it might slow down the process. The goal of the startup/brand is to eventually grow big enough so that open-sourcing as well as pirating and copying (which is very common) is not a threat to the business.

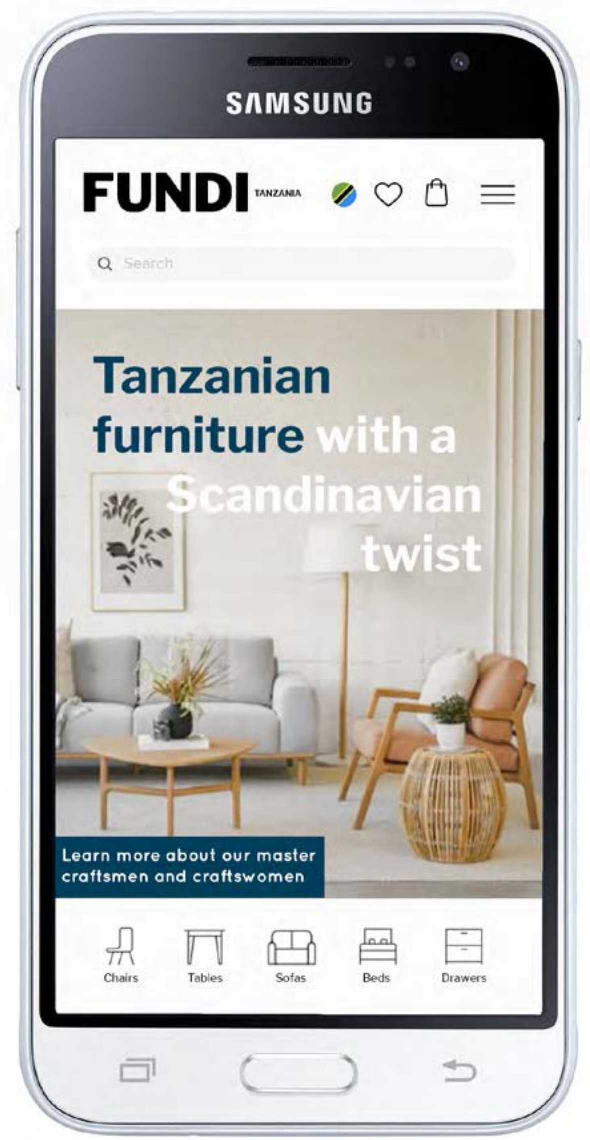
Finally, product "stickiness" needs to be explored: How do carpenters and also consumers stay engaged with the platform? Proper incentives for carpenters to sell through the platform need to be developed and tested.

From our project's perspective, the primary goal of the new startup is to create a test platform for new furniture designs created from sustainable wood. A data-driven model of continuous learning and adapting informs and drives the startup.

Ideation workshops

One of the first steps in this work package is to arrange a set of workshops where the name of the brand, different online platform options, and different marketing possibilities are tested. In this paper, we will use FUNDI as a placeholder for the brand as it represents the purpose well. However, we stress that we only use it as an example until different names are tested in the next phase. FUNDI as a no-brand name will likely not work locally as it might have negative connotations. The founders of the startup as well as potential consumers should be involved in the co-creation process and respecting workshops.

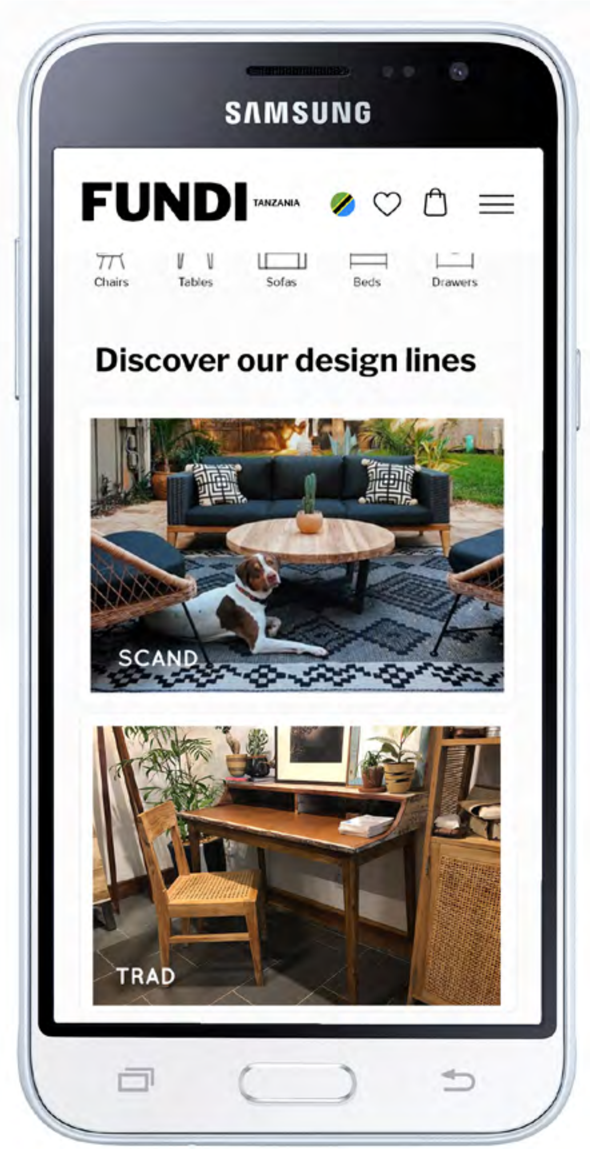
The brand's online furniture store and services (concept)



This mockup includes visuals from third parties

The online store's landing page.

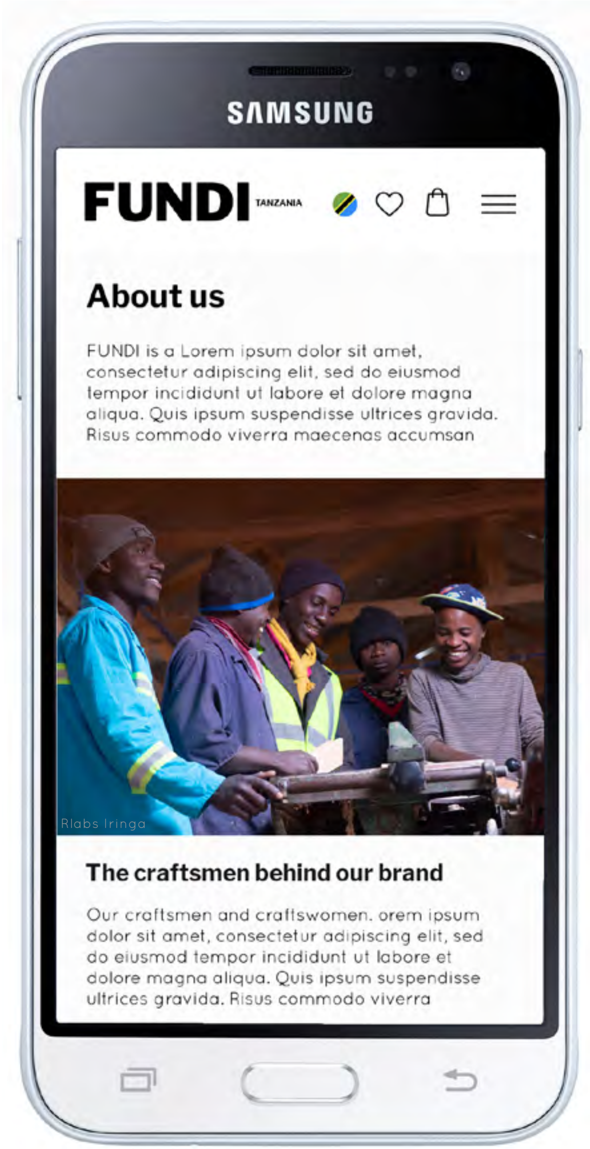
Welcome to FUNDI (working title)— the online store for design-loving people with an eye for detail.

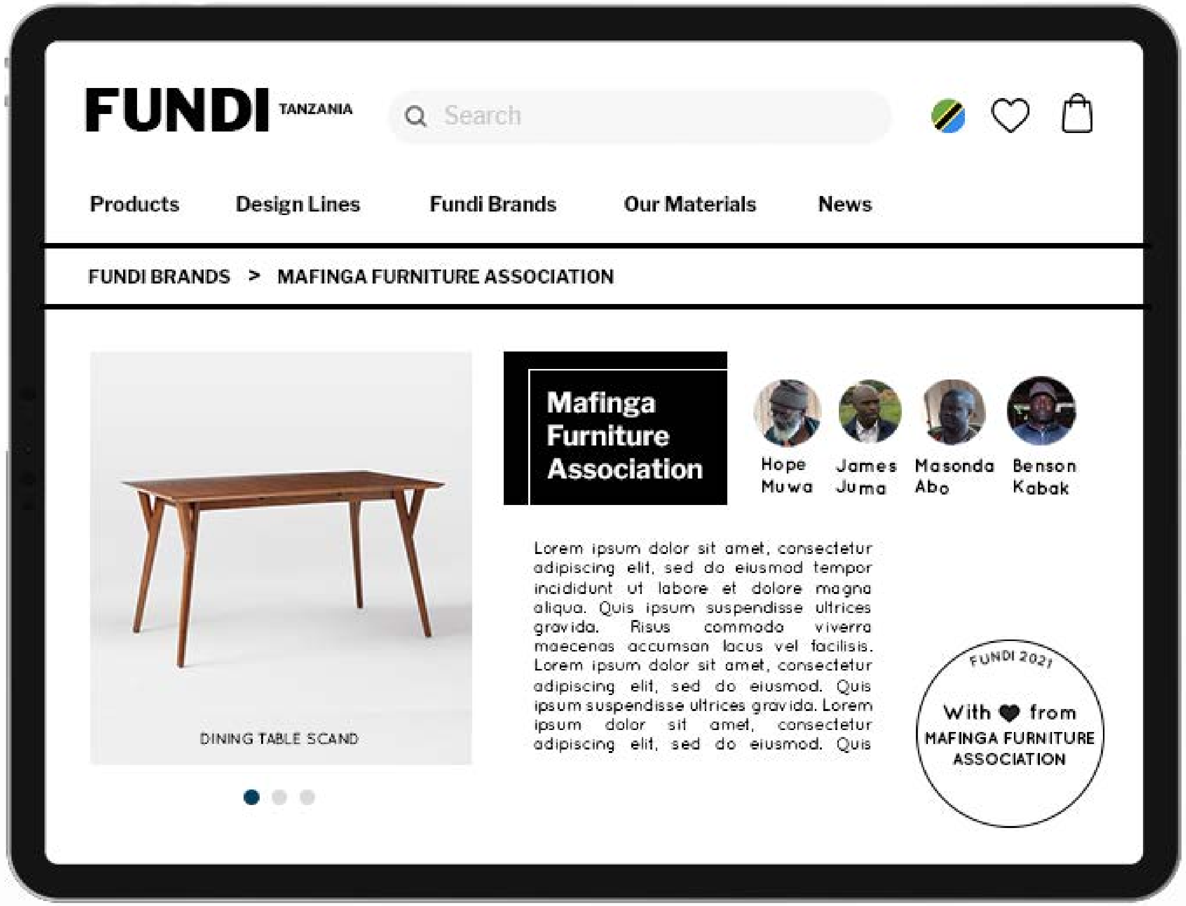


This mockup includes visuals from third parties

Introducing FUNDI's background and story.

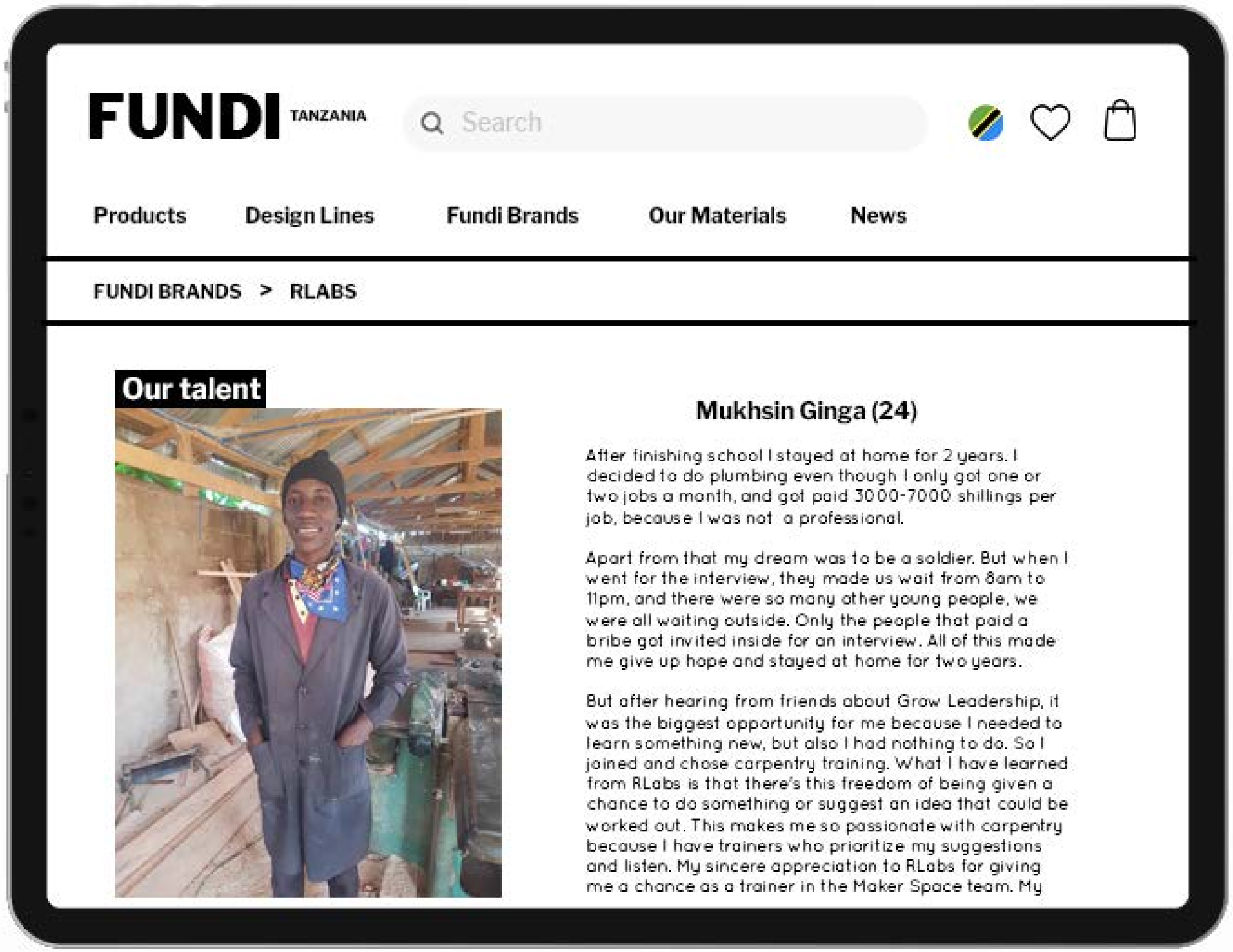
The SCAND (sustainable) and TRAD (traditional) design lines.



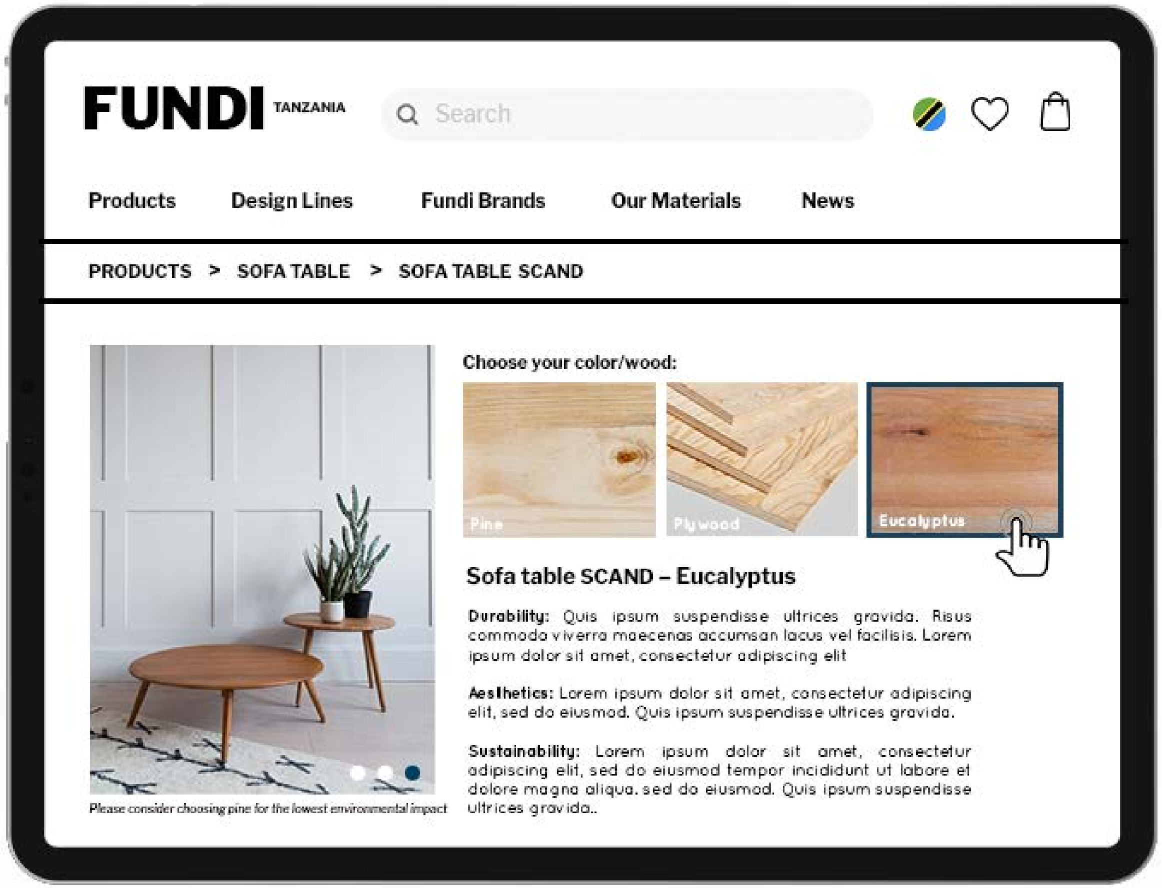


This mockup includes visuals from third parties

Each FUNDI "brand" has their own page on the store platform. It shows the product which an association or a single carpenter produces, and introduces the people behind the "brand".



Each FUNDI "brand" has their own page on the store's platform. It shows the product which an association or a single carpenter produces, and introduces the people behind the "brand".



This mockup includes visuals from third parties

Customers can select different furniture products and design lines. On the product page, the same piece can be ordered in different colors/wood types. Upon selecting a wood type, the product text adjusts and informs the customer on the durability of the wood and product, its aesthetic features as well as the sustainability of the product. Additionally, some of the products have alternative features such as pillows, to be chosen in plain colors or locally hand-crafted, or parts of the furniture, like handles or arm rests, in decorative carved wood or plain.

Startup founders, actions, and ownership

The founding partners of the startup are three local experts that are highly motivated to enter and mix up the local furniture market and to build this startup from the ground.

The first founding partner would be a business enthusiast who has experience in the entrepreneurial world, who is outspoken and charismatic, and can attract attention to this new endeavor.

The second founding partner would be a technology expert, who knows how to build an e-commerce platform, utilize data to develop the platform, and inform the startup's direction with top-class international know-how.

The third founding partner is a design expert with an aesthetic eye, or a skillful designer who is determined to make this startup and brand user and service-centered. They implement design into each aspect of the business–from how it works, how it feels, to how it looks.

In order to find local founders with fitting backgrounds, experiences, and motivations, a thorough recruitment process is required. Founders are hand-picked and have already worked in the industry and know the industry, or have had similar ideas. We have had first contact with potential entrepreneurs that could be good fits and we will utilize various networks in the recruitment process.

The startup is the enterprise selling the furniture both online and through showrooms. It is responsible for the platform and marketing. The ownership of the furniture designs must be discussed. The startup arranges the logistics of furniture transport from the Southern Highlands to Dar es Salaam and maintains a storage space, if that decision is indeed made. It is to be considered if the startup also offers assembly services in homes. The startup is further responsible for the curation and quality control. The curation happens in Dar es Salaam, purchasing locally produced furniture, and with time ideally sustainable furniture. To identify furniture makers in Dar es Salaam who produce good quality furniture of sustainable wood, the startup needs to reach out to various furniture makers. Quality control potentially happens in the Southern Highlands, accepting pieces of furniture produced by the local carpenters. When accepted, the piece gets stamped with a FUNDI stamp, revealing the origins of the product (more on this further below).

The startup ownership is to be discussed. One possibility is a majority-ownership by the steering group/cooperative, linking the PFP2 Apprenticeship Programme with the business. Another potential is to have a Nordic Furniture company as an equity owner in the company together with the local founders.

The way forward

The startup establishes a working service concept and business model. The startup's Minimum Viable Products (MVPs) are validated and a significant user base and test platform (for the new furniture designs from the Southern Highlands) are in place. The startup is prepared to apply for seed funding.

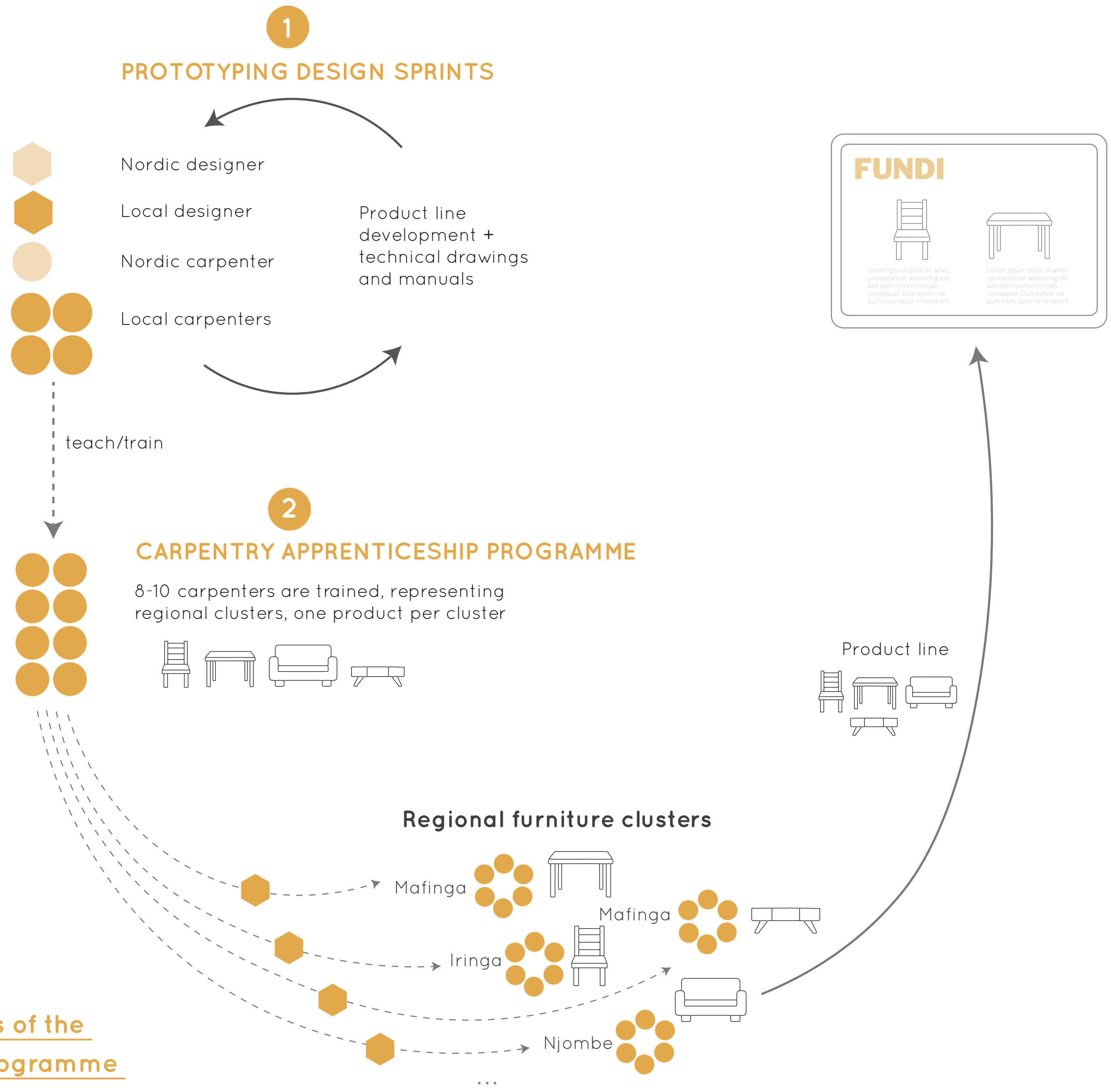
In order to reach these goals, negotiations with a Nordic furniture company to join as a shareholder should take place. Next, founding partners are to be identified and brought on board. A Board of Directors is to be established that supports the identification and implementation of founding principles and other mechanisms to secure sustainability, as well as other business and operational plans. The startup then works on setting up the online business, needed marketing activities, spaces for showrooms, and a storage.

Eventually, once the value chain for the sustainable product and design lines are established and the startup is running well, the startup could engage in product export. To set up a functional value chain for export activities is different from the local market and will not yet be considered in this paper and at this stage, but is important to consider in the future.

WORK PACKAGE 2: APPRENTICESHIP PROGRAMME (PFP2)

The *Apprenticeship Programme* is a training center for carpenters and shall be directly connected to the startup. The program offers apprenticeship for local carpenters who, as part of the program, are thought to produce the models for the sustainable furniture product line (called SCAND).

The PFP2 Apprenticeship Programme includes *Prototyping Design Sprints* as well as the *Carpentry Apprenticeship Programme*. Both will be described in more detail next.



Activities and programs of the PFP2 Apprenticeship Programme

Prototyping Design Sprints

"A design sprint is a flexible product design framework that serves to maximize the chances of making something people want. It is an intense effort conducted by a small team where the results will set the direction for a product or service." [1]

The purpose of the *Prototyping Design Sprints* is to bring the product line in shape and develop the production manuals for the furniture items in the product line. This shall happen within a 6-month timeframe. By that time, four educated local carpenters are ready to function as teachers in the PFP2 Apprenticeship Programme, teaching the skills needed to produce the furniture in the product line to other carpenters.

To make this happen, team members for conducting the prototyping design sprints will be recruited. We imagine a Nordic designer and a Nordic carpenter to be on site for about 4–6 months (depending on budget). They arrive with an idea of the production line, developed in close collaboration with Leapfrog, if the designer and carpenter do not represent Leapfrog. They start by closely working together with a local designer and four local craftsmen in a workshop setting, co-designing and prototyping the products one by one. The four local carpenters who were part of the design sprints continue afterward as teachers at the PFP2 Apprenticeship Programme, in the beginning under the supervision of the local designer.

The first three stages of the *Apprenticeship Programme* constitute of the *Prototyping Design Sprints* conducted as per the following:

STAGE 1: The designs for the product line will—as a starting point—follow the design criteria stated above in chapter 4. The first sprint entails co-creation with end users. The sprint is led by the Nordic and local designers who will prepare the material based on the design criteria. This means that furniture models are sketched, and paper prototypes are created and tested for different furniture alternatives.

STAGE 2: This sprint focuses on hands-on co-creation to finalize the product line, which is based on the results from Stage 1. Here, deep collaboration between the Nordic designer, the local designer, and the Nordic carpenter as well as the four skillful carpenters takes place.

STAGE 3: Technical drawings and production manuals are developed at this stage. The Nordic and local designers collaborate closely with the carpenters to produce the manuals.

Overall, continuous documentation and feedback shared by designers, carpenters, the consultant and steering group for the whole process of prototyping and learning is required. The design sprints can be repeated, in smaller scale and shorter time span, if the startup recognizes that some of the products do not sell well. Based on the feedback, either a new product is developed or the original one is changed.

Carpentry Apprenticeship Program

The goal of the *Carpentry Apprenticeship Programme* is to do capacity building in the Southern Highlands region and to assure high quality of the production line for the startup.

The *Carpentry Apprenticeship Programme* constitutes the fourth and fifths stages of the overall program (continued from above):

STAGE 4: This stage entails hands-on co-work led by the Nordic and trained local carpenters, and supervised by the designers, with 8–10 chosen carpenters who represent the clusters in the region. These chosen carpenters will learn to skillfully produce one particular piece of furniture of high quality and how to transfer the skill sets for producing these particular products to their respective furniture manufacturers' clusters.
The local carpenters who are part of the program are further co-developing and provided with their individual stamps. Each furniture piece is stamped at a subtle spot, indicating where the piece was produced (e.g., Iringa), by whom (the furniture association's name or an individual carpenter's name), and when (e.g., 2021). While FUNDI is a *no-brand*, it is through the stamps that the skilled work of the crafts people who have produced the individual pieces are emphasized. These craftsmen and women with their unique stories and backgrounds highlight that the furniture pieces are locally manufactured, with love to detail, and in a sustainable way.
Once a carpenter in a cluster has produced a product, he sells it to the startup. If it passes the quality control, the product can receive the stamp.

Stage 4 can be repeated if there are more than 8 clusters, if the quality received is not good enough, or if the individuals in a cluster change. Stage 4 also requires continuous and collective documentation and feedback by designers, carpenters, consultants and the steering group.

STAGE 5: The *Carpentry Apprenticeship Programme* regularly organizes affordable training and seminars for local carpenters to improve their skills in general, outside of the FUNDI program.

WORK PACKAGE 3: GOVERNANCE & COORDINATION

For the overall system transition concept to work with its different interventions, a governance model is required. Our proposed model has the following two bodies:

The steering group / cooperative

The multi-disciplinary *steering group/ooperative* represents all value chain actors: from raw material actors such as smallholder farmers and timber factories, to production actors such as representation of wood production, carpenters and PFP2, to designers, logistics, to market actors such as the startup. This steering group/cooperative builds up the structure and interlinkage between the different segments and between the various actors within the system. It is further responsible for making decisions related to funding. This entity is the majority owner or, if not, holds the rights of a majority owner of the startup.

Part of the work is to develop proper mechanisms to identify the right kind of startup founders and owners, as well as to identify and decide on a Finnish furniture company (potentially) as an equity or founding partner. An extensive recruitment process is needed which is to be defined and decided upon in this work page.

Project coordinator

The *project coordinator* is responsible for coordinating specifically between the carpenters and the startup. The production capacity of the carpenters in the Southern Highlands is currently very low. The project coordinator therefore needs to keep track of the production capacity of the carpenters in the Southern Highlands and communicate it to the startup. They also need to follow gaps in quality, foresee potential delays and needs for more carpenters to be trained. The project coordinator further responds to other related needs and challenges and coordinates with other relevant actors (steering group) to ensure a smooth process for all parties involved. This person is planned as a continuous resource.

The goals of the steering group and project coordinator are to coordinate, oversee all activities, orchestrate the initiative, measure its impact, secure continued funding, and intervene when necessary.

To avoid the governance model with its two bodies being a bottleneck for the startup, it needs to be set up with the ability to pivot when necessary. There needs to be a balance between directives and freedom. The governance model needs to ensure sustainability and work creation in the Southern Highlands, whereas the startup needs freedom to operate, develop, and make decisions in an agile way. The governance model should not slow down the process for the startup or *tie its hands*.

The following actions will be required to make this happen: First, steering group members and the project coordinator are recruited. Second, governance principles and structures are developed and set up. Third, processes are developed and executed for a) prototyping and collective learning, b) continuous impact assessment, and c) risk mitigation and management.
The governance model is aimed to be in place for the transition phase into sustainability. After this time, the "system" should be self-organizing and a governance model should no longer be needed.

WORK PACKAGE 4: VALUE CHAIN ENHANCEMENT ACTIVITIES

In order to move the overall furniture ecosystem toward sustainability, various interventions along the whole value chain are needed. We propose *Value Chain Enhancement Activities* as part of this project and in connection to the other proposed activities.

The value chain enhancement activities are ongoing mechanisms for identifying pain points along the value chain as well as funding new interventions. We aim to have dedicated mechanisms in place and first interventions executed within a certain timeframe upon initiation.

Several actions should take place:
Needs should be clarified around, e.g., intermediaries (entrepreneurs) who connect smallholder plantations with industry scale sawmills (such as Sao Hill Industries) and sawmills with local carpenter collectives.
An independent entrepreneur or the PFP2 Apprenticeship Programme should be involved in procuring high-quality and properly-dried timber for the Prototyping Design Sprints, the Carpentry Apprenticeship Programme, as well as future furniture production related to this project. This is essential for producing high-quality products that last.
Before this work package begins, the wood for these purposes could be temporarily procured from Sao Hill Industries. Further, a collaboration with Sao Hill Industries could be established where Sao Hill Industries sources wood from local smallholder farmers, properly kiln-dries it, and sells the produced quality timber to an intermediary (entrepreneur), who sells it to the FUNDI carpenters (who have been trained to produce furniture for the FUNDI product line).

Further, a logistics partner needs to be identified or established who reliably connects the Southern Highlands with Dar es Salaam and potentially delivers furniture to the homes of customers.

Technology transfer should be explored and established, and business models around “tool sharing” for carpenters requires exploration.

Fourth, advisory and negotiation support by PFP2 and a consultant should be established for these and future value chain enhancement activities.

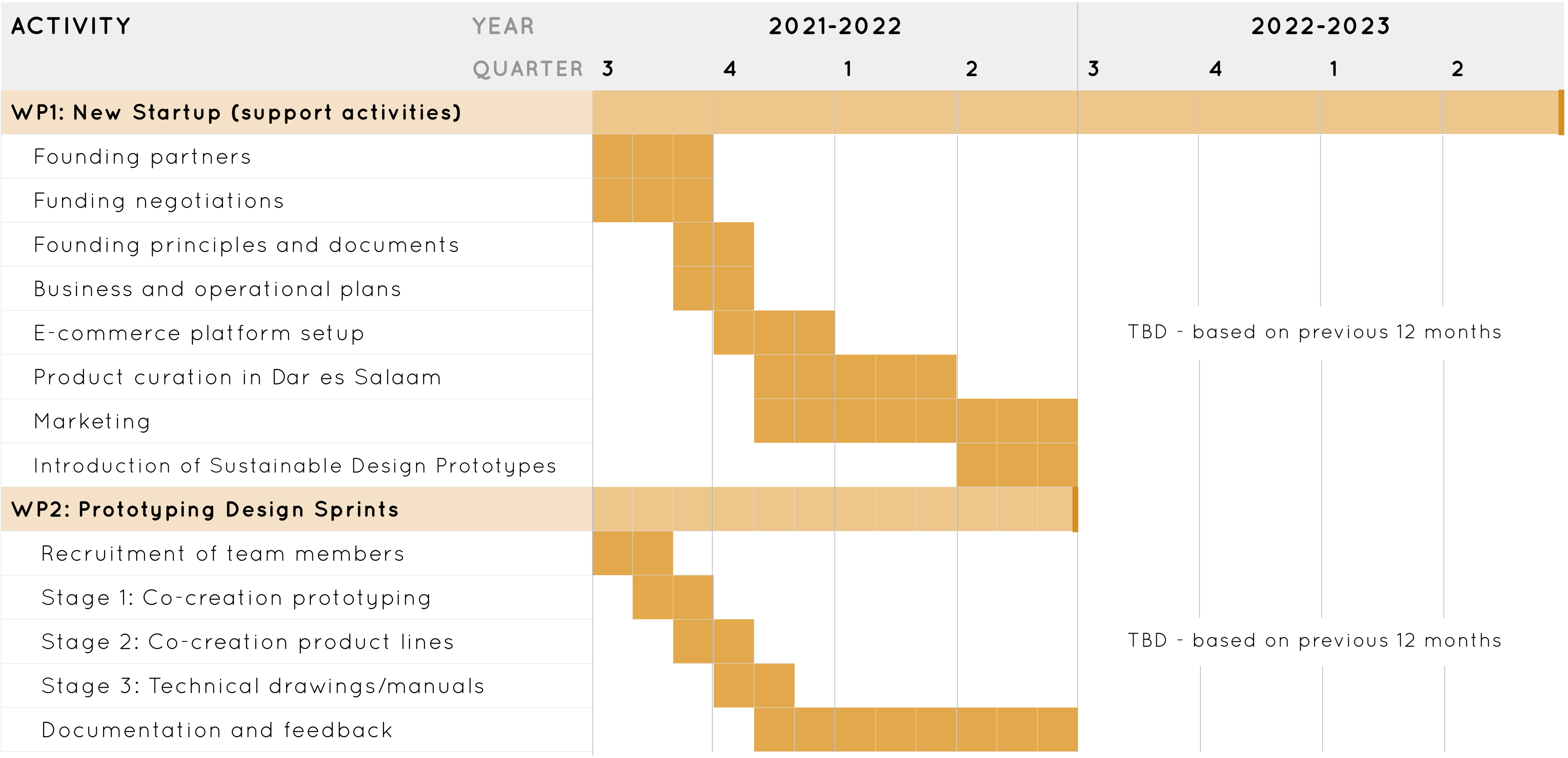
ACTION AND FUNDING PLAN

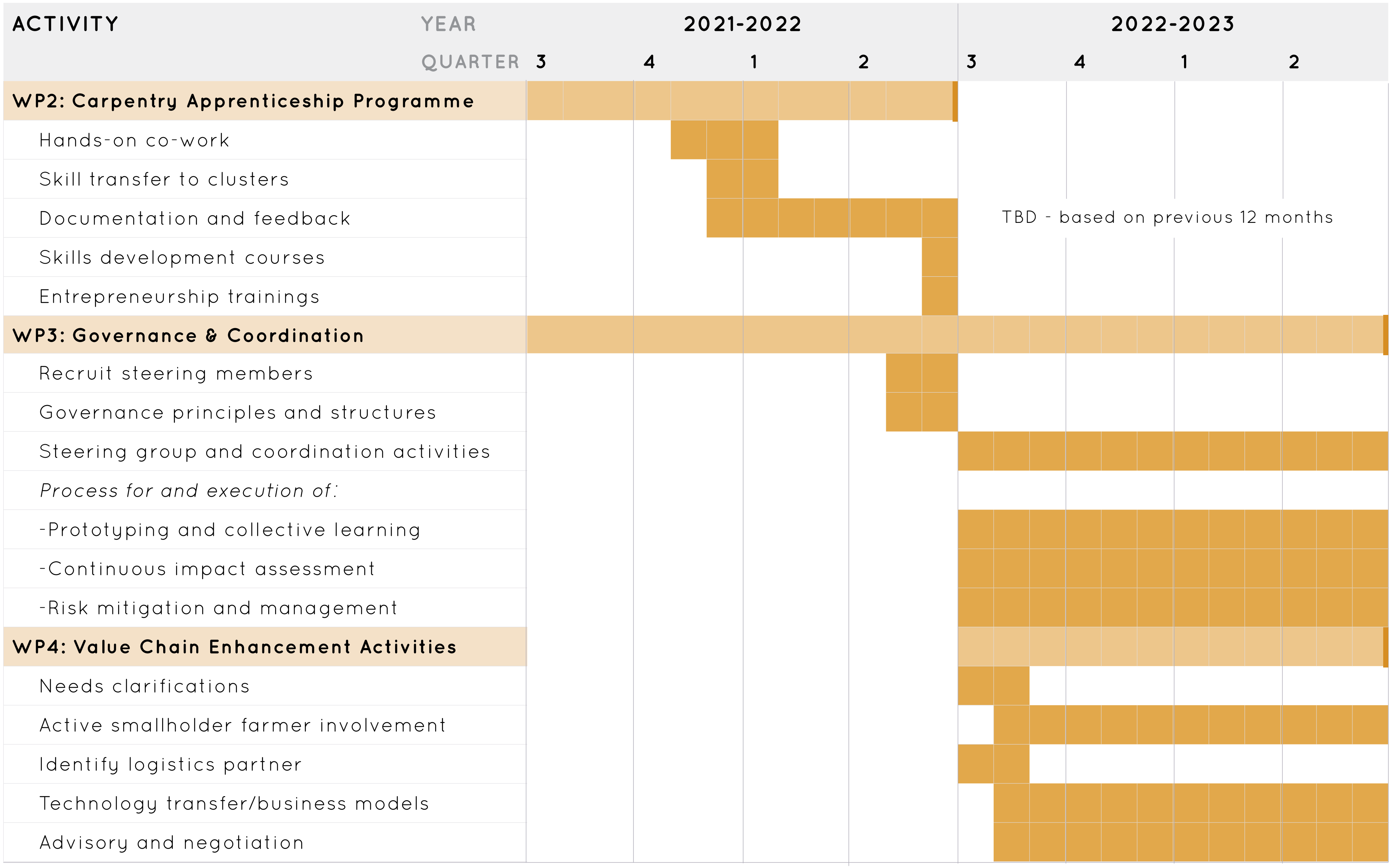
Before revealing the action and funding plan next, it is important to re-emphasize that the ultimate goal of this work is to improve the livelihoods of local smallholder farmers in the Southern Highlands. This is approached through a growing market demand for sustainably produced wood as described in this paper. Objectives and activities outlined in the action plan have been developed with this important goal in mind.

Objectives

	PROJECT PHASE 1 (COMPLETED) Q3 2020- Q2 2021 12 months	PROJECT PHASE 2 (PROTOTYPING) Q3 2021-Q2 2022 (12 months)	PROJECT PHASE 3 (IMPLEMENTATION) Q3 2022→(ongoing)
WP1: STARTUP		Startup setup and e-commerce platform is running with locally curated products primarily from workshops based in Dar es Salaam. Platform in place to test the first Southern Highlands (**SH**) prototypes.	Furniture and design lines highlighted and most prominent(ly sold) on the platform.
WP2: APPRENTICESHIP PROGRAMME (PFP2)		Prototypes and manuals are developed and crafted through the program. Timber procured from SH sawmill such as Sao Hill Industries (temporary).	SH furniture is produced at satisfying capacity and meets consumer demand. Learning and iterative product adjustments. Timber is procured primarily from SH smallholder farmers and an industry-scale sawmill such as e.g., Sao Hill Industries.
WP3: GOVERNANCE & COORDINATION		*The structure and governance model is planned.*	Steering group & project coordinator work supports activities of the startup. A solid process for working with SH carpenters is in place.
WP4: VALUE CHAIN ENHANCEMENT		*PFP2 activities.* --	PFP2 activities. Resources and logic to carry out value enhancement activities in place. The majority of timber for SH furniture is sourced from smallholder farmers and supply chains are in place. Continuous learning and improvement.

Action plan


ACTIVITY
YEAR
QUARTER
2021-2022
3
4
1
2
2022-2023
3
4
1
2
WP1: New Startup (support activities)
Founding partners
Funding negotiations
Founding principles and documents
Business and operational plans
E-commerce platform setup
Product curation in Dar es Salaam
Marketing
Introduction of Sustainable Design Prototypes
TBD - based on previous 12 months
WP2: Prototyping Design Sprints
Recruitment of team members
Stage 1: Co-creation prototyping
Stage 2: Co-creation product lines
Stage 3: Technical drawings/manuals
Documentation and feedback
TBD - based on previous 12 months


ACTIVITY
YEAR
QUARTER
2021-2022
3
4
1
2
2022-2023
3
4
1
2
WP2: Carpentry Apprenticeship Programme
Hands-on co-work
Skill transfer to clusters
Documentation and feedback
Skills development courses
Entrepreneurship trainings
TBD - based on previous 12 months
WP3: Governance & Coordination
Recruit steering members
Governance principles and structures
Steering group and coordination activities
Process for and execution of:
-Prototyping and collective learning
-Continuous impact assessment
-Risk mitigation and management
WP4: Value Chain Enhancement Activities
Needs clarifications
Active smallholder farmer involvement
Identify logistics partner
Technology transfer/business models
Advisory and negotiation

Funding plan and cost estimate per work package

In this section, we present an overview of the funding opportunities and cost estimates for each work package. The funding needs are estimates for the next 12 months. The funding sources are in no way exhaustive. Instead, they emphasize organizations and instruments from our existing networks.

WORK PACKAGE 1	NEW STARTUP
Funding need (12 months)	PFP funding: - External funding: 100,000-200,000 Euro
Funding plan (12 months)	**Aim:** Equity and/or loan-arrangements to ensure 18 month runway and cover external consultancy fees that are used to support business planning, operations and further funding negotiations. **Potential funding sources:** *Public/third sector:* Business Finland, Finnpartnership, Finnfund, FCA Investment (Finnish Church Aid's Impact Investment branch), Nordic Development Bank), Unicef Innovation, SIDA (Innovation for Poverty Alleviation), Nordic Innovation (Nordic Council of Ministers), HDIF, Costech (TZ), SDG competitions, EIT green competition, other international competitions, South African instruments) *Private equity/ private loan-arrangements:* Furniture companies: Nikari (FI), Sinituote (owner of e.g. Lundia) (FI), Puuartisti (FI), Asko (FI), Isku (FI), Hem (FI), Skanno (FI), Puutaiturit (FI), Nyumbani furniture (TZ), IKEA (SE) Other corporations (CSR angle): UPM (FI), Stora Enso (FI), Metso (FI), Green Resources (NO), Ahlström (FI), Assam Industries (TZ) *Corporate foundations:* Ikea Foundation, Asko Foundation *Impact investors:* Oikos bank, Bambou, Ashoka, Northern light (SE), FIBAN (Finnish Angel investor Network), Richard Branson's impact impact investor network (CA)

WORK PACKAGE 2	APPRENTICESHIP PROGRAMME (PFP2)
Funding need (12 months)	PFP funding: 80,000 Euro External funding: 80,000-120,000 Euro
Funding plan (12 months)	**Aim:** Secure funding for carpenter capacity building in Southern Highlands and abroad. Create partnerships that can be leveraged in later stages to support value chain enhancement activities. **Potential Funding sources:** *Corporate social responsibility programs:* Ikea (Global Innovation), Sinituote (FI) *Corporate foundations:* Ikea Foundation (SE), Asko Foundation (FI), Ahlström Foundation (FI), Shell Foundation (UK) *Public/third sector:* PFP (MFA), Forvac (MFA), Finnish Church Aid, The Anglican Church (UK), Finnish Embassy (local budget), Finnish Cultural Foundation, Market facility (DK/UK), Bill and Melinda Gates Foundation (e.g. disabilities), Other: EU instruments, Tanzanian government *Private donors:* UK donor network (active in TZ)

WORK PACKAGE 3	GOVERNANCE & COORDINATION
Funding need (12 months)	PFP funding: 20,000 Euro External funding: N/A
Funding plan (12 months)	Setup governance model, explore and evaluate alternative legal models, recruit participants and arrange first sessions. PFP2 (MFA)

WORK PACKAGE 4	VALUE CHAIN ENHANCEMENT ACTIVITIES
Funding need (12 months)	PFP funding: N/A External funding: N/A
Funding plan (12 months)	N/A

APPENDIX

REFERENCES / APPENDICES

YOU WILL FIND:

REFERENCES

1. THE BIG PICTURE

FRAMEWORKS FOR UNDERSTANDING SUSTAINABILITY

Page 19-23

1 World Commission on Environment and Development (WCED), 1987. Our Common Future, Oxford, UK: Oxford University Press.

2 Sachs, J., 2015. The age of sustainable development. New York: Columbia University Press.

3 Folke, C. ym., 2016. Social-ecological resilience and biosphere-based sustainability science. Ecology and Society, 21(3).

4 Rockström, J., 2015. Bounding the Planetary Future: Why We Need a Great Transition. [Online] Available at: http://www.tellus.org/pub/Rockstrom-Bounding_the_Planetary_Future.pdf [Accessed 14 November 2019].

5 Rockström, J. et al., 2009. Planetary Boundaries: Exploring the Safe Operating Space for Humanity. Ecology and Society, 14(2), p. 32.

6 Steffen, W. et al., 2015. Planetary Boundaries: Guiding human development on a changing planet. Science, 347(6223).

7 Raworth, K., 2012. A safe and just space for humanity: Can we live within the doughnut? Discussion paper, Oxford: Oxfam.

8 UN Department of Economic and Social Affairs., 2019. Sustainable Development Goals. [Online] Available at: https://sustainabledevelopment.un-.org/?menu=1300 [Accessed 14 November 2019].

9 Stockholm Resilience Centre, 2015. What is resilience?. [Online] Available at: http://www.stockholmresilience.org/research/research-news/2015-02-19-what-is-resilience.html [Accessed 14 November 2019].

10 Raworth, K., 2017. A Doughnut for the Anthropocene: humanity's compass in the 21st century. The Lancet Planetary Health, 1(2), p. 48–49.

11 Walker, B. & Salt, D., 2006. Resilience thinking: sustaining ecosystems and people in a changing world. Washington, DC: Island Press.

12 United Nations Office for Disaster Risk Reduction. UNISDR Annual Report 2017: 2016-17 Biennium Work Programme Final Report [Online] Available from: https://www.unisdr.org/files/58158_unisdr2017annualreport.pdf [Accessed 10.01.2021]

13 Biggs, R. ym., 2012. Toward Principles for Enhancing the Resilience of Ecosystem Services. Annual Review of Environment and Resources, Osa/vuosikerta 37, p. 421–448.

TANZANIAN CONSUMER CULTURE: CREATING IDENTITIES AND FUTURES

Page 25-27

1 A. Stambach. Evangelism and Consumer Culture in Northern Tanzania. Anthropological Quarterly, 2000, 73 (4), pp.171-179. [Online] Available from: https://muse-jhu-edu.libproxy.helsinki.fi/article/2069

2 H. Dilger. Doing Better? Religion, the Virtue-Ethics of Development, and the Fragmentation of Health Politics in Tanzania. Africa Today, 2009, 56 (1), pp.89-110. [Online] DOI: 10.1353/at.0.0081

3 B. Meyer. Pentecostalism and Globalization. Studying Global Pentecostalism, 2019, 10, pp.113-130. http://web.a.ebscohost.com.libproxy.helsinki.fi/ehost/ebookviewer/ebook/ZTAwMHh3d19fMzMzMzYxX19BTg2?sid=91b-

7c8a8-62b3-4477-8104-3483787c28fc@sdc-v-sessmgr02&vid=0&format=EB&lpid=lp_113&rid=0

4 M. Green and S. Mesaki. The birth of the "salon": Poverty, "modernization," and dealing with witchcraft in southern Tanzania. American Ethnologist, 2008, 32 (3), pp.371-388. [Online] Available from: https://anthrosource.onlinelibrary.wiley.com/doi/10.1525/ae.2005.32.3.371

5 Mercer, C. Boundary Work: Becoming Middle Class in Suburban Dar es Salaam. International journal of urban and regional research, Vol.44 (3), p.521-536, 2020

6 M. Green. Making Africa middle class: From poverty reduction to the production of inequality in Tanzania. Economic Anthropology, 2015, 2 (2), pp.295-309. [Online] Available from: https://anthrosource.onlinelibrary.wiley.com/doi/10.1002/sea2.12032

OVERVIEW OF TANZANIAN WOOD TYPES USED FOR FURNITURE

Page 28-31

1 Woodworking trade, website https://www.woodworkingtrade.com/hardwood-vs-softwood/ Visited 26.03.2021

2 Kachol, D. Assessment of Tree Species Richness, Diversity, Population Structure and Natural Regeneration in Nongeni Forest Reserve in Morogoro Region, Tanzania. Tanzania Journal of Science, 2019, 45(3): 330-345, College of Natural and Applied Sciences, University of Dar es Salaam. https://www.researchgate.net/publication/338401979_Assessment_of_Tree_Species_Richness_Diversity_Population_Structure_and_Natural_Regeneration_in_Nongeni_Forest_Reserve_in_Morogoro_Region_Tanzania

3 F. Guadagno, S. Wangwe, M. Delera, A. B. R. de Castro. Horticulture, and wood and furniture industries in Tanzania. International Growth Centre, 2019 [Online] Available from: https://www.theigc.org/wp-content/uploads/2020/01/Guadagno-et-al-2019-policy-brief_2-2.pdf [Accessed 30 Nov 2020].

4 Tanzania: illegal logging threatens tree species with extinction, the Guardian. https://www.theguardian.com/global-development/2015/jan/14/tanzania-illegal-logging-tree-species-extinction Visited 26.03.2021

5 Ngaga Y. Forest plantations and woodlots in Tanzania. African Forest Forum, 2011, vol 1 (16).https://landmatrix.org/media/uploads/sifisewp-contentuploads201202forest-plantations-and-woodlots-in-tanzaniapdf.pdf

2. MAKING SENSE OF THE TANZANIAN FURNITURE MARKET

THE GROWING URBAN MIDDLE CLASS DRIVES FURNITURE DEMAND

Page 36-41

1 Africa Business Pages. The Market for Furniture in Africa. Africa Business Pages, [no date]. [Online] Available from: https://news.africa-business.com/post/market-furniture-africa-importers [Accessed 30 Nov 2020].

2 C. Mercer. Middle class construction: domestic architecture, aesthetics and anxieties in Tanzania. The Journal of Modern African Studies, 2014, 52 (2), pp.227-50.

3 A. Papadopoulos. These Are The Countries With The Largest Household Size, 2020. CEOWorld Magazine, 2020. [Online] Available from: https://ceoworld.biz/2020/02/19/these-are-the-countries-with-the-largest-household-size/ [Accessed 30 Nov 2020].

4 The United Republic of Tanzania. Basic Demographic and Socio-Economic Profile, Tanzania Zanzibar. The United Republic of Tanzania, 2014. [Online] Available from:https://www.tanzania.go.tz/egov_uploads/documents/TANZANIA_ZANZIBAR_SOCIO_ECONOMIC_PROFILE_sw.pdf [Accessed 30 Nov 2020].

5 Mercer, C. Boundary Work: Becoming Middle Class in Suburban Dar es Salaam. International journal of urban and regional research, Vol.44 (3), p.521-536, 2020

6 Hasan, N 2015, Suomalaisten pk-yritysten kansainvälistyminen Tansaniaan : Haasteet, keinot ja mahdollisuudet, Tampereen ammattikorkeakoulu. https://www.theseus.fi/handle/10024/92364

7 Maritz, J. 12.9.2014. Making sense of Africa's middle class. How we made it in Africa. 11.2.2021 http://www.howwemadeitinafrica.com/making-sense-of-africas-middle-class/43318/

8 McEwan, C; Hughes, A ; Bek, D. Theorising middle class consumption from the global South: A study of everyday ethics in South Africa's Western Cape. Geoforum, 2015-12, Vol.67, p.233-243

9 The National Bureau of Statistics, Tanzania Republic, 2016 Employment and Earnings Survey (EES) https://www.nbs.go.tz/nbs/takwimu/labour/EES_2015_REPORT.pdf

10 The National Bureau of Statistics, Tanzania Republic, 2014 Basic Demographic and Socio-Economic Profile https://www.tanzania.go.tz/egov_uploads/documents/NATIONAL_SOCIO-ECONOMIC_PROFILE_sw.pdf

11 The National Bureau of Statistics, Tanzania Republic, 2016 Basic Demographic and Socio-Economic Profile

12 The National Bureau of Statistics, Household budget survey main report 2011/12 https://www.nbs.go.tz/index.php/en/census-surveys/poverty-indicators-statistics/household-budget-survey-hbs/149-household-budget-survey-main-report-2011-12

13 The National Bureau of Statistics, Household budget survey main report 2017/18 https://www.nbs.go.tz/index.php/en/census-surveys/poverty-indicators-statistics/household-budget-survey-hbs/413-the-2017-18-household-budget-survey-key-indicators-report

14 The National Bureau of Statistics, National accounts of Tanzania mainland 2007-2017 https://www.nbs.go.tz/nbs/takwimu/na/National_Accounts_of_Tanzania%20_Mainland_Publication_2017.pdf

15 The National Bureau of Statistics, National accounts of Tanzania mainland 2012-2018 https://www.nbs.go.tz/nbs/takwimu/na/National_Accounts_Statistics_of_Tanzania_Mainland_2018.pdf

16 Falco, P., Kerr A., Paci P., & Rijkers B., 2014. Working toward Better Pay : Earnings Dynamics in Ghana and Tanzania. World Bank Publications. ProQuest Ebook Central, http://ebookcentral.proquest.com/lib/helsinki-ebooks/detail.action?docID=1717617

THE ROLE OF STYLE, AFFORDABILITY AND LOCAL EMPOWERMENT IN MARKETING ETHICAL PRODUCTS TO TANZANIAN MIDDLE CLASSES

Page 42-43

1 Hughes, A ; McEwan, C ; Bek, D Mobilizing the ethical consumer in South Africa. Geoforum, Vol.67, p.148-157, 2015

2 Gregson N. & Ferdous R. Making space for ethical consumption in the South. Geoforum Vol 67, p. 244-255, 2015

3 McEwan, C; Hughes, A ; Bek, D. Theorising middle class consumption from the global South: A study of everyday ethics in South Africa's Western Cape. Geoforum, 2015-12, Vol.67, p.233-243

4 A. Stambach. Evangelism and Consumer Culture in Northern Tanzania. Anthropological Quarterly, 2000, 73 (4), pp.171-179. [Online] Available from: https://muse-jhu-edu.libproxy.helsinki.fi/article/2069

5 M. Green. Making Africa middle class: From poverty reduction to the production of inequality in Tanzania. Economic Anthropology, 2015, 2 (2), pp.295-309. [Online] Available from: https://anthrosource.onlinelibrary.wiley.com/doi/10.1002/sea2.1203242 Digital opportunity trust. Digital Shift. Youth Voices on Digital Inclusion and Skills, 2020

6 Mercer, C. Boundary Work: Becoming Middle Class in Suburban Dar es Salaam. International journal of urban and regional research, Vol.44 (3), p.521-536, 2020

7 B. Meyer. Pentecostalism and Globalization. Studying Global Pentecostalism, 2019, 10, pp.113-130. http://web.a.ebscohost.com.libproxy.helsinki.fi/ehost/ebookviewer/ebook/ZTAwMHh3d19fMzMzMzYxX19BTg2?sid=91b-7c8a8-62b3-4477-8104-3483787c28fc@sdc-v-sessmgr02&vid=0&format=EB&lpid=lp_113&rid=0

8 Digital opportunity trust. Digital Shift. Youth Voices on Digital Inclusion and Skills, 2020

EDUCATED URBAN YOUTH ARE MOST LIKELY TO USE THE INTERNET AND HAVE GOOD DIGITAL SKILLS

Page 44-49

1 M. Mutambala. Sources and Constraints to Technological Innovation In Tanzania: A Case Study Of The Wood Furniture Industry In Dar Es Salaam. Dissertation for Award of Master of Arts at University of Dar es salaam, 2011. [Online] Available from: https://www.stipro.or.tz/wp-content/uploads/2018/11/SOURCES-AND-CONSTRAINTS-TO-TECHNOLOGICAL-INNOVATION-IN-TANZANIA.pdf [Accessed 30 Nov 2020].

2 Digital opportunity trust. Digital Shift. Youth Voices on Digital Inclusion and Skills, 2020

3 Reuters Staff, Tanzania internet users hit 23 million; 82 percent go online via phones: regulator, 2018 [Accessed 8 Mar 2021].

4 World Bank Group. Tanzania Economic Update: Addressing the Impact of Covid-19, 2020

5 Digital opportunity trust. Youth voices: Digital Lives and Livelihoods in Africa, the Middle East and Indegenous Canada, 2016

6 Nieminen, J. Landscape report on digital education in Tanzania, Fingo report, 2020

CHANGING CONSUMER DESIRES FUEL THE POPULARITY OF IMPORTED FURNITURE

Page 50-51

1 M. Mutambala. Sources and Constraints to Technological Innovation In Tanzania: A Case Study Of The Wood Furniture Industry In Dar Es Salaam. Dissertation for Award of Master of Arts at University of Dar es salaam, 2011. [Online] Available from: https://www.stipro.or.tz/wp-content/uploads/2018/11/SOURCES-AND-CONSTRAINTS-TO-TECHNOLOGICAL-INNOVATION-IN-TANZANIA.pdf [Accessed 30 Nov 2020].

2 Mutalemwa, D. Study on the furniture sector in Tanzania. Publishing of Embassy of Finland, Dar-es-Salaam, Tanzania and Finpro Nairobi, 2012.

3 C. Mercer. Middle class construction: domestic architecture, aesthetics and anxieties in Tanzania. The Journal of Modern African Studies, 2014, 52 (2), pp.227-50.

4 N. P. Kumburu, J. F. Kessy. Consumers' preference on imported and locally made furniture in Dar es Salaam and Arusha, Tanzania, Global Business Review, 2018. [Online] Available at: https://doi.org/10.1177/0972150918811519 [Accessed 30 Nov 2020].

5 O. Sayaka. Impact of Imported Chinese Furniture on The Local Furniture Sector in Arusha City, Tanzania: Focusing on the Strategies of Furniture-Makers for Using Indigenous Timber Species. African study monographs. Supplementary issue, 2018, 55, pp.27-47. [Online] Available from: https://doi.org/10.14989/230163 [Accessed 30 Nov 2020].

6 N. P. Kumburu, J. F. Kessy, S. J. Mbwambo. Profitability of SIDO Supported Small Scale Furniture Industries Against Imported Furniture in Dar es Salaam and Arusha Regions, Tanzania. East African Journal of Social and Applied Sciences, 2019, 1 (2), pp.33-48.

7 F. Guadagno, S. Wangwe, M. Delera, A. B. R. de Castro. Horticulture, and wood and furniture industries in Tanzania. International Growth Centre, 2019 [Online] Available from: https://www.theigc.org/wp-content/uploads/2020/01/Guadagno-et-al-2019-policy-brief_2-2.pdf [Accessed 30 Nov 2020].

8 C. Chanjarika. Factors leading imported furniture to be preferred Over locally produced ones A case of Ilala and Temeke municipal councils in Dar es salaam-Tanzania. MSc Thesis, Dar es Salaam, Mzumbe University, 2013. [Online] Available from: www.scholar.mzumbe.ac.tz/bitstream/handle/11192/1931/MSc_MBA_Clement%20Chanjarika_2013.pdf?sequence=1 [Accessed 30 Nov 2020].

COMPETITION WITH CHINESE FURNITURE AND PROTECTION OF NATURAL HARDWOOD CREATES PROBLEMS FOR LOCAL MANUFACTURERS

Page 52-53

1 O. Sayaka. Impact of Imported Chinese Furniture on The Local Furniture Sector in Arusha City, Tanzania: Focusing on the Strategies of Furniture-Makers for Using Indigenous Timber Species. African study monographs. Supplementary issue, 2018, 55, pp.27-47. [Online] Available from: https://doi.org/10.14989/230163 [Accessed 30 Nov 2020].

2 M. Mutambala. Sources and Constraints to Technological Innovation In Tanzania: A Case Study Of The Wood Furniture Industry In Dar Es Salaam. Dissertation for Award of Master of Arts at University of Dar es salaam, 2011. [Online] Available from: https://www.stipro.or.tz/wp-content/uploads/2018/11/SOURCES-AND-CONSTRAINTS-TO-TECHNOLOGICAL-INNOVATION-IN-TANZANIA.pdf [Accessed 30 Nov 2020].

CONSUMERS MOSTLY BUY FURNITURE FROM SMALL LOCAL WORKSHOPS

Page 69-71

1 E. P. Mhede. The Growth of Micro and Small, Cluster - Based Furniture - Manufacturing Firms and their Implications for Poverty Reduction in Tanzania. REPOA, 2012. [Online] Available from: 10.13140/RG.2.1.4005.1683 [Accessed 30 Nov 2020].

2 F. M. Musonda. Small and micro enterprise clusters in Tanzania: Can they generate industrial dynamism', In: Industrial clusters and innovation systems in Africa: institutions, markets, and policy, 2007, p. 81. [Online] Available from: www.archive.unu.edu/unupress/sample-chapters/1137-IndustrialClustersAndInnovationSystemsInAfrica.pdf [Accessed 30 Nov 2020].

LOCAL FURNITURE PRICES AND CONSUMER WILLINGNESS TO PAY

Page 74-78

1 O. Sayaka. Impact of Imported Chinese Furniture on The Local Furniture Sector in Arusha City, Tanzania: Focusing on the Strategies of Furniture-Makers for Using Indigenous Timber Species. African study monographs. Supplementary issue, 2018, 55, pp.27-47. [Online] Available from: https://doi.org/10.14989/230163 [Accessed 30 Nov 2020].

2 Mutalemwa, D. Study on the furniture sector in Tanzania. Publishing of Embassy of Finland, Dar-es-Salaam, Tanzania and Finpro Nairobi, 2012.

3 Development of vocational education in carpentry and joinery and value adding in furniture manufacturing in Tanzania. Publishing of Embassy of Finland, Dar es Salaam, Tanzania (year and writer of report unknown).

3. FROM PLANTATION TO MARKET

THE TANZANIAN FURNITURE SECTOR HAS GREAT POTENTIAL BUT IS UNDERPERFORMING

Page 85-88

1 Mutalemwa, D. Study on the furniture sector in Tanzania. Publishing of Embassy of Finland, Dar-es-Salaam, Tanzania and Finpro Nairobi, 2012.

2 F. Guadagno, S. Wangwe, M. Delera, A. B. R. de Castro. Horticulture, and wood and furniture industries in Tanzania. International Growth Centre, 2019 [Online] Available from: https://www.theigc.org/wp-content/uploads/2020/01/Guadagno-et-al-2019-policy-brief_2-2.pdf [Accessed 30 Nov 2020].

3 E. P. Mhede. The Growth of Micro and Small, Cluster - Based Furniture - Manufacturing Firms and their Implications for Poverty Reduction in Tanzania. REPOA, 2012. [Online] Available from: 10.13140/RG.2.1.4005.1683 [Accessed 30 Nov 2020].

4 F. M. Musonda. Small and micro enterprise clusters in Tanzania: Can they generate industrial dynamism', In: Industrial clusters and innovation systems in Africa: institutions, markets, and policy, 2007, p. 81. [Online] Available from: www.archive.unu.edu/unupress/sample-chapters/1137-IndustrialClustersAndInnovationSystemsInAfrica.pdf [Accessed 30 Nov 2020].

5 Development of vocational education in carpentry and joinery and value adding in furniture manufacturing in Tanzania. Publishing of Embassy of Finland, Dar es Salaam, Tanzania (year and writer of report unknown).

5. A HOLISTIC APPROACH FOR TRANSITION IN THE TANZANIAN FURNITURE MARKET

WORK PACKAGE 2: APPRENTICESHIP PROGRAMME (PFP2)

Page 142

1 What is a design sprint?. O'Reilly, 2015 [Online] Available from: https://www.oreilly.com/content/what-is-a-design-sprint/ [Accessed 24 Mar 2021].

APPENDIX

A: TANZANIAN WOOD TYPES USED FOR FURNITURE

Page 164-166

1 F. Guadagno, S. Wangwe, M. Delera, A. B. R. de Castro. Horticulture, and wood and furniture industries in Tanzania. International Growth Centre, 2019 [Online] Available from: https://www.theigc.org/wp-content/uploads/2020/01/Guadagno-et-al-2019-policy-brief_2-2.pdf [Accessed 30 Nov 2020].

2 Hines D. & Eckman K. Indigenous multipurpose trees of Tanzania: uses and economic benefits for people. Food and Agriculture Organization of the United Nations Rome, 1993. http://www.fao.org/3/x5327e/x5327e.pdf

3 Fourth national report on implementation of convention on biological diversity. Publishing of the Vice President's Office, Division of Environment, United Republic of Tanzania (URT), Dar es Salaam, 2009 https://www.cbd.int/doc/world/tz/tz-nr-04-en.pdf

4 Arvola, A., Malkamäki A., Penttilä J., Toppinen A. Mapping the Future Market Potential of Timber from Small-Scale Tree Farmers: Perspectives from the Southern Highlands in Tanzania. Small-scale Forestry, 2019, 18, pp.189–212. https://link.springer.com/article/10.1007/s11842-019-09414-8

5 Species List. National forestry resources monitoring and assessment of Tanzania (Naforma). Publishing of the Ministry of Natural Resources & Tourism, 2010. http://www.fao.org/forestry/25325-06f1d19bfee42e483baaf9880dcdabb5f.pdf

6 Milledge S., Gelvas I. & Ahrends A. Forestry, governance and national development: lesson learned from a logging boom in Southern Tanzania. Publishing of the Ministry of Natural Resources and Tourism, 2007. https://www.traffic.org/site/assets/files/3612/logging-boom-southern-tanzania.pdf

7 Mpingo conservation & development initiative web page Visited 26.3.2021 http://www.mpingoconservation.org/sustainable-timber/buy-timber/?L=516#c537

8 Kachol, D. Assessment of Tree Species Richness, Diversity, Population Structure and Natural Regeneration in Nongeni Forest Reserve in Morogoro Region, Tanzania. Tanzania Journal of Science, 2019, 45(3): 330-345, College of Natural and Applied Sciences, University of Dar es Salaam. https://www.researchgate.net/publication/338401979_Assessment_of_Tree_Species_Richness_Diversity_Population_Structure_and_Natural_Regeneration_in_Nongeni_Forest_Reserve_in_Morogoro_Region_Tanzania

A: TANZANIAN WOOD TYPES USED FOR FURNITURE

Wood species	Suitability	Environmental status	Relative prices
HARDWOODS			
Mninga *(Pterocarpus angolensis), Mhinga (Fipa), Mninga (Makonde), Msondwa (Fipa), Mtumbati (Makonde)*	Most popular wood for furniture making, durable, aesthetically valued	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Mvule *(Milicia excelsa)*	Popular wood for furniture making	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Mkola *(Afzelia quanzensis)*	Popular wood for furniture making	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Loliondo *(Olea europaea subsp. africana)*	Popular wood for furniture making	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Kemfa *(Ocotea usambarensis)*	Popular wood for furniture making	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Mtondoo *(Julbernardia globiflora) Chesa (Fipa), Irihu (Iraqw), Mhangala (Shambaa), Mkiriki (Nyaturu), Mnhondolo (Lugulu), Mnondondo (Makonde), Mowe (Makonde), Muba, Muva (Nyamwezi), Munza (Fipa), Muwa (Fipa)*	Used for timber by locals, unsure if used to make furniture	Threatened by illegal/unsustainable harvesting, indigenous	$$$

Wood species	**Suitability**	**Environmental status**	**Relative prices**
Prunus africana, *Mkomahoya (Shambaa), Mkondokona (Chagga), Mkunguwa (Pare), Mseneo (Chagga), Mwiluti (Hehe)*	Preferred for furniture, but rare	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Olea africana/Olea europea	Preferred for furniture, but rare	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Mpangapanga *(Milettia stuhlmannii)*	Preferred for furniture	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Mpingo, African blackwood, *(Dalbergia melanoxylon)*	Used mostly for musical instruments	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Mkongo *(Afzelia quanzensis)*	Popular wood for furniture making	Threatened by illegal/unsustainable harvesting, indigenous	$$$
Mpodo *(Podocarpus falcatus)*	Popular wood for furniture making	Threatened by illegal/unsustainable harvesting, indigenous	$$$
White and Red **Caliptus** *(Eucalyptus)*	Used for furniture	Some species available in plantations, sustainability depends	$ - $$$ (Dependent on age)
Teak *(Tectona grandis)*	Used for furniture, popular	Available in plantations, sustainable (but less than eucalyptus)	$$$
Black wattle *(Acacia mearnsii)*	Used for furniture	Available in plantations, sustainable	
Shelisheli or Mshelisheli, Breadfruit tree *(Artocarpus altilis)*	Light and durable, can be used for furniture	Multipurpose trees, easy to grow but not widely cultivated in Tanzania	
Mjakaranda *(Jacaranda mimosifolia)*	Popular wood for furniture making, relatively durable and easily available in Northern Tanzania		

Wood species	Suitability	Environmental status	Relative prices
SOFTWOODS			
Kemfa *(Ocotea usambarensis)*	Used for indoor furniture	Available in plantations, sustainable	$
Cypress *(Cupressus lusitanica)*	Used for furniture, durable	Available in plantations, sustainable	
Mruka *(Albizia schimperiana)*	Used for indoor furniture, absorbs moisture		$
Msesewe *(Rapanea rhododendroides)*	Used for indoor furniture, absorbs moisture		$
Mringaringa *(Cordia africana)*	Used for indoor furniture, absorbs moisture		$

This table represents some of the main wood types and very rough estimations on their sustainability, availability and prices based on information combined from a variety of sources [1, 2, 3, 4, 5, 6, 7, 8] The current situation of each species demands further research.

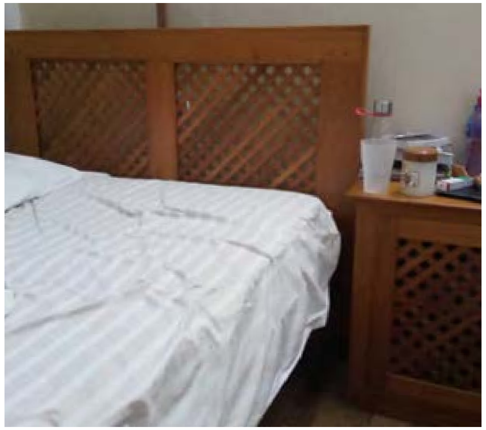
B: ETHNOGRAPHY DAR ES SALAAM MIDDLE CLASS

Liked home furniture owned by interviewees

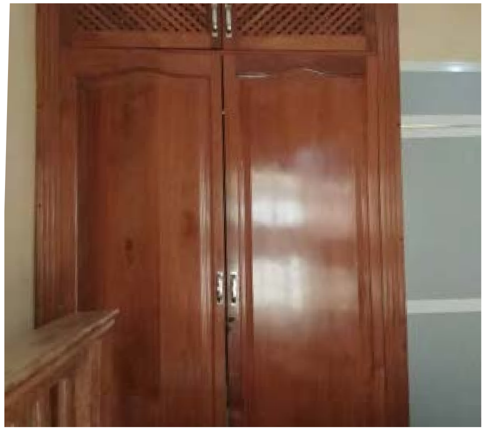


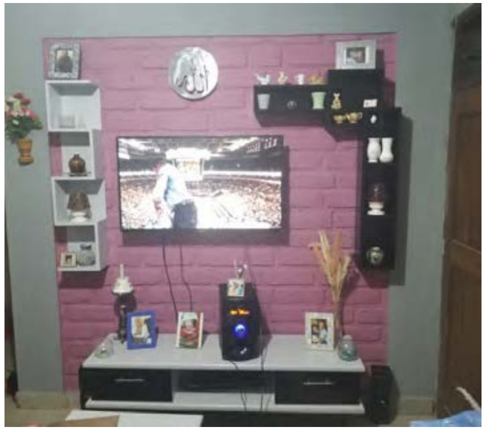




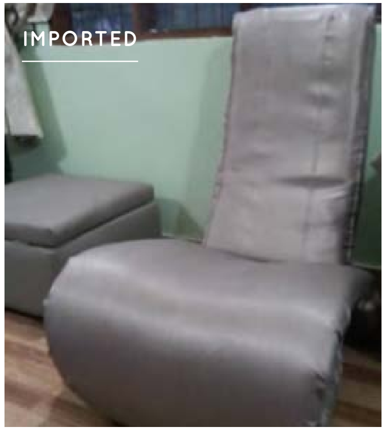


IMPORTED





Disiked home furniture owned by interviewees












Kiduku
VS



IMPORTED

Other home furniture owned by interviewees












C: MARKET ACTORS DESCRIPTIONS

SAO HILL INDUSTRIES LTD/GREEN RESOURCES (OUTSIDE OF MAFINGA)

Green Resources is a private Norwegian company and East Africa's largest forest development and wood processing company. Green Resources' industrial subsidiary, Sao Hill industries (SHI), operates two sawmills, a pole plant and a briquetting factory.

TANGANYIKA WATTLE COMPANY LTD (TANWAT) (NJOMBE)

A tanning extract and timber production company. The company was founded in 1949 and is foreign-owned (Indian/Kenyan). Products are among others timber, plywood, and blockboards.

TANGANYIKA PLYWOOD LTD (MAFINGA)

Tanganyika Plywood LTD (TPL) produces hardwood eucalyptus core veneer and plywood. They also produce high-quality timber for local and export markets. Material come from sustainable plantations.

MW LIMITED (MAFINGA)

MW LIMITED is a locally owned manufacturer in the wood products industry. Products include among others finger jointed boards (mw board), blockboards, marine boards, veneer and plywood.

FURNITURE ASSOCIATION AND PRODUCERS (NJOMBE) & FURNITURE ASSOCIATION (MAFINGA)

Both associations each organize and support local carpenters.

NEEMA CRAFTS (IRINGA)

Neema Crafts is a not-for-profit organization that helps train, employ and empower people with disabilities in Tanzania. The center has eight different craft workshops (among which one is dedicated to furniture manufacturing), a therapy unit for disabled children, an award winning cafe entirely staffed by deaf people, and a welcoming guesthouse.

RLABS IRINGA (IRINGA)

RLabs' Grow Leadership Academy helps young people create innovative businesses. In Iringa, RLabs is developing a youth cafe and Maker Space, among other things. RLabs Iringa has a furniture manufacturing workshop.

FORESTRY AND WOOD INDUSTRIES TRAINING CENTRE (FWITC MAFINGA)

The Forestry and Wood Industries Training Centre (FWITC) offers practical short courses in forestry, wood processing, occupational safety and health, entrepreneurship and business management. In addition, the center provides a range of support services related to the forest value chain. FWITC is the only training center in all of East Africa to focus on practical short course training aimed at adult learners who wish to improve their knowledge and skills sets.

D: ADDITIONAL DESIGN GUIDELINES

Our design criteria form the design guidelines for the project. Sustainability serves as a strong foundation with social, ecological, and economic sustainability being given equal weight throughout the whole value chain.

SOCIAL	ECOLOGICAL	ECONOMIC
Job creation Support don't erase small scale furniture makers	Local or recycled materials Ecological furniture production techniques/ processes/adhesives/ finishes Product life cycle: recycle or upcycle	Sustainable business models Circular ecosystem innovation Enhancing local economy

Identified critical aspects for ensuring project sustainability

Identified product design criteria according to four categories

STYLE

SIMPLE CLEAN CUTS PLAIN MINIMALIST	DARK / HARDWOOD	RECYCLED (PELLETS) ROUGH INDUSTRIAL	HANDMADE SPECIAL UNIQUE	ORGANIC FORMS
MODERN COOL	DARK WOOD COMBINED WITH TEX-TILE	BLACK TEXTILE	KITSCHY	HAND CARVED ORNAMENTS
GEOMETRIC FORMS	PASTEL COLORED VELVET	WHITE OR WHITE BLASTED	RUSTIC ROMANTIC BULKY	ROYAL LUXURIOUS ELEGANT

DISTRIBUTION

VALUE FOR MONEY	AFFORDABLE	TRUSTABLE RELIABLE TRANSPARENT	SHOWROOM

FUNCTIONALITY

DISASSEM-BLABLE / FOLDABLE	DURABLE	MULTI-FUNCTIONAL	EASY TO CLEAN AND TO CLEAN UNDER
COSY AND COMFORT-ABLE	OPEN AIRY STRUCTURES (SHELVES)	SPACE SAVERS	QUALITY FINISH

PRODUCTION

COMBINED WOOD AND METAL	SIMPLE STRUTURES	ALTERNATIVE USE OF ONE FORM (PALLETS)
REQUIRE SMALL SPACE FLAT-PACKED	STANDARDI--ZATION	RECYCLING

Indufor ...forest intelligence

NIRAS