

Pee Pee (Tanzania) Ltd Tanga, Tanzania

Project Commercial Plan

June 2020

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Project Executive Summary

Background

Pee Pee (Tanzania) Ltd is a company registered in Tanzania with certificate of incorporation no. 24636 dated 26th day of January 1994.

In alignment with the national policies of Tanzania, which are strongly focused on creating employment through growth in the Agricultural and Manufacturing sectors, the project investors have identified an additional business opportunity in specific woven packaging sectors. These are:

1. The manufacture and distribution to smallholder farmers of PICS Hermetic Bags for chemical free storage of agricultural produce.
2. Supply of cement packaging to the cement industry who form a critical component for the national infrastructural growth plan.
3. The opportunity to export PICS bags and cement packaging within the greater EAC and SADC regional trading blocs.

Commercial Market Study

Crossboundary who are an American founded independent consultancy firm were engaged by the investors to conduct further detailed scoping and due diligence of the market being targeted. The final report confirmed a gap in the market for the identified product range.

Technical Due Diligence

The project size was designed based on the market study report taking into consideration the current and potential future markets for product. At this stage building and machinery requirements were scoped out and budgeted for.

Project Financing

The total funding requirement was calculated at US\$ 7,283,753 raising of which was targeted as follows:

Shareholder Funds	US\$ 1,733,753
Shareholder Loans	US\$ 3,050,000
AgDevCo Loan	US\$ 2,500,000
Total	US\$ 7,283,753

Project Viability

Finally, project feasibility and sustainability were confirmed through financial modelling and risk analysis which confirmed the viability of the project and based on the same the company board approved the investment and directed management to complete the capital raise and proceed with implementation.

**TANZANIA INVESTMENT CENTRE
DAR ES SALAAM
PROGRESS REPORT**

(Information required for the project's progress report after every six months)

1. Planned Activities for the period to 31st December, 2020

- Import & erect Pre-Engineered Building structural steel for factory area
- Complete construction to 80% stage
- Install & commission Cement Bag Machinery
- Install & commission Printing equipment
- Install & Commission Utilities
- Import balance fork lifts required for project

2. Achievements made on the project implementation to date:

- FCC approval completed
- Construction commenced and currently at 30% stage
- Weaving machines installed & commissioned
- Three of seven forklifts received and commissioned
- Working capital requirement funded
- Long term (10yr) debt agreement with AgDevCo completed

3. Updated information on the aspects:

S/No.	Information	Description	Current Project Status
1.	Shareholder's Information	Current Shareholders' names, nationality and percentage of ownership	PP Holdings Limited British 99.9%
			Suraj K.P. Devani Kenyan 0.02%
			Taranjit Singh Saini Indian 0.02%
			Jonathan Aubrey Lane 0.02%
			Farhat Jonathan Lane 0.02%
			Ashvin B Mavani 0.02%
2.	Company Communication Information	Email address	sales@pptl.biz
		Mobile Number	+255 784 249100
		Land line Telephone Number	+255 27 2646853/4
			+255 27 2647519

		Physical Address (Plot No, Street, District and Region)	Plot No.1,2,3,4 Heavy Industrial area-Kange, Korogwe road, Tanga
3.	Contact Person	Name	Suraj Devani
		Position	Director
		Communication Details (Email, Mobile and Telephone)	suraj@pptl.biz +255 787 249 100
4.	Incorporation	Certificate of Incorporation	24636
5.	TIN information	TIN Certificate No.	100-158-612
6.	Project Objective	Project Core Activity	Production of Woven Packaging for the Agricultural & Cement Industry
7.	Capacity	Project Capacity per Year	Current 7500MT PA, Project will add 4500 MT PA
8.	Direct Employment	Foreign-Men	9
		Foreign-Women	N/A
		Local-Men	Current 500; Project will add 200
		Local-Women	Current 350, Project will add 150
9.	Indirect Employment	Estimated Total No.	120
		Type/areas of Indirect Employment	Transport, Clearing

4. Project Financial Expenditure to date:

	Expenditure to date:	
1	Land & Buildings	\$230,850
2	Pre-engineered building structure	\$388,163
3	Plant & Machinery including advances paid	\$1,487,364
4	Vehicles	\$81,900
5	Pre-operational expenses	\$123,841
6	Working capital	\$1,000,000
7	Repaid DTB term loan	\$500,000
	Total	\$3,812,118
	Funded By	
1	Foreign Equity - P P Holdings Ltd	\$1,000,000
2	Foreign Loan – AgDevCo	\$1,400,000
3	Foreign Loan - P P Holdings Ltd	\$1,412,118
	Total	\$3,812,118

5. Project Financing

	Total Project Value	\$7,283,753
	Funded by:	
1	Foreign Equity from Parent Company - P P Holdings Ltd	\$1,000,000
2	Long term Foreign Loan - AgDevCo 10 year term	\$2,500,000
3	Long term Foreign Loan - P P Holdings Ltd 10 year term	\$3,050,000
4	Internal Accruals	\$733,753
	Total	\$7,283,753

6. Problems and Solution

We are happy to report that in general, project execution has been moving smoothly mainly due to the excellent response from the various Governmental stakeholders both in Tanga and those headquartered in Dar es Salaam. Whilst the pandemic has led to some logistical challenges and delays worldwide, we recognize and appreciate that Tanzania has taken a structured and methodical approach to the same by not taking hasty decisions that could have been highly detrimental.

We have further noted that the majority of the capital items, equipment and machinery required for the project are, under the customs act, not dutiable and thus creates a positive investment friendly environment. We have accordingly at this stage only identified two major items in the investment list for which we request your intervention.

Pre-Engineered Building (PEB) Structure

The current factory manufacturing area is 15,000m² and the company has undertaken in the current extension phase to add an additional 8,500m² of production area. The buildings are technically planned to cater for the company's specialized production requirements and are thus of wide span design.

Whilst the company has been able to identify a suitable Tanzanian company for the civil works, there are currently none with the capacity to manufacture the steel structure as required to meet the specifications of the building. We have further canvassed for manufacturers within the East African Community, but found that the one potential manufacturer in Kenya was unable to meet the project standard requirements.

Thus, we had to look beyond to the U.A.E and India and have successfully identified a suitable manufacturer based in Ahmedabad, India. Steel PEB structures are classified under customs code 9406.90.90 which as per the current tariffs is dutiable at 25%. Taking into consideration the size of the project, the employment creation and specific nature of the building requirement we humbly request that the specialized steel structure be considered for import duty exemption.

Uninterrupted Power Supply (UPS) supported with Heavy Duty Batteries

As part of the project the company is investing in the latest state of the art machinery which requires uninterrupted power supply to ensure smooth and efficient operations. The industrial UPS units (HS 8504) in themselves are not dutiable under the customs act but the UPS requires backup batteries (HS 8506) to support continuity of machine operation for up to ten minutes whilst the backup generators come into operation. Our understanding is that the batteries may be dutiable and we request that this requirement be waived as they form a critical component of the power supply to the machines.

7. Future Plans

Subject to the prompt resolution of the above, the current project and full investment is scheduled to be complete by June 2021 creating up to 300 new direct jobs and multiple indirect opportunities for Tanzanian companies servicing the supply and logistics requirement of the company. The company based on its current operations is classified as a large taxpayer and the expansion activities will lead to a direct increase in statutory payments to the various Governmental bodies.

8. Recommendations and any other comments

We request that the Tanzania Investment Center as the responsible body for promoting investment review our submission at soonest and assist with prompt resolution in order to avoid any delays in further implementation.

Commercial Market Study Report



CROSSBOUNDARY

Tanzania Agri-Packaging

Final Deliverable

November 2018

PRIVILEGED AND CONFIDENTIAL

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Study Objectives: Exeo Capital is considering an investment in the Tanzania agri-packaging space and asked CrossBoundary to explore several areas

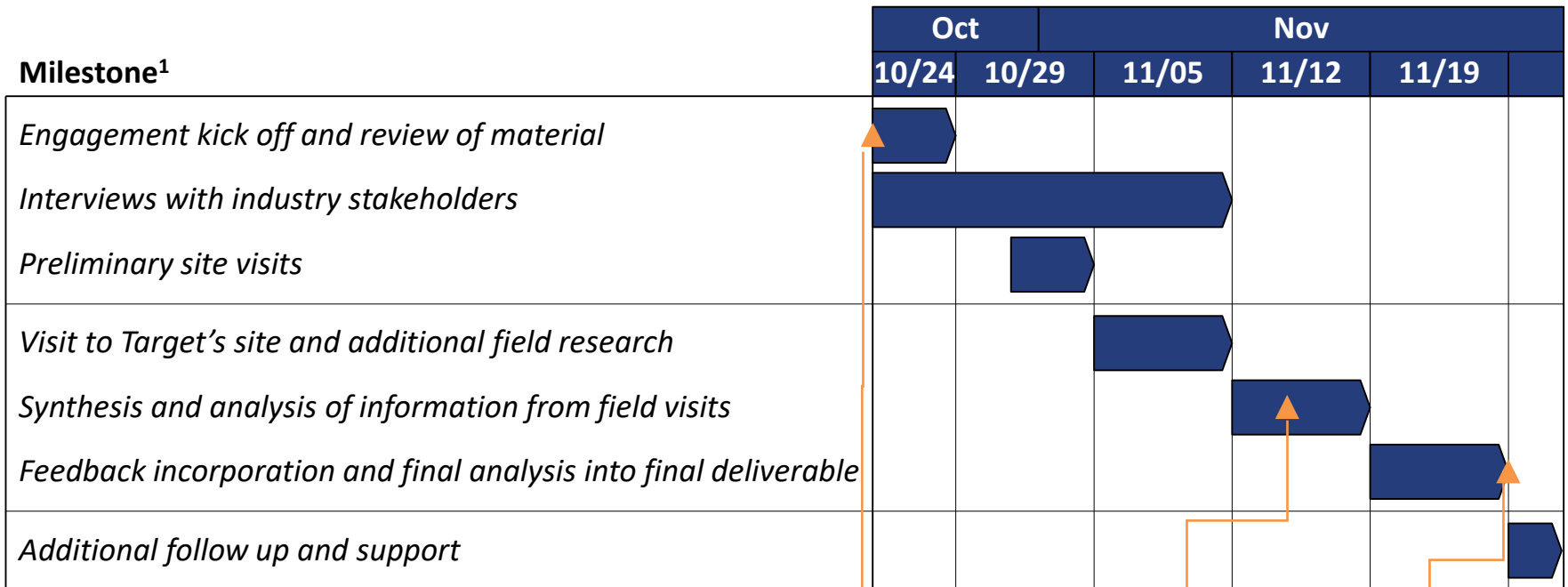
Exeo Capital asked CrossBoundary to provide perspective on the following topics:

Assessment of the competitive landscape of the agri-packaging market in Tanzania

Sales and distribution practices in the market

Market opportunity and competitive landscape of hermetic bags

Timeline: CrossBoundary completed the engagement over a 5-week period



Wednesday, Oct. 24

- Kick off call

Tuesday, Nov. 13

- Mid-point check-in
- Review insights from site visits and interviews

Friday, Nov. 23

- Submission of final deliverable
- Next steps

We undertook extensive desk research, field visits, and expert interviews to source our data and insights for this engagement

15+

Research and Analysis

- USAID Feed The Future's (FTF) Zambia Report
- USDA Agricultural Report
- Food and Agriculture Organization (FAO) reports
- Natural Resources Institute
- Alliance for a Green Revolution in Africa (AGRA) Report
- Mercy Corps' Tanzania Smallholder Survey Analysis
- Vestergaard newsletters
- PICS Global Newsletters

8+

Expert Interviews

- USAID's Nafaka Program
- East Africa Grain Council
- SYS Trading Ethiopia
- BRAC Tanzania
- PICS Global
- Grain Pro Inc, Southern Africa
- Vestergaard, Nairobi Office
- AgroInput Suppliers Ltd, Malawi
- Practical Action Consulting International

10+

Field Visits & Interviews

- A-Z Textile Mills Ltd, Arusha
- Azam Polystacks, Dar Es Salaam
- Papercrafts Ltd, Dar Es Salaam
- Market in Kariokoo, Dar Es Salaam
- Agri-bags wholesaler in Arusha and Tabora, Tanzania
- Leading distributor in the Southern Highlands, Tanzania
- AgriNet Uganda Ltd, Uganda
- Agro Supply Ltd, Uganda

Executive Summary (1/3): PPTL is well positioned to service the high value packaging clients

1. **There are several key players in Tanzania's packaging industry including A-Z Ltd, Azam, Hill, and Harsho Group; PPTL competes in the industry with four key product lines: agri-bags, tarpaulins, cement bags, and PICS bags**
 - **Agriculture is a primary economic activity in Eastern and Southern Africa; therefore, polypropylene bags ("agri-bags") are an essential product in the market**
 - In Tanzania, the market for agri-bags is at least ~\$37M; this is based on the ~10M metric tons of cereal produced annually. Cereal is transported and stored in exclusively in agri-bags
 - Farmers prioritize low-quality, cheap bags over high-quality, pricier bags due to their short-term use. As such, Chinese bag producers pose a threat to local agri-bag producers
 - With 14% market share, PPTL is one of the four main agri-bag producers focused on smallholder farmers in Tanzania; outside of the main players, there are a number of small players in the industry
 - **The tarpaulin sheet ("tarps") market is heavily dominated by Chinese producers**
 - Tarps are used for drying grains, covering stored products, or constructing make-shift markets
 - Similar to the agri-bag industry, Chinese producers are dominant due to their cheaper, lower-quality products; the key local producers of tarps are A-Z Ltd and PPTL
 - **The cement industry is rapidly growing in Tanzania; A-Z Ltd dominates cement bag production**
 - Over the last decade, cement production in Tanzania grew at 7.5% CAGR
 - A-Z Ltd is the second largest cement bag producer in Africa (after the Dangote Group). In Tanzania, A-Z produces 70% of total cement bags on the market
 - PPTL's cement bag production runs at full capacity; increased capacity will allow them to serve the growing cement market

Executive Summary (2/3): Similar sales and distribution tactics are used throughout Tanzania

2. **PPTL and its competitors employ similar sales and distribution strategies; the main point of differentiation is the unique incentives producers put in place to motivate their distributors**
 - **PPTL boasts a broad, decentralized distribution network due to its long history in the market**
 - The company works with an extensive network of distributors with deep rural penetration
 - PPTL sells directly to the distributors who in turn sell the products to smallholder farmers and large multinationals
 - **Due to limited product differentiation, agri-packaging players employ similar distribution tactics to ensure customer loyalty**
 - Majority of sales are through leading distributors in the agricultural regions
 - Companies have annual contracts with most corporate clients such as NGOs (e.g., WFP) and cement manufacturers (e.g., Dangote Group)
 - Depending on order size and contract conditions, some agri-packaging producers deliver bags to clients directly
 - **However, producers have unique incentives for their distributors including bonuses, transportation support, access to credit, customer appreciation events, and discounts**
 - **Overall, the agri-packaging market is relatively homogenous; PPTL can focus on high value segments and tap into the promising cement production industry**
 - In agri-packaging, the products are highly similar and there is little innovation in the industry; PPTL can emphasize their high-quality products and target high-value customers for agri-bags and tarps
 - For cement, PPTL can benefit from Tanzania's low power and labor costs to improve margins and increase production to cater to growing demand in Tanzania

Executive Summary (3/3): There is a large potential market for hermetic bags; the innovative bags address post-harvest loss, a critical issue for farmers

3. PICS is the market leader in hermetic bags across Eastern and Southern Africa

- **Post-harvest loss is one of the biggest problems facing both smallholder and commercial farmers**
 - In Tanzania, 30-40% of food production is lost because of pest infestations, poor handling and storage practices, weather, mold, and spillage during transportation
 - Hermetic bags have a multidimensional value proposition including improved food security, health benefits, and increased income for farmers
- **There are 6 different types of hermetic bags currently in the East and Southern African market: PICS, AgroZ, GrainPro, ZeroFly, Harsho, and Elite bags**
 - There are several key points of differentiation across the various bags on the market including the number of layers, method of closing the bag, and price
 - As the incumbent, PICS can capitalize on its strong brand reputation as it expands across the region
- **There is a large potential market for hermetic bags across Eastern and Southern Africa; in Tanzania alone there is a market opportunity of 46M bags. Of this opportunity, 30M bags are addressable based on ability to pay. Logistics remains a critical concern for Tanzania**
 - The addressable market in Uganda is 11M bags; the hermetic bag market is still in its infant stages and will require significant training and a strong distribution partner
 - The addressable market in Zambia is 8M bags; however, the Zambian government's support will be critical to PPTLs expansion
 - The addressable market in Malawi is 6M bags. Given fewer logistical constraints, competition will be fierce
 - High retail prices and training costs paired with strict government policies may inhibit rapid hermetic bag adoption; producers will need to develop a multifaceted sales and distribution approach to reach farmers



- 1. Competitive landscape for PPTL products**
 - a. Agri-bags**
 - b. Tarpaulin sheets**
 - c. Cement bags**
- 2. Sales and distribution strategies**
- 3. Competitive landscape of hermetic bags**
- 4. Hermetic bags opportunity and country deep dives**

PPTL is a key player in the packaging industry with a long track record in business and a competitive array of products

	PPTL	A-Z Limited	Azam	Hill & Harsho Group	Chinese players ¹
Products	<ul style="list-style-type: none"> • Agri-bags* • Tarpaulin sheets • Cement bags • PICS bags 	<ul style="list-style-type: none"> • Mosquito nets* • Garments • Agri-bags • Recycled bags • Cement bags • Tarpaulin sheets • Agro-Z bags 	<ul style="list-style-type: none"> • Maize and wheat products* • Soft drinks • Agri-bags • Brown paper packaging 	<ul style="list-style-type: none"> • Animal feed* • Agri-bags • Packaged water 	<ul style="list-style-type: none"> • Recycled tarpaulin sheets • Recycled agri-bags, also known as khaki bags
Company history	<ul style="list-style-type: none"> • First privatized plastics company in 1995 	<ul style="list-style-type: none"> • Introduced agri-packaging business in 2006 • Africa's leading net producer but shifting to agri-packaging products 	<ul style="list-style-type: none"> • Started producing plastics in 2001 • Produces bags for internal mills and sells surplus to corporates 	<ul style="list-style-type: none"> • Group of companies owned by one family • Focus on animal feed • Agri-bags mainly for internal use 	<ul style="list-style-type: none"> • Began production after the 2008 industry boom • Uses unknown chemicals in recycling, potentially unsafe
Location	<ul style="list-style-type: none"> • Previously produced in KE and TZ; currently only in Tanga, TZ 	<ul style="list-style-type: none"> • Based in Arusha; 5,000sq m facility with staff quarters and other amenities 	<ul style="list-style-type: none"> • Part of Bakhresa Group • Based in Dar Es Salaam 	<ul style="list-style-type: none"> • Based in Mapinga and Moshi 	<ul style="list-style-type: none"> • Import distributors across the country • Some EPZ factories
EPZ status	<ul style="list-style-type: none"> • Planned 	<ul style="list-style-type: none"> • Not present 	<ul style="list-style-type: none"> • Brown paper factory in EPZ but slowed operations down 	<ul style="list-style-type: none"> • Not present 	<ul style="list-style-type: none"> • Mainly import directly from China, but some producers located in EPZs

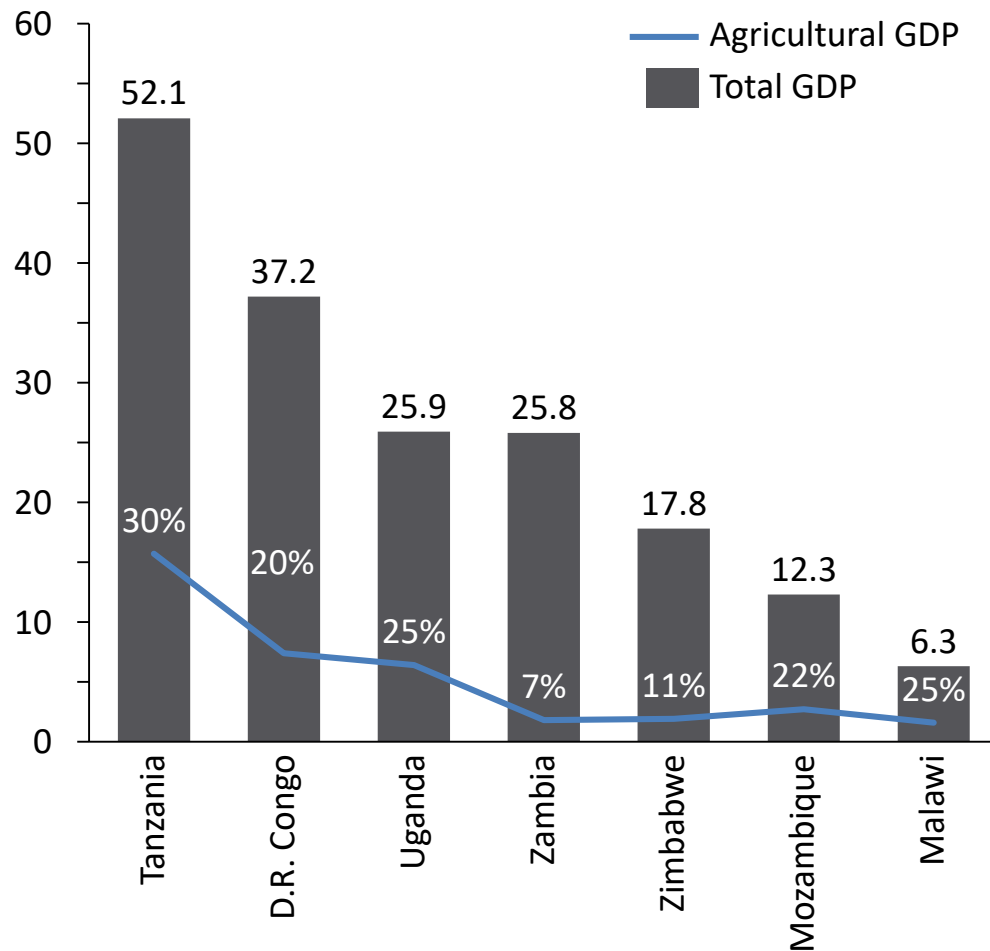
Source: Expert interviews, respective organization's website

1. Grouped multiple players together since they make the same products; * Primary product

Agriculture is the primary economic activity in Eastern and Southern Africa

Total GDP vs Agricultural GDP

US\$ Bil., 2017



Agriculture contributes 20-30% of total GDP in the majority of target countries

- Tanzania has the highest agricultural contribution to GDP at 30%
- Across the region, agricultural GDP is driven by the diverse production of export-focused cash crops (coffee, cotton, tea, tobacco) and locally consumed cereals (maize, sorghum, millet etc.)

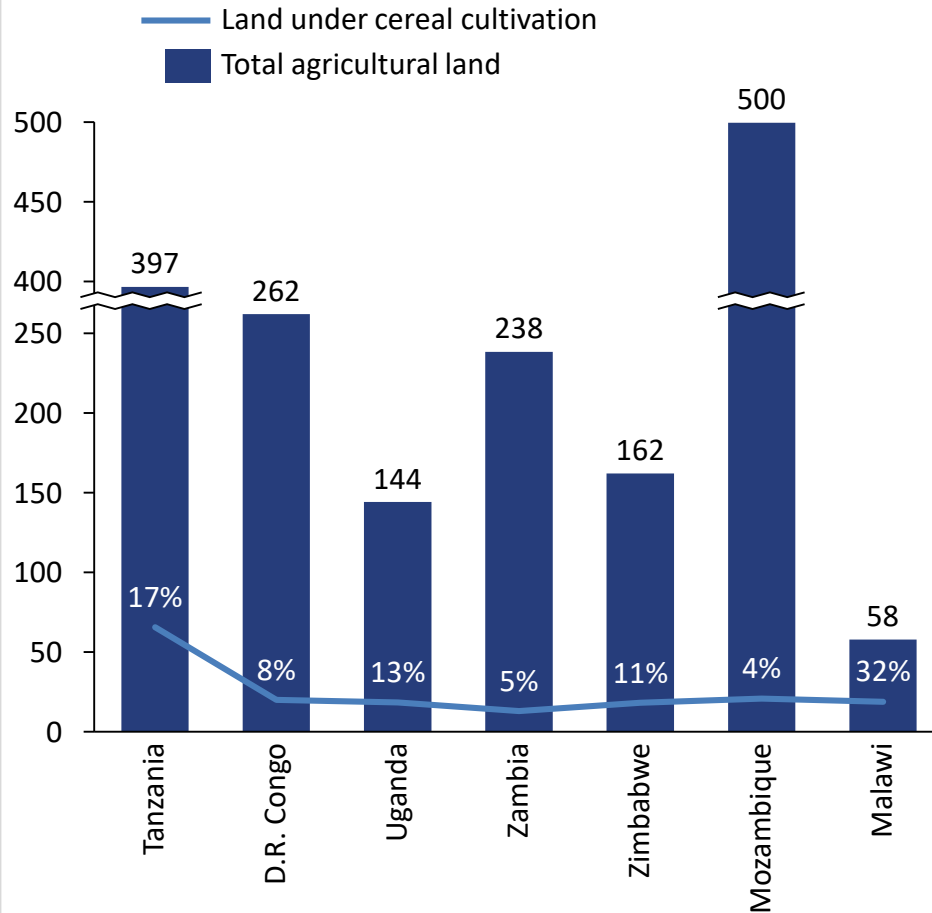
Zambia has dominant mining and industry sectors, hence lower agricultural GDP contribution

- **Zambia's agricultural GDP represents 7% of the total while its mining accounts for 36% of GDP**

Source: World Bank data

Cereal is the main product stored in agri-bags; its cultivation and storage is fundamental to community subsistence in the region

Agricultural land vs Land under cereal cultivation
'000 Sq Km, 2015



Agricultural land is defined as land area that is arable, under permanent crops, or under permanent pasture:

- Arable: land under temporary crops (e.g., cereal, other staples)
- Under permanent crops: land occupied for long periods of time with crops such as cocoa, coffee, rubber, and fruit/nut trees
- Under permanent pasture: land used for five or more years for foraging

Land under cereal cultivation represents a sizeable portion of agricultural land, especially in Malawi, Tanzania and Uganda

- Cereals such as maize, sorghum and millet are the leading staple foods in the region

Cereal is the main product stored in agri-bags, and therefore a priority for agri-bag producers

- Other staples stored in agri-bags include beans, soybeans, chickpeas etc.

Source: World Bank, Food and Agriculture Organization (FAO)

Polypropylene bags (“agri-bags”) are the most common agri-packaging product in the market; farmers buy the cheapest bags available

Agri-bags are primarily used for transporting grains and storing harvest

- Farmers treat agri-bags like a disposable product
 - They purchase high volumes for one-time use (primarily for transport)
- Agri-bags are also used to store harvest over a single season; standard agri-bags do not last more than one season due to their poor quality
- Grains stored in agri-bags require frequent pesticide treatment (at least every two months) to protect crops from insects and rats

Farmers prioritize low-quality, cheap bags over high-quality, pricier bags due to their short-term use

- The average agri-bag weighs 90g/sqm, but current market quality is as low as 50g/sqm
- The most commonly sold bag stores 50kgs. Other bags in the market store up to 100kg and as little as 25kg
- Farmers are brand agnostic; they purchase the cheapest bag available



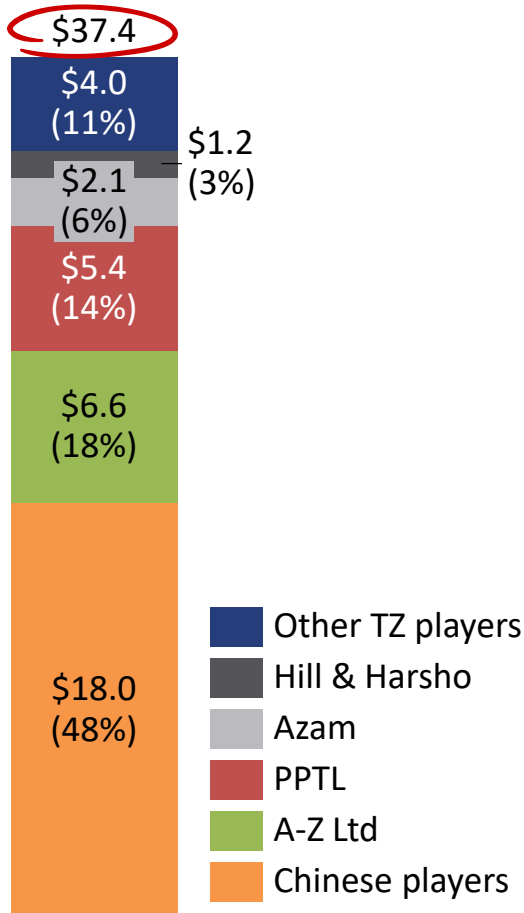
“Farmers do not know the difference between bags. If one bag tears quickly, they either change shops or ask for a different color”

– Vendor, Dar Es Salaam’s Kariokoo Market

The Tanzanian market for agri-bags is estimated at ~\$37M, and is characterized by Chinese companies and 4 key local players

Tanzania's agri-bags market
\$Mil., 2016

- Tanzania's 2016 cereal production was approximately 10M tons
- 30% haircut applied due to post harvest loss
- Assumed 70/30 split use between 50kg and 100kg bag usage, retailing at \$0.28 and \$0.44 respectively



Chinese producers are aggressively capturing market share; they benefit from easily accessible raw materials and tax benefits

- Chinese agri-bags contribute to 48% of the total market
- Chinese producers acquire their raw materials easily and at cheap prices since they collect plastic waste from the streets and purchase it from other factories
- Imported Chinese bags are not subject to VAT and other import taxes
- Chinese producers in EPZ benefit from tax exemptions as a result of bi-lateral government relationships

Chinese bags are prominent in the market due to their lower prices

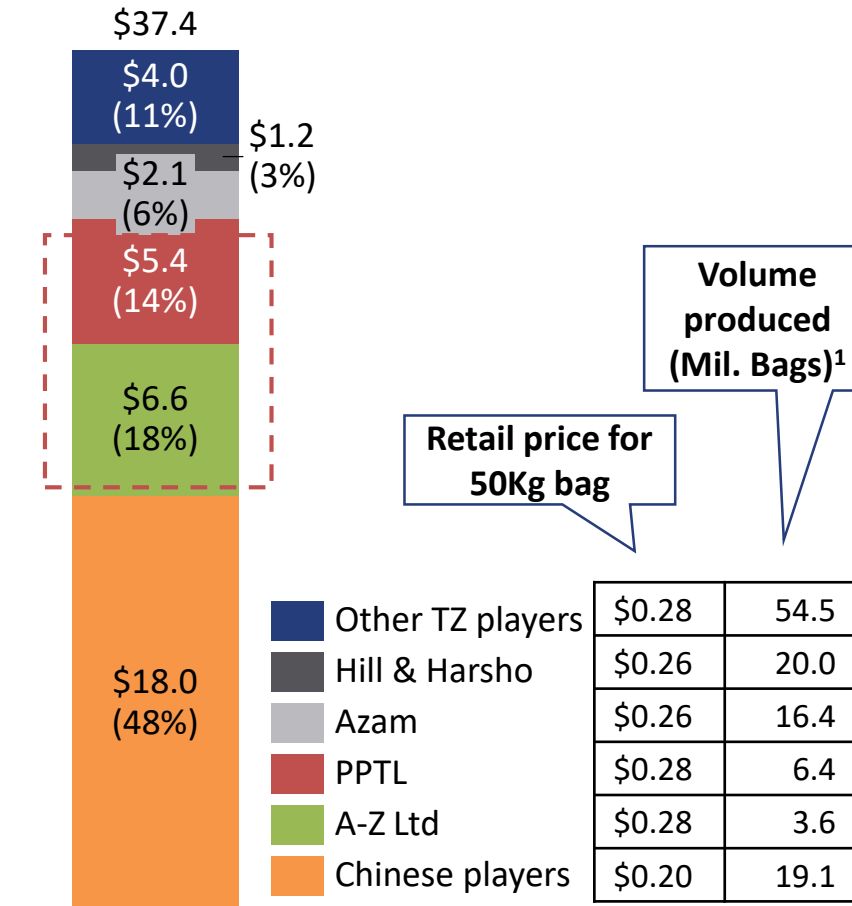
- Due to cheaper production costs, khaki bags retail at 30-60% cheaper than local virgin bags (see pricing on next page)

Source: FAO, Expert interviews, field data

Note: \$37M is a conservative estimate; it does not take into consideration legumes and cash crops

A-Z Limited and PPTL are the leading agri-bags producers among local players with 18% and 14% market share respectively

Tanzania's agri-bags market
\$Mil., 2016



Local players compete for the remaining market; some companies differentiate themselves with branded bags

- Local producers import raw materials from the Middle East and other regions incurring high production costs
- The majority of local agri-bags are white, plain, and unbranded
- However, agri-packaging companies often add labels to bags for internal use or depending on a corporate customer's preferences

A-Z Textile Mills is PPTL's biggest competitor targeting smallholder farmers

- They are the leading local producer with 18% market share
- A-Z Ltd recently invested in a recycling machine to produce recycled agri-bags. This new product will allow A-Z Ltd. to compete with the Chinese players

Other large players are vertically integrated businesses and produce bags for internal use e.g., Azam Polystacks and Hill Group

Source: FAO, Expert interviews, field data

1. Total volume produced; includes bags of all sizes. Note: \$37M is a conservative estimate; it does not take into consideration legumes and cash crops

The tarpaulin sheet (“tarps”) market is heavily dominated by the Chinese



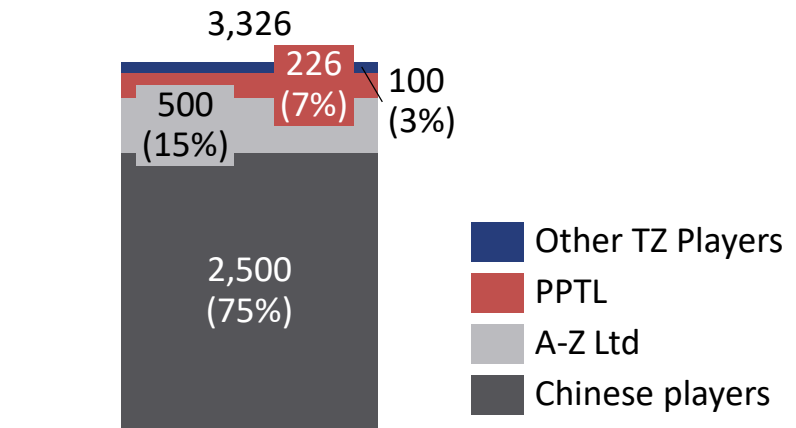
- Tarps are used for drying grains, covering stored products, or constructing make-shift markets
- Chinese producers are dominant due to their cheaper, lower-quality products
- Top local tarps producers are PPTL and A-Z Limited

“Farmers buy cheap tarps; they typically buy those that last 2-3 months, throw them away after tearing and buy new ones”

– Tarpaulins distributor

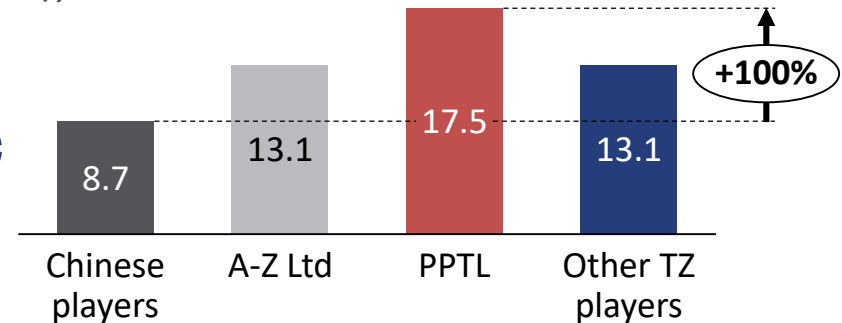
The Chinese produce the majority of tarpaulins...

Tarpaulin sheet sales '000 Sheets¹, 2017



...due to their significantly lower prices

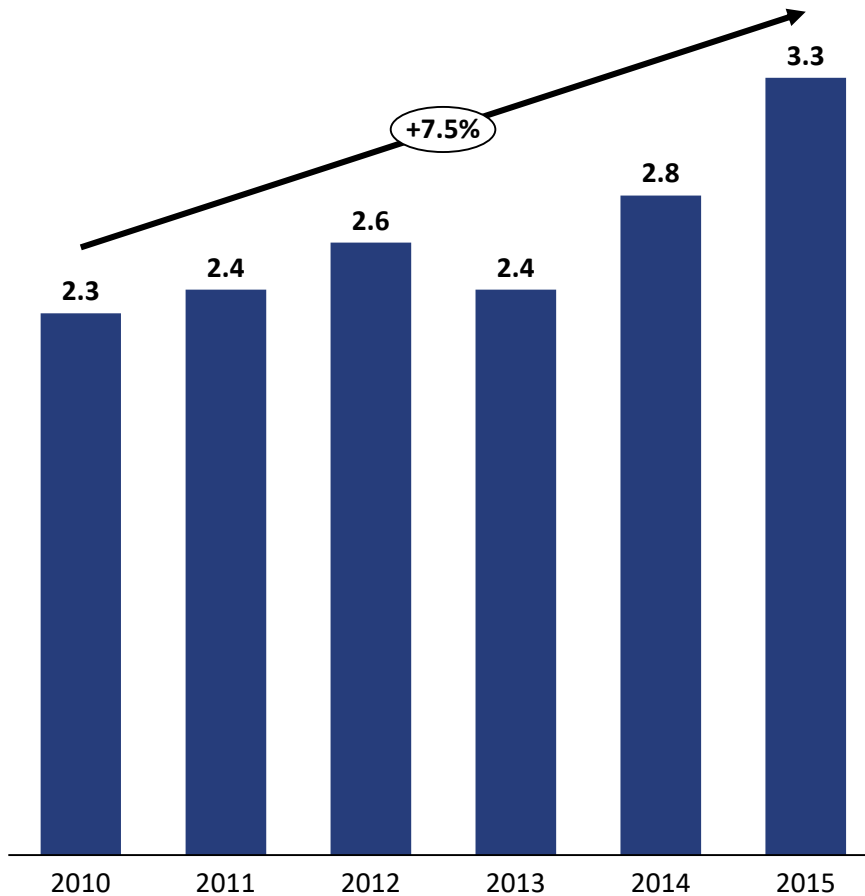
Standard tarpaulin sheet retail prices \$, 2018



Source: CrossBoundary analysis, Expert Interviews, respective organization’s website
1. Standard size measures 4x5m, but bigger sheets of up to 6x12m are available

Tanzania's cement industry is steadily growing driven by a booming construction industry

Cement production in Tanzania
Mil. Tons, 2011-2015



Tanzania's cement industry has grown rapidly in the last few years

- **Total production increased by 7.5% CAGR between 2011 and 2015**

A flourishing economy contributes to an expanding construction industry

- **Strong GDP growth of ~8% sustained for over a decade**
- **Commissioning of mega-infrastructure projects e.g., \$10 billion port and special economic zone in Bagamoyo**

Historically, Tanzania Portland Cement Company (TPCC) and Tanga Cement have been the leading cement producers, but there are new market entrants

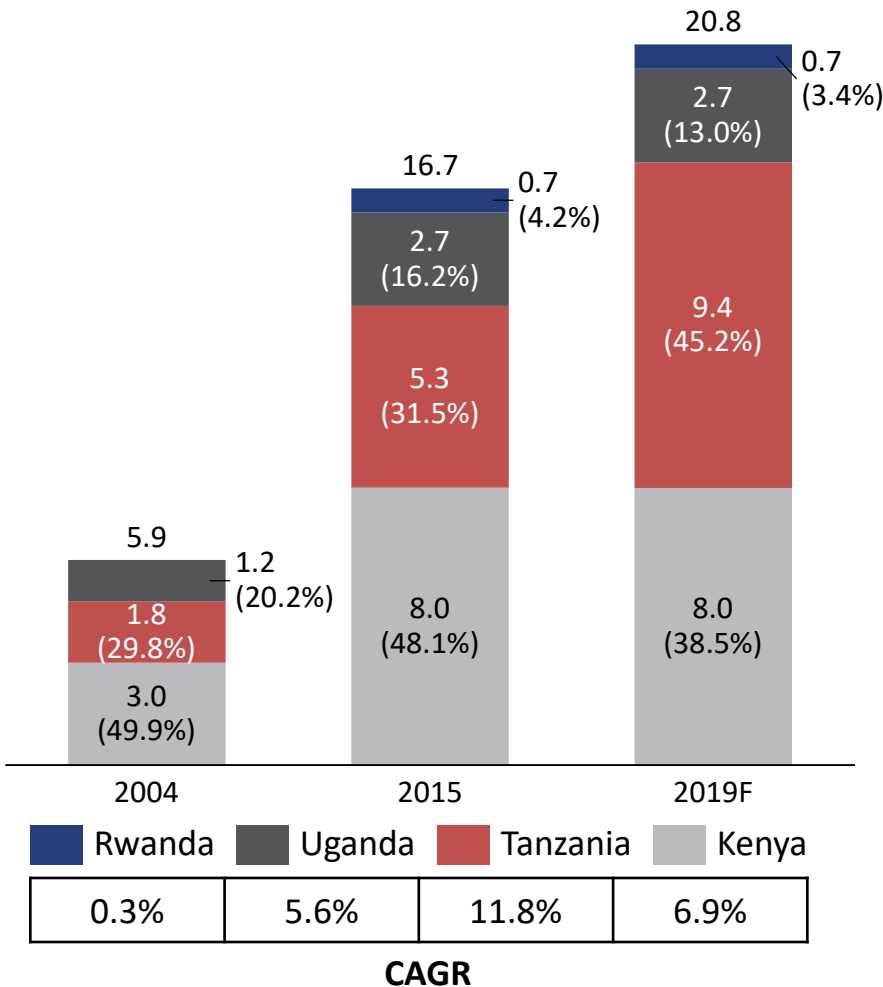
- **TPCC held 36% of total market share in 2015**
- **New players have increased production in the market, including Dangote Group, who installed a 3 mil. Ton cement plant in 2015**
- Other new players include Camel Cement, Lake Cement, and export-focused Chinese manufacturers

Source: AIB Capital Ltd Cement Report

Tanzania is quickly becoming a leading cement producer in East Africa

Cement production capacity

Mil. Tons, 2004-2019F



Tanzania's cement production capacity is expected to grow faster than its peers

- Regional YoY growth is 8.7% while Tanzania records 11.8% YoY growth until 2019
- Kenya records a lower YoY growth of 6.9%
- Tanzania will emerge as a regional leader with capacity forecasts of 9.4 mil. tons by 2019, out-producing Kenya for the first time in history

Competition is growing fiercely in Tanzania due to many new market entrants. By contrast, Kenya's market remains controlled by a few key players

- More than 6 new cement producers have entered the Tanzanian market since 2015
- Kenya's Athi River Mining went into administration and is rumored to be in the final stages of buyout by Dangote Group
- Tanzania is increasing its domestic production and reducing its dependence on regional imports

Tanzania's cement production growth steers a parallel industry in packaging

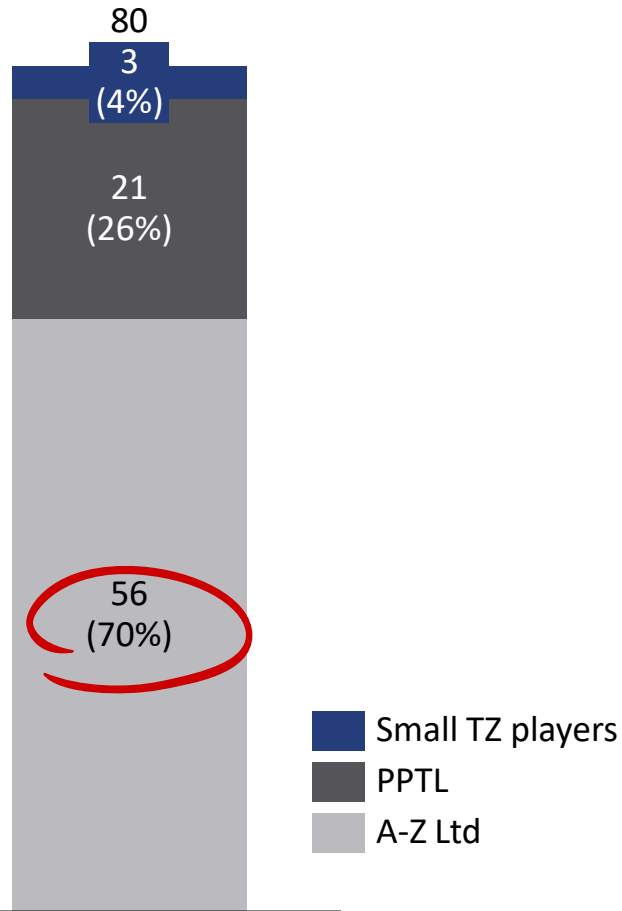
Source: Tanzania Investment Authority; Standard Investment Bank Report

PPTL's potential expansion will allow them to capture the growing cement bag market

A-Z Ltd dominates cement bag production

Cement bag sales

Mil. bags, 2017¹



A-Z Textiles Ltd is the second largest cement bag manufacturer in Africa.

- **A-Z Ltd produces ~70% of the total demand in TZ**
- **However, the majority of A-Z Ltd's total production is exported to Kenya, Zambia, and Uganda**

PPTL cement bag production runs at full capacity

- Increased capacity will allow them to serve the growing cement market (most producers outsource their packaging)

Source: AIB Capital Ltd Report, CrossBoundary analysis, Expert Interviews

1. Estimate of 2017 cement production at 3.9M Tons based on 10% CAGR from 2015 (driven by numerous new market entrants); Cement bags store 50kgs



- 1. Competitive landscape for PPTL products**
 - a. Agri-bags**
 - b. Tarpaulin sheets**
 - c. Cement bags**

2. Sales and distribution strategies

3. Competitive landscape of hermetic bags

4. Hermetic bags opportunity and country deep dives

Sales and distribution strategies are similar across the market players due to limited product differentiation

PPTL boasts a broad, decentralized distribution network due to its long history in the market

- PPTL works with an extensive network of distributors and buyers with deep rural penetration
- PPTL sells directly to the distributors who in turn sell the products to smallholder farmers and large multinationals
 - The Southern highlands is PPTL's biggest market due to the region's agricultural activity and economic size





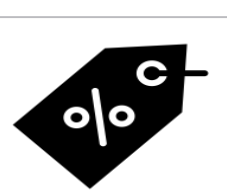
Agri-packaging players employ similar distribution tactics to ensure customer loyalty

- Majority of sales are through leading distributors in the agricultural regions
- Companies have annual contracts with most corporate clients such as NGOs (e.g., WFP) and cement manufacturers (e.g., Dangote Group)
- Depending on order size and contract conditions, some agri-packaging producers deliver bags to clients directly
- A few corporate clients purchase on a need basis



Source: Expert interviews, CrossBoundary analysis

However, different producers have unique incentives for their distributors

	Bonuses	<ul style="list-style-type: none">Some companies set sales targets with their main distributors every year and provide cash bonuses when the distributors sell more than the anticipated amounts
	Transport	<ul style="list-style-type: none">During peak seasons, manufacturers lend their trucks to distributors with constrained resources for short periods of timeTransportation support enables distributors to cater to numerous purchase orders simultaneously
	Credit	<ul style="list-style-type: none">A few companies extend credit especially for big sales during peak harvest season. Distributors receive products on credit for up to 30 daysPPTL steers away from credit sales for agri-bags and tarpaulins due to high default rates resulting in financial losses
	Appreciation	<ul style="list-style-type: none">PPTL's competitors continuously share appreciation messages with their distributors; for example, hosting a collective annual dinner celebration at the end of the year
	Discounts	<ul style="list-style-type: none">Chinese players are known to provide large discounts to distributors and wholesalers<ul style="list-style-type: none">Price discounts as high as 10% coupled with lower prices boost Chinese product sales in the market

Source: Expert interviews, CrossBoundary analysis

Overall, the agri-packaging market is relatively homogenous; PPTL can focus on high value segments and tap into the attractive cement industry

Undifferentiated products

- Competition is fierce due to lack of product differentiation and price cutting
 - The agri-packaging industry is unregulated with limited quality control, leading to a plethora of low quality, cheap products
- The government does not mandate a minimum standard of quality

Limited innovation

- There are few new inventions in the agri-packaging industry; the major innovation in the last 20 years is the hermetic bags

Optimal production location

- Compared to Kenya, Tanzania's cost of power is 40% less and starting wages are two-thirds lower
- However, production efficiency is lower and skilled workers are limited

"The unpoliced environment supports poor quality products. It's a free for all"

– Agri-bags producer

"This is a pretty dull and price sensitive industry, you don't see much innovation"

– Agri-bags producer

Opportunities for PPTL

- PPTL can emphasize their high-quality products and target high-value customers for agri-bags and tarps
- For cement, PPTL can utilize the favorable production environment to increase production and cater to growing demand

Source: Expert interviews, field research



1. **Competitive landscape of for PPTL products**
 - a. **Agri-bags**
 - b. **Tarpaulin sheets**
 - c. **Cement bags**

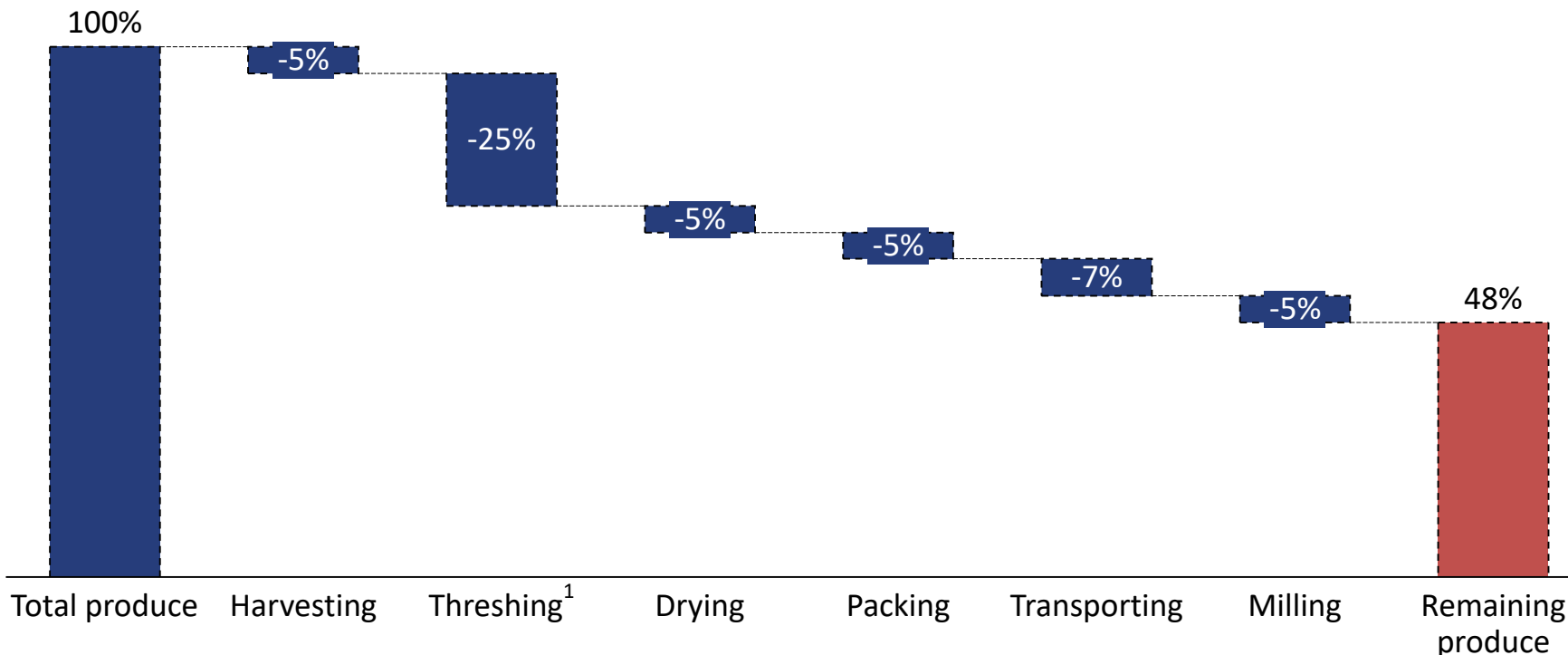
2. Sales and distribution strategies

3. Competitive landscape of hermetic bags

4. Hermetic bags opportunity and country deep dives

Post-harvest loss is one of the biggest challenges across the agricultural value chain in Sub-Saharan Africa

Post-harvest loss for maize across the value chain
%, 2014



Research shows that average post-harvest loss across the continent is 20-40% and can be as high as 50% depending on the crop variety, location, post-harvest handling techniques, and seasonality

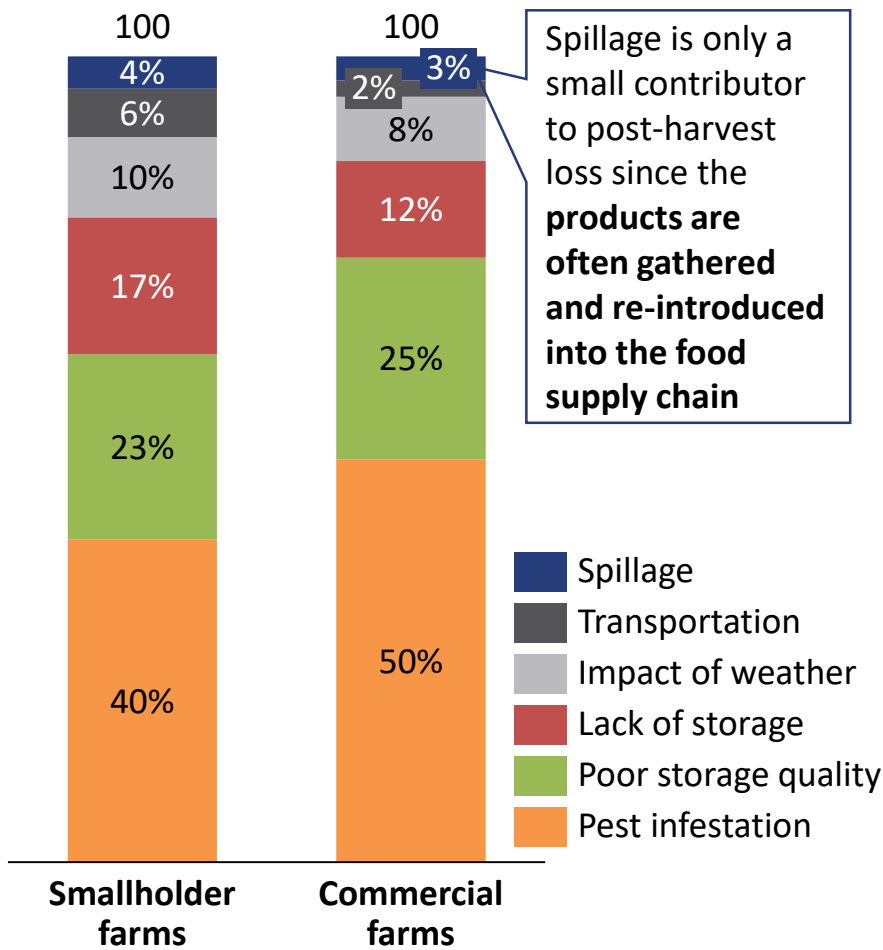
AGRA Report, 2014;

1. Threshing - Process of loosening the edible part of grain (or other crop) from the husks and straw to which it is attached



Farmers in Tanzania attribute crop loss primarily to pest infestation and inadequate storage facilities

Perceived causes of crop loss
%, 2014



The largest contributor of post-harvest loss in Tanzania is pest infestation

- Pest infestation directly or indirectly causes 40% and 50% of crops losses among smallholder farmers and commercial farmers respectively

Across the board, farmers have poor quality storage facilities contributing to 23-25% of crop loss

However, lack of storage facilities is a bigger problem for smallholder farmers

- Storage absence leads to 17% and 12% crop loss for smallholder and commercial farmers respectively
- Smallholders often share limited and sparsely-spread communal warehouses
- This issue is exacerbated in large countries with limited infrastructure such as Tanzania

Crop loss due to transportation is often a result of poor infrastructure (e.g., inadequate roads)

Source: AGRA Post Harvest Loss Survey, 2014; Department of Crop Development Tanzania

Hermetic bags have a multidimensional value proposition including improved food security, health benefits, and increased income for farmers



Food security

- **Household food storage is the primary use for hermetic bags** among smallholder farmers in Sub-Saharan Africa
- Storage is critical to food security as it allows farmers to provide for their families during the off season



Health benefits

- Hermetic bags are a chemical-free solution; **they do not require harmful pesticides to protect against insects**
- Studies show that items stored in hermetic bags maintain their nutritional content and yield better during seed multiplication¹



Increased income

- **High value products (e.g., coffee) stored in hermetic bags attract higher premiums in overseas markets** due to the fact that the flavor profile and taste is maintained
- **Stored items can be sold at higher prices when supply is low** (during off season) especially when quality is maintained as a result of proper storage









Reduced losses

- **Proper usage reduces post-harvest losses from 40% to as low as 2%-5%**
- With a lower amount of stock lost due to insect damage and mold, farmers receive income for a higher portion of their stock
- Hermetic bags are not rodent-proof, but rodents can smell the bag contents less compared to standard agri-bags







1. Natural Resources Institute, Expert Interviews

While PICS is the incumbent player in the region, other players are actively seeking investment and plan to scale in the coming years

						
Description	3-layer hermetic bag	2-layer hermetic bag	Hermetic bag with zip-lock technology and large cocoon-sack	Slow-release insecticide incorporated into outer bag	2-layer hermetic bag	3-layer hermetic bag
Manufacturer (location)	PPTL (Tanga, TZ)	A-Z Ltd (Arusha, TZ)	GrainPro (Boston, USA)	Vestergaard (Switzerland)	Harsho Group (Moshi, TZ)	Elite Innovations (Kenya)
Target end user	Smallholder farmers	Smallholder farmers	Commercial farmers and high value goods (“HVG”)	Smallholder farmers	Smallholder farmers	Smallholder farmers
Reputation	Incumbent hermetic bag solution in Africa	Least expensive bag available	Known for HVG (e.g., coffee) Zip lock requires additional training	Zip lock requires additional training	New market entrant	New market entrant
Reach	Regional	Regional	Regional	Regional	Tanzania only	Kenya only
Retail price in Tanzania	\$2.50 but often sold with NGO subsidies	\$2.0	\$2.50 - \$3.0	\$2.5	\$2.0	\$2.5 (Price in Kenya)

Source: Respective organization’s website, CrossBoundary analysis, Expert Interviews

There are several key points of differentiation across the various hermetic bags on the market

	Input from farmers	 PICS <small>Purdue Improved Crop Storage</small>	 AgroZ	 GP GRAINPRO <small>STORING THE FUTURE</small>	 ZeroFly Hermetic <small>Storage Bag by VESTERGAARD</small>	 Harsho Group <small>Quality & Trust</small>	 ELITE <small>INNOVATIONS K LTD</small>
Pictorial instructions¹	Useful	✓	✓	✗	✓	✓	✓
Instructions in local language	Useful depending on literacy	✗	✓	✗	✗	✗	✓
Phone contact information²	Useful	✗	✗	✓	✓	✗	✓
Website contact information	Not useful, low internet penetration	✗	✓	✗	✓	✗	✗
Rope tie	Easy to use	✓	✓	✗	✗	✓	✗
Zip lock	Requires training	✗	✗	✓	✓	✓	✓
Insecticide	Potential health concern	✗	✗	✗	✓	✗	✗
Layers	More the better	3	2	2	2	2	3
Price range (USD)		\$1.8-\$2.5	\$1.8-\$2.0	\$2.2-\$4	\$2.5	\$2.0	\$2.5

Source: Expert Interviews, Respective organization's website

1. Instructions on the bag are only useful when supplementing training; they cannot substitute proper training

2. Contact information on the bag is not a substitute for a strong relationship with a distributor

As the incumbent, PICS can capitalize on its strong brand reputation as it expands across the region

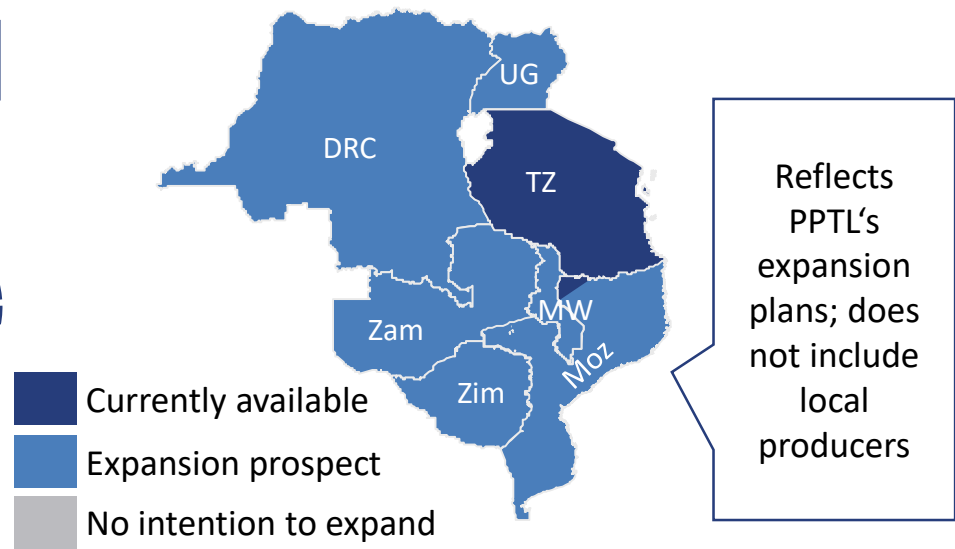


Outside bag (side 1)
Rope tie

Outside bag (side 2)
No print on inner bag

History	Introduced through a research program by Purdue University in West Africa in 1996; Expanded into East Africa in 2013
Unique value prop	Three-layered bag, considered superior by the majority of smallholder farmers
Market entry challenges	Historically, PICS entered new markets with strong support from NGO partners At full retail price, PICS is sometimes more expensive than competitors

"Farmers see the value of the bags and are looking for more. The main value proposition is household storage, but there will be more market penetration if the effects on seed multiplication are emphasized"
- NAFKA Program Chief of Party



Source: Respective organization's website, Expert Interviews

Agro-Z is PICS' main competitor; lower prices and strategic partnerships create fierce competition



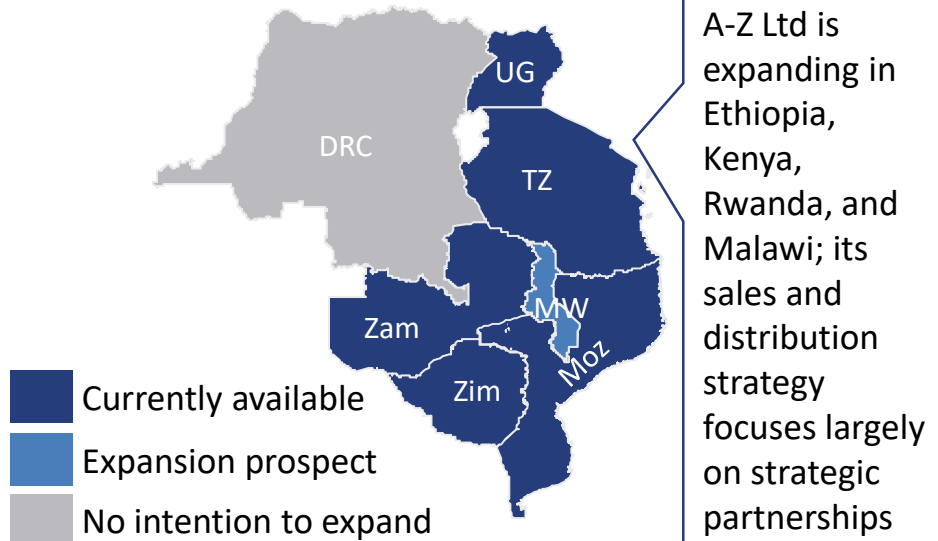
Outside bag (same print on both front and back)

1 inner layer + rope tie

History	Introduced in 2015 through a research project in Arusha in collaboration with Japanese scientists
Unique value prop	Co-extrusion of 5 plastic layers into one strong, airtight bag
Market entry challenges	Some farmers assume Agro-Z bags lower quality since they have one less layer than PICS

"PICS is still market leader in TZ, but Agro-Z is getting a strong foothold. They invest in the product and sell at lower prices. They received prize money from AgResults that has enabled them to expand their market"

- CEO PICS Global



Source: Respective organization's website, Expert Interviews

GrainPro dominates bulk storage and transportation of cash crops, and it is considered unattractive for smallholder farmers

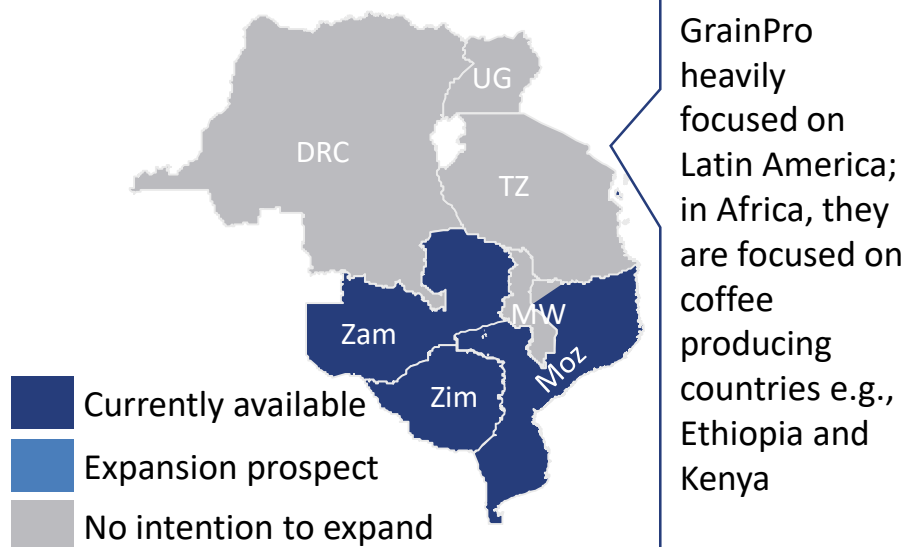


Outside bag (side 1)

Outside bag (side 2)

History	US company bought technology from Israel in 1992; currently manufactured in Philippines. Was introduced to EA in 2010
Unique value prop	5MT-500MT cocoon bag for large scale storage; 80% of 50 kg and 100kg bag sales are to coffee producers
Market entry challenges	Attempted less intensive training model in Rwanda and Zambia; unsuccessful due to rat infestation incidences

"GrainPro technology is of a higher magnitude than needed to kill insects; the oxygen barrier is higher. It is not attractive to smallholders because it is a pricier bag. Their market is high end products like coffee, and strictly for commercial purposes"
- Global hermetics expert



Source: Respective organization's website, Expert Interviews

Zerofly is a new market entrant with limited reach but ability to grow

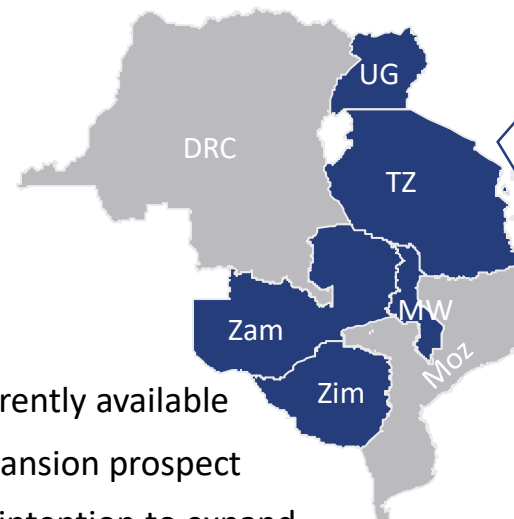


Outside bag (slow release insecticide on bag)

Inner bag

History	Danish company founded in 1957; launched ZeroFly in 2016; bags imported from Denmark
Unique value prop	Slow release insecticide offers additional protection against pests
Market entry challenges	Lack of localization e.g., instructions on bag labelled in English, imported product Late market entrant; difficult to capture market with high prices

“Vestegaard is not a big threat yet, but they have a lot of resources to innovate and grow”
 - CEO, PICS Global

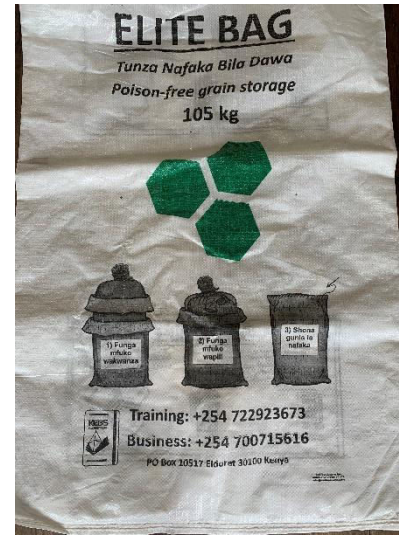


- Currently available
- Expansion prospect
- No intention to expand

Initial global focus on India, Ghana, and Kenya; now expanding to neighboring countries. Recently found a distributor in Malawi and Zimbabwe

Source: Respective organization’s website, Expert Interviews

Harsho and Elite bags are new market entrants; they do not pose an immediate threat



Harsho Group is based in Moshi, Tanzania

- The core business is an animal feed milling company paired with an agro-inputs sales and distribution company (e.g., pesticides, seeds)
- The secondary business is a packaging business producing a variety of polypropylene bags including agri-bags and a new to market hermetic bag (currently only sold in Tanzania)
- The tertiary business is a B2B and retail stationary and office equipment business



Elite Innovations is based in Eldoret, Kenya

- Founded in 2014, the core business is hermetic bags (currently only sold in Kenya)
- They are fundraising and plan to expand throughout the region



Source: Respective organization's website, Expert Interviews



- 1. Competitive landscape of for PPTL products**
 - a. Agri-bags**
 - b. Tarpaulin sheets**
 - c. Cement bags**

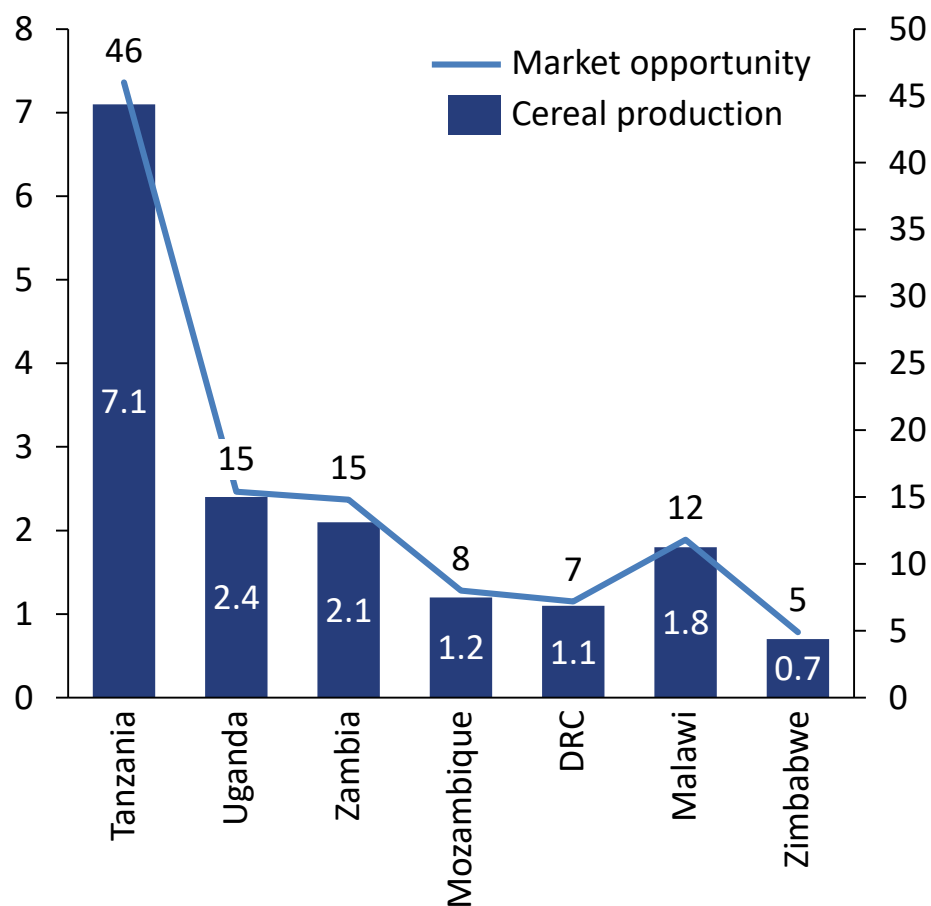
- 2. Sales and distribution strategies**

- 3. Competitive landscape of hermetic bags**

- 4. Hermetic bags opportunity and country deep dives**

There is a large potential market for hermetic bags across Eastern and Southern Africa

Annual cereal production (Mil. tons) vs Market opportunity (bags), 2017



Market opportunity calculation is conservative

- Only includes cereal production; does not include legume production (e.g., beans)
- Cereal production volumes take into account ~30% post harvest loss
- Only 50% of cereal production considered eligible for storage as ~40-60% of harvest is typically immediately sold and transported in standard agri-bags
- Smallholder population contributes to ca. 80% of cereal production

Does not take into consideration infrastructure and logistical concerns within countries

- Domestic infrastructure has a strong influence on marketing, sales, and distribution of hermetic bags
- Similarly, training is required to ensure proper usage

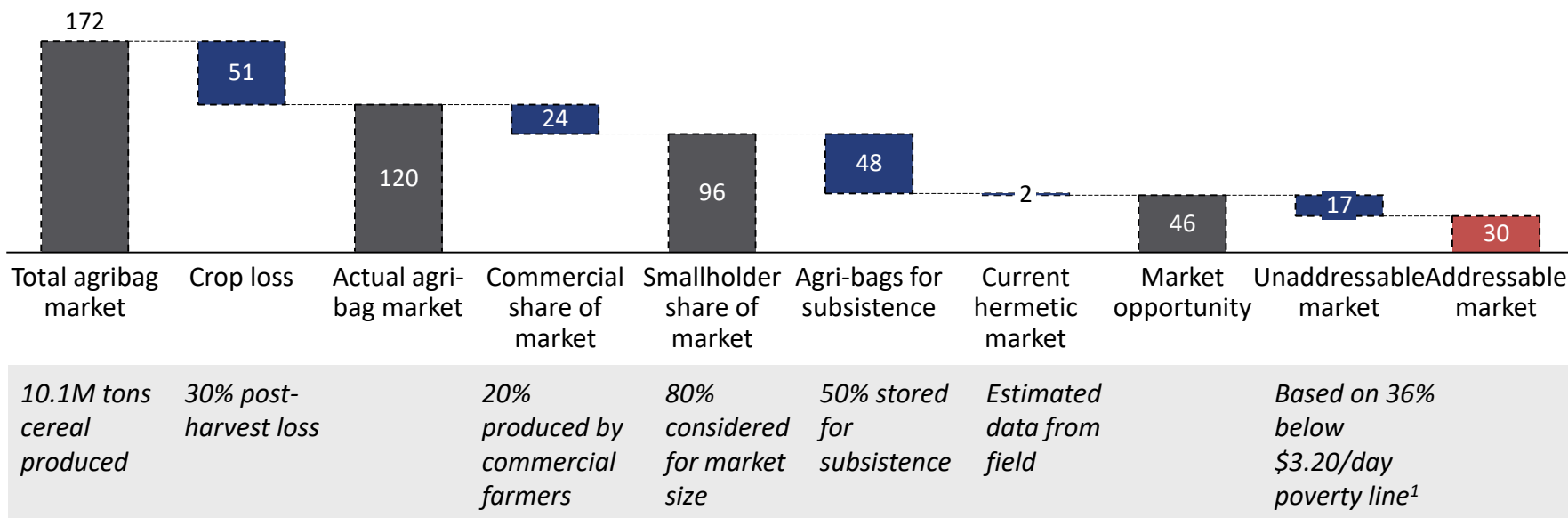
Source: FAO, AGRA Post Harvest Loss Survey , CrossBoundary Analysis

There is a 30 million bag untapped market opportunity in Tanzania; only two main players have a broad presence in the market



Hermetic bag market size

Mil. bags, 2017



PICS and AgroZ dominate the hermetic market...

- The most prominent bags are PICS and AgroZ bags, 51% and 32% of the current market respectively
 - PICS and AgroZ are manufactured locally driving market dominance
- AgroZ retails at \$2.0 while PICS retails at \$2.25-\$2.50
 - PICS market share is driven by NGO subsidies
- Although GrainPro is popular in coffee markets, AgroZ controls the cash crop segment in Arusha

...but there still remains a 30 Mil. bag untapped market

- Current hermetic bag sales only capture ~4% of the potential market
- PPTL can capitalize on PICS' strong brand reputation to increase their market share:
 - Increase agro-dealer network in the Southern highlands as entry point to markets such as Malawi
 - Focus on underserved cash crop farmers

Source: World Bank, FAO, AGRA Post Harvest Loss Survey 2014, CrossBoundary Analysis

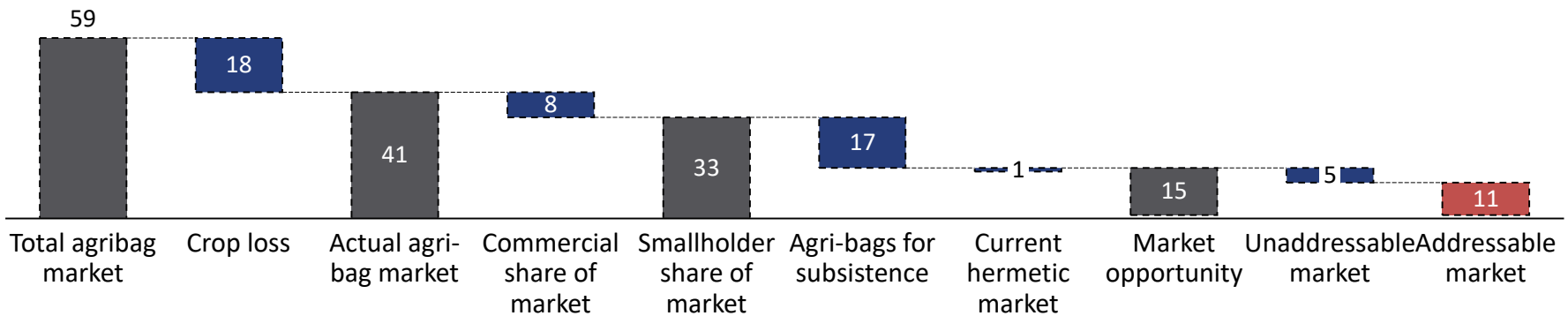
1- Haircut applied based on assumption that farmers below \$3.20 per day poverty line cannot afford \$2.0+ hermetic bags

Uganda's hermetic bag market is in its infant stages; with the right partner, PPTL can penetrate the market



Hermetic bag market size

Mil. bags, 2017



3.5M tons cereal produced

30% post-harvest loss

20% produced by commercial farmers

80% considered for market size

50% stored for subsistence

Estimated data from field

Based on 31% below \$3.20/day poverty line¹

The hermetic market is nascent with no local players

- Uganda lacks a hermetic manufacturer, and has obtained its supply through NGOs and importers
 - In the last two years, a WFP program distributed over 1 million PICS bags in Uganda
 - AgroZ's main distributor imports from TZ and built an agrodealer network to drive sales
- AgroZ retails at \$1.8-\$2 while PICS retails at \$2.6
 - However, WFP subsidized 50% of PICS costs at the onset of their program

...but there is great opportunity for increased presence

- Ugandan farmers have an appetite for hermetic bags; the key issue is availability

"The problem is hermetic bags haven't been available to farmers. Every place we did a training, farmers bought the bag. If the bags were made available, people would buy them"

- AgroZ Distributor

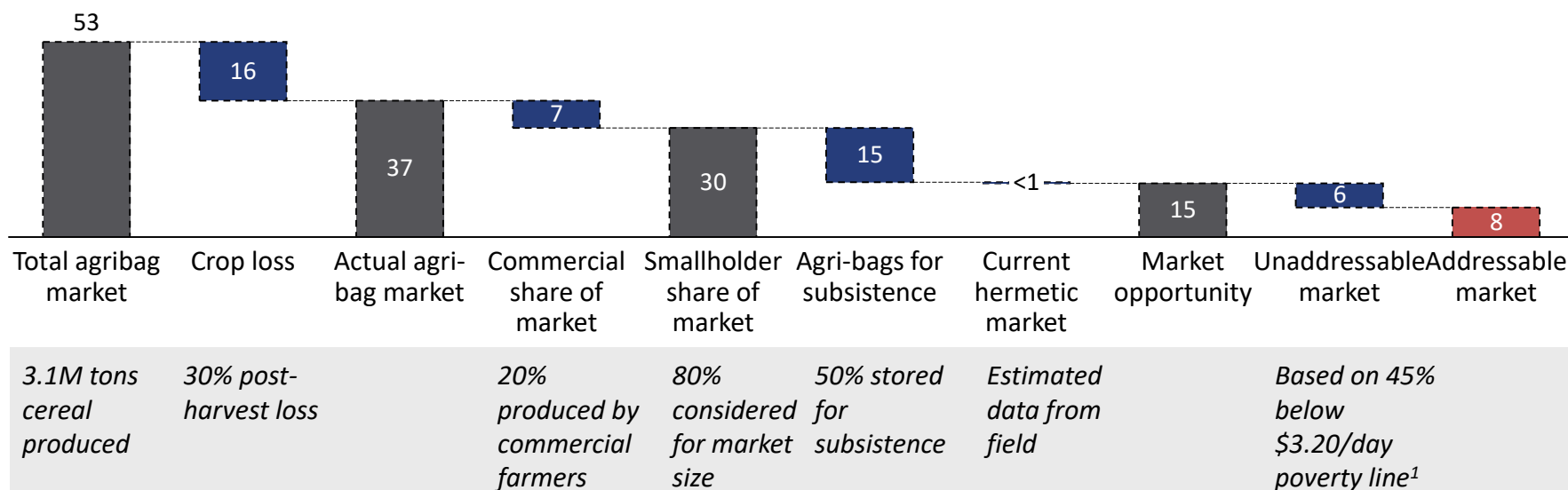
Source: World Bank, FAO, AGRA Post Harvest Loss Survey 2014, CrossBoundary Analysis

The Zambian government's support for PICS bags will be instrumental to PPTL's expansion



Hermetic bag market size

Mil. bags, 2017



PICS are the most common hermetic bags...

- Four types of hermetic bag are available in Zambia: PICS, AgroZ, Zerofly, and Grainpro
- Similar to other countries, PICS is the market leader, contributing to ca. 80% of the total market
 - **Locally produced by Polythene Products Ltd Zambia**
- Zambian farmers are extremely price sensitive, and hermetic bags sales fluctuate based on the market price for grains

...PPTL can capitalize on government support

- Government support e.g., countrywide publicization has led to PICS' success in the market
 - PPTL can capitalize on the country's positive outlook to increase sales
 - Unlike PICS, GrainPro gained a negative reputation, particularly with the National Grain Board because of rat infestation incidents
 - Their market presence has diminished

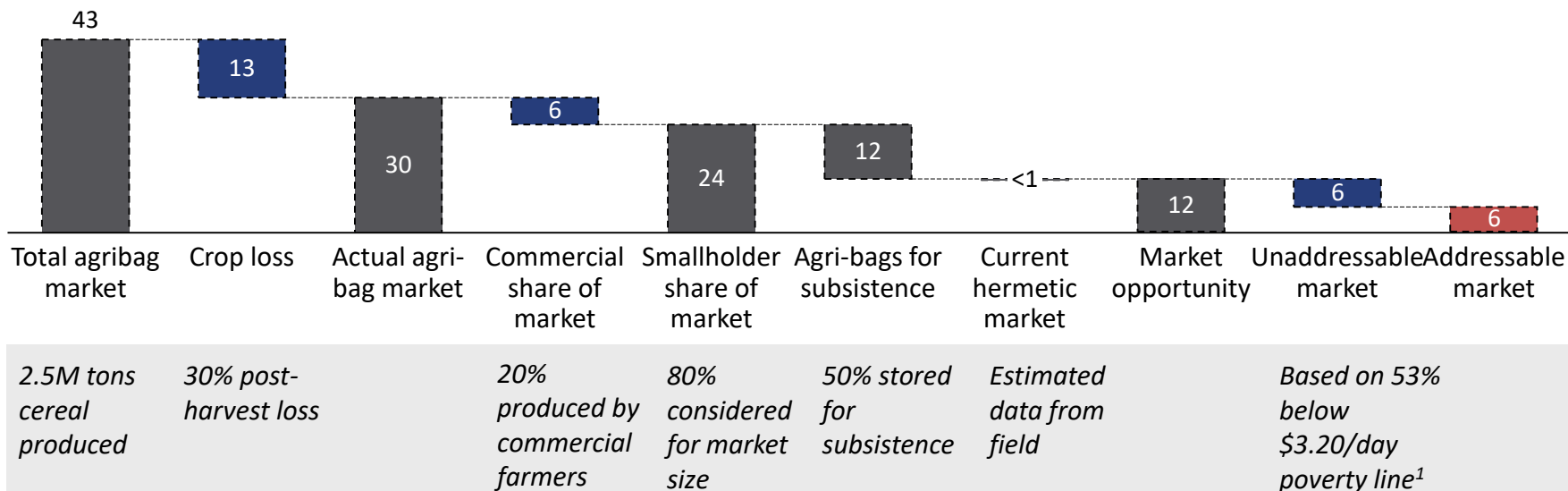
Source: World Bank, FAO, AGRA Post Harvest Loss Survey 2014, CrossBoundary Analysis

Although PICS is a dominant hermetic player in Malawi, new entrants pose a threat in the underserved regions



Hermetic bag market size

Mil. bags, 2017



PICS is prevalent in Malawi...

- With about 250K bag sales in 2017, PICS bags represent ~90% of the current hermetic market
 - **Locally produced by Polybags Ltd**
- PICS bags are widely used in the South and Central region due to a large NGO presence (FTF, One Acre, WFP) and easy access to the Polybag Ltd facility
- PICS bags are significantly cheaper than ZeroFly
 - PICS retails at \$1.3 while ZeroFly retails at \$2.20 for 50kg bags

...but is yet to capture the Northern market

- The Northern region has the least hermetic sales and presents an untapped opportunity
 - Little NGO presence and underdeveloped agro-dealer network
 - Given proximity to Tanzania's southern region, PPTL could extend its PICS sales and capture the market
- **Competition will stiffen as AgroZ bags are under review by Malawi Research Technology Clearing Team and will soon be available**

Source: World Bank, FAO, AGRA Post Harvest Loss Survey 2014, CrossBoundary Analysis

High retail price, training costs, inadequate distribution networks, and limiting government policies inhibit rapid hermetic bag adoption



High prohibitive costs

- **Hermetic bags are 6-10X more expensive than regular agri-bags**
- Despite being a 3-year investment, farmers cannot afford the high initial costs
 - Farmers often lack access to financing or credit purchases
- Agro-dealers also struggle with high cost of bags; they often want to purchase bags from manufacturers on credit to avoid high up-front cost



Lack of extensive distribution networks

- **Farmers are located in rural areas where distribution logistics are challenging**
 - Hermetic bags are typically sold to farmers through agro-dealers; their networks are more dispersed than traditional distributors
 - Manufacturers struggle to build new, reliable, and well-established agro-dealer distributors



Limited training

- **Proper usage of the bag requires extensive and continuous training of consumers and distributors**
- NGO's and initiatives (e.g., WFP, Feed the Future) engage in farmer demonstrations but their programs are temporary
- Manufacturers must continue the costly marketing and training programs with limited capital and market reach



Government policy constraints

- **New market entry requires approval from country's agricultural research institutions. The approval process is often lengthy and unpredictable**
- The plastic bag ban in Kenya and Rwanda poses a potential threat
- Hermetic bags are considered a farming input but are still subject to VAT. This is not the case for other farming inputs such as fertilizers and seeds

Source: Expert Interviews, CrossBoundary analysis

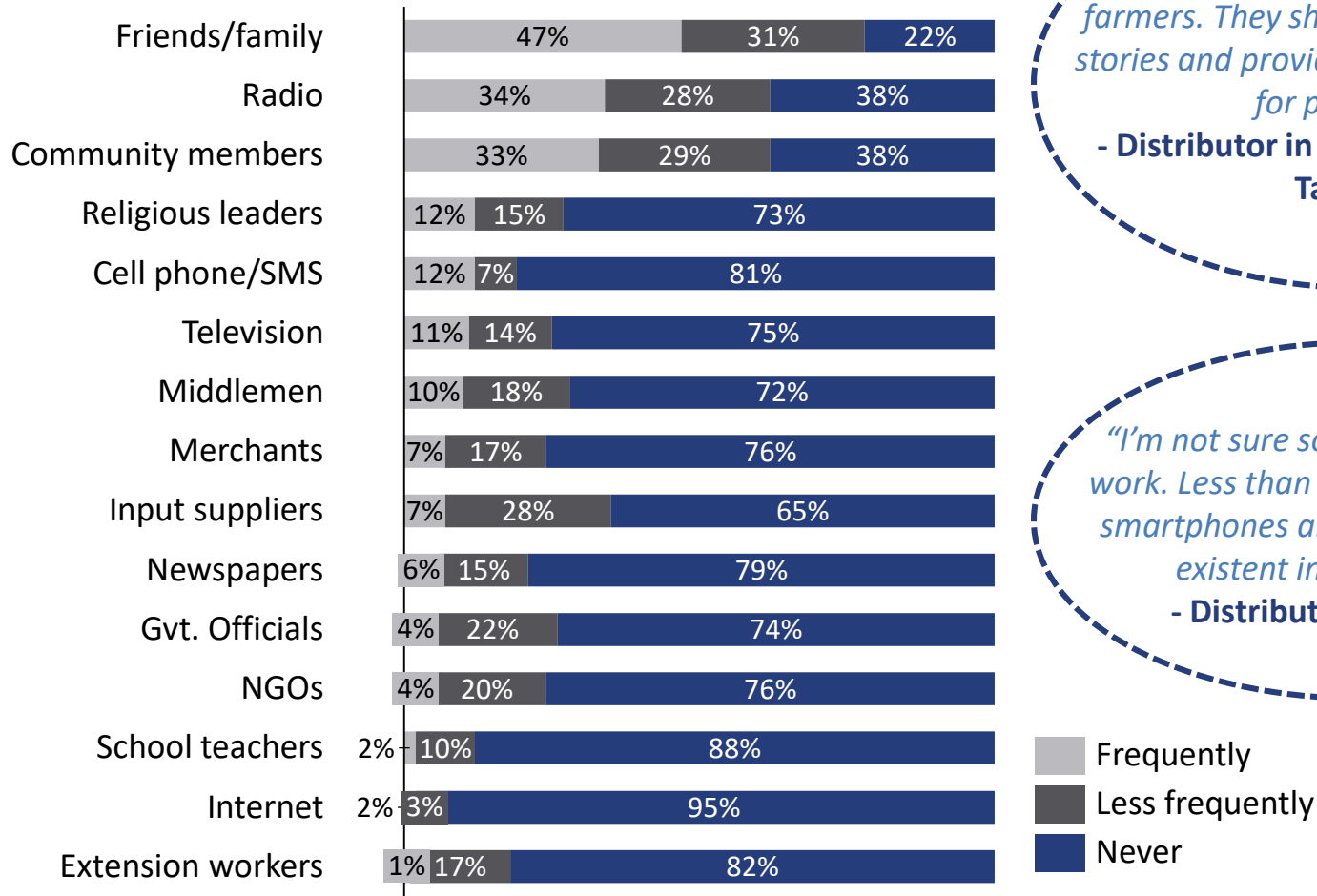
Hermetic bags barely scratch the surface in terms of reaching and servicing farmers; sales and distribution requires a multifaceted approach

Direct education	<ul style="list-style-type: none">• NGO initiatives (e.g., Feed the Future, WFP) conduct farmer field days which feature product demonstrations; these are costly as they need to be conducted over a couple months to show the difference in agri-bag storage and hermetic bag storage	 A photograph showing a group of people, including a man in a blue shirt and a woman in a white shirt, standing in a field. One man is sitting on the ground, possibly demonstrating a technique or product.
Strategic collaborations	<ul style="list-style-type: none">• Opportunity to partner with other agricultural input producers (e.g., seeds, fertilizers) to provide training on value added services across the value chain• Partnerships with government ministries (e.g., agriculture) can supplement NGO trainings and farmer outreach	 A close-up photograph of a brown wooden bowl filled with small, reddish-brown seeds, likely sorghum or millet.
Distributors	<ul style="list-style-type: none">• Manufacturers will rarely sell directly to consumers; instead, they operate through distributors who develop strong relationships with farmers within their regions• Distributors need to be thoroughly trained to accurately service farmers	 A photograph of a woman wearing a yellow headscarf and a purple patterned top, working in a field. She is using a wooden tool to dig or plant in the soil.
Exhibitions	<ul style="list-style-type: none">• Large scale farmers, innovators, and other players in the agriculture sector attend agricultural shows to learn new farming techniques and best practices• Exhibitions create an opportunity for manufactures to remain tapped into changes in the broader agricultural market	 A photograph of an agricultural exhibition or market. Several people are gathered around a table displaying various agricultural products, including bags of grain.
Farmer groups / SACCOs	<ul style="list-style-type: none">• Leveraging farmers groups and SACCOs to reach farmers can increase reach and build brand reputation• Allowing groups to purchase higher volumes at lower prices can increase the farmers willingness and ability to pay for hermetic bags	 A photograph of a large group of farmers, including men and women, posing for a group photo. They are wearing colorful clothing and are standing in a field.

Source: Expert Interviews

Word of mouth and radio are the most common sources of information for farmers in Tanzania

Survey question: How often do you use each of the following sources of information for agricultural activities?



“Local radio advertisements reach farmers. They should highlight success stories and provide contact information for purchases”

- Distributor in Southern Highlands, Tanzania

“I’m not sure social media would work. Less than 2% of farmers own smartphones and internet is non-existent in rural areas”

- Distributor in Uganda

Source: MercyCorps “Smallholder farmers in Tanzania: A Re-Look at the CGAP National Survey and Segmentation of Smallholder Farmers” James Hokans. July 2016 Survey N = 2,638



CROSSBOUNDARY

Appendix

PRIVILEGED AND CONFIDENTIAL

A farmers' survey revealed that the biggest effects of post-harvest loss are reduced subsistence consumption and inability to pay hospital bills

Ranking	Effects of the losses to smallholder farmers
1	Less family consumption
2	Failure to pay hospital expenses
3	Breaking even of investment
4	Less income
5	Difficult to pay school fees hence dropout from school
6	Difficult to repay loans
7	Change the plan for family income and expenditure
8	Less profit
9	Getting less interested in producing the product

Alliance for a Green Revolution In Africa (AGRA) *Post-harvest loss survey, 2014*

Technical due diligence summary

Project Technical Due Diligence Report

Scope of Machinery Requirements

The choice of machinery must take into account the product range being targeted and must therefore be suitable for multi-purpose use. The machinery requirement was identified and summarized as follows:

1. Tape extrusion machine of suitable capacity
2. Circular fabric weaving machinery
3. Printing Machines
4. Extrusion Coating and Cement Sack conversion machinery
5. Cutting and Sewing Machines
6. Auxiliary utilities for compressed air and chilled water provision
7. Gensets for backup power
8. Uninterrupted power supply complete with battery pack for the tape extrusion machine
9. Forklifts

Primary machinery: Items 1 – 5

Three major potential suppliers were contacted namely Starlinger of Austria, Windmoller & Holscher of Germany and Lohia Group of India. All three provided quotes for turnkey solutions and after detailed due diligence by the investment committee it was decided that a turnkey solution was not the most technically and commercially viable option due to the multi-purpose nature of the application. It was therefore decided to split the order based on the identified specialization of the machine suppliers and finalized as follows:

1. Tape Extrusion and Weaving – Lohia Group, India
2. Printing, cutting and sewing equipment – Golden Jason, Taiwan
3. Extrusion Coating and Cement Sack Conversion machinery - Windmoller & Holscher, Germany

Auxiliary machinery: Items 6 – 8

Potential suppliers of items 6, 7 & 8 are still under review. With regards to the forklifts, as these are to be used within the factory it was decided to move forward with electric forklifts which have been finalized from Heli Group of China after a tendering process.

Construction Scope

The manufacturing process requires specialized widespan buildings and the architect and his team based in Dar es Salaam visited the site in Tanga and proceeded with the design of the building accordingly. On completion of the design work and the bill of quantities the architect identified the following companies for tender:

Civil Works and Erection of Steel Structure: New Builders, Tanga; Mohamedi Builders, DSM; Advent Construction, DSM; Tanzanite Builders, DSM & Laxson Construction, DSM

Based on the architect's review of the civil works tender for capacity and competitiveness of the bidders, the civil works contract has been awarded to Laxson Construction of Dar es Salaam.

Steel Structure: There are currently no manufacturers within Tanzania who were able to quote for the steel structure requirements due to the specialized nature of the same. The architect thus shared the tender with the following: Steel Structures, Kenya; Roofings FZS, UAE; & Shree Pre-Fab, India

During the review of the steel structure tenders, Steel Structures of Kenya were unable to meet the technical requirements of the project. Based on the review of the other two offers the award was made to Shree Pre-Fab of India.

Budgets for Construction & Machinery

Project Civil Works and Steel Structure Budget					
1	Civil works & erection of steel structure			\$750,000	
2	Steel structure			\$410,000	
			Building Total	\$1,160,000	
Project Equipment List - Estimates Subject to change as Project Develops					
1	Weaving Machines	8	\$13,264	\$106,115	Imported
2	Tape extrusion machine	1	\$907,195	\$907,195	
3	Weaving Machines	56	\$13,264	\$742,805	
4	Extrusion Coating with BOPP attachment	1	\$1,932,300	\$1,932,300	65% advance paid
5	Cuttex & Slittex for Cement	1			
6	Block bag machine (Cement Bag Machine)	1			
7	Location for cement bag machine	1	\$16,244	\$16,244	
8	Gravure for BOPP	1	\$125,000	\$125,000	
9	Sliter for BOPP	1	\$25,000	\$25,000	
10	Cement bag printer	1	\$154,963	\$154,963	100% Paid
11	PICS + Fertilizer Bag Printer	1	\$159,250	\$159,250	- Shipped
12	Cutting & Sewing Line - Normal	1	\$30,625	\$30,625	30% Paid
13	Cutting & Sewing Line - Gusset & Handle Equipped	1	\$49,613	\$49,613	Advance
14	Utilities - Panels, Compressors, Chillers, Dryers, Dosing Units, etc	1	\$300,000	\$300,000	
15	Stand by generators	3	\$75,000	\$225,000	
16	Forklifts	7	\$15,000	\$105,000	3 received
17	Capacity enhancement bulk bags	Set	\$50,000	\$50,000	
18	UPS complete with Backup Batteries	2 Sets	\$89,822	\$179,644	
			Machinery Total	\$5,108,753	

Project Financials

Profit & Loss Account										
	2021		2022		2023		2024		2025	
Sales Cement Bags	\$4,416,000.00		\$5,520,000.00		\$6,624,000.00		\$7,728,000.00		\$7,728,000.00	
Sales - PICS Bags	\$1,350,000.00		\$1,620,000.00		\$2,025,000.00		\$2,430,000.00		\$2,700,000.00	
Sales - Grain Bags & Others	\$4,500,000.00		\$3,825,000.00		\$3,150,000.00		\$2,475,000.00		\$2,475,000.00	
Sales - Waste	\$218,500.00		\$232,000.00		\$247,750.00		\$263,500.00		\$268,000.00	
Revenue	\$10,484,500		\$11,197,000		\$12,046,750		\$12,896,500		\$13,171,000	
COS - Raw Materials	\$7,047,936	67%	\$7,483,392	67%	\$7,991,424	66%	\$8,499,456	66%	\$8,644,608	66%
Gross Margin	\$3,225,068	31%	\$3,488,818	31%	\$3,814,962	32%	\$4,141,106	32%	\$4,265,893	32%
COS - Factory Costs	\$1,549,110	15%	\$1,636,545	15%	\$1,737,756	14%	\$1,839,110	14%	\$1,872,438	14%
Gross Profit	\$1,675,958	16%	\$1,852,273	17%	\$2,077,207	17%	\$2,301,996	18%	\$2,393,456	18%
SG&A	\$500,000	5%	\$512,500	5%	\$525,313	4%	\$538,445	4%	\$551,906	4%
Adjustments										
EBITDA	\$1,175,958	11%	\$1,339,773	12%	\$1,551,894	13%	\$1,763,551	14%	\$1,841,549	14%
Calculation of PAT										
Depreciation	\$364,084		\$364,084		\$364,084		\$364,084		\$364,084	
Interest Cost	\$327,500		\$310,556		\$293,611		\$262,083		\$215,972	
Other Incomes										
PBT	\$484,375		\$665,134		\$894,200		\$1,137,384		\$1,261,494	
Current Tax	\$0		\$0		\$0		\$30,568		\$409,432	
Deffered tax liability adjusted	\$528,469		-\$183,616		\$268,260		\$310,647		-\$30,984	
Total Tax Payable	\$528,469		-\$183,616		\$268,260		\$341,215		\$378,448	
Transfers to reserves										
Other Extraordinary Items										
PAT Transferred to retained earnings	-\$44,094		\$848,751		\$625,940		\$796,169		\$883,045	
PBT%	4.62%		5.94%		7.42%		8.82%		9.58%	
Computation of Taxation										
Calculation of Current tax										
PBT as per Books	\$484,375		\$665,134		\$894,200		\$1,137,384		\$1,261,494	
Add Depreciation as per books	\$364,084		\$364,084		\$364,084		\$364,084		\$364,084	
Less Depreciation as per Income tax	-\$1,974,532		-\$1,814,884		-\$417,959		-\$328,157		-\$260,805	
PBT for tax calculation	-\$1,126,074		-\$785,666		\$840,324		\$1,173,310		\$1,364,772	
Tax Loss Carried forward/(Adjusted)	\$1,126,074		\$785,666		-\$840,324		-\$1,071,416		\$0	
Taxable Profit	\$0		\$0		\$0		\$101,894		\$1,364,772	
Normal Tax	\$0		\$0		\$0		\$30,568		\$409,432	
Minimum Alternate Tax	\$0		\$0		\$0		\$0		\$0	
Current tax	\$0		\$0		\$0		\$30,568		\$409,432	
Balance of Carried forward Tax Loss	-\$1,126,074		-\$1,911,740		-\$1,071,416		\$0		\$0	
Depreciation for tax purposes										
WDV										
Class2 WDV	-		1,915,782		1,436,837		1,077,628		808,221	
Additions after initial allowance @ 50% in first year	2,554,377		-		-		-		-	
Total	2,554,377		1,915,782		1,436,837		1,077,628		808,221	
Depreciation	638,594		478,946		359,209		269,407		202,055	
Initial Allowance	1,277,188		1,277,188		-		-		-	
Total	1,915,782		1,756,134		359,209		269,407		202,055	
Opening WDV Class 6	1,175,000		1,175,000		1,175,000		1,175,000		1,175,000	
Closing WDV Class 6	1,175,000		1,116,250		1,057,500		998,750		940,000	
Depreciation	58,750		58,750		58,750		58,750		58,750	
Opening WDV	-		3,032,032		2,494,337		2,076,378		1,748,221	
Additions	3,729,377		-		-		-		-	
Disposals										
Depreciation	697,344		537,696		417,959		328,157		260,805	
Initial allowance	1,277,188		1,277,188		-		-		-	
Total Depreciation for tax	1,974,532		1,814,884		417,959		328,157		260,805	
Closing WDV	3,032,032		2,494,337		2,076,378		1,748,221		1,487,416	
Calculation of Deffered tax liability										
WDV as per FAR	\$5,919,669		\$5,555,586		\$5,191,502		\$4,827,419		\$4,463,335	
Total WDV as per I tax	\$3,032,032		\$2,494,337		\$2,076,378		\$1,748,221		\$1,487,416	
Difference in WDV	\$2,887,637		\$3,061,249		\$3,115,125		\$3,079,198		\$2,975,920	
Difference in Provisions			\$0		\$0		\$0		\$0	
Tax Loss Carried forward	-\$1,126,074		-\$1,911,740		-\$1,071,416		\$0		\$0	
Net Difference	\$1,761,563		\$1,149,509		\$2,043,709		\$3,079,198		\$2,975,920	
Deffered tax liability	\$528,469		\$344,853		\$613,113		\$923,759		\$892,776	
Change in deffered tax liability	\$528,469		-\$183,616		\$268,260		\$310,647		-\$30,984	

Project Balance Sheet & Cash Flow Statement

	2020	2021	2022	2023	2024	2025
Assets						
Cash and cash Equivalents	\$1,000,000	\$67,529	\$330,064	\$1,081,836	\$2,046,223	\$2,452,664
Closing stock	\$0	\$2,297,973	\$2,607,521	\$2,805,408	\$3,003,295	\$3,067,219
Trade and other receivables	\$0	\$2,010,726	\$2,300,753	\$2,475,360	\$2,649,966	\$2,706,370
Total Current Assets	\$1,000,000	\$4,376,228	\$5,238,338	\$6,362,603	\$7,699,484	\$8,226,254
Property Plant and equipment	\$0	\$6,283,753	\$6,283,753	\$6,283,753	\$6,283,753	\$6,283,753
Capital Work In Progress	\$6,283,753	\$0	\$0	\$0	\$0	\$0
Accumulated depreciation	\$0	-\$364,084	-\$728,167	-\$1,092,251	-\$1,456,334	-\$1,820,418
Net Property Plant and equipment	\$6,283,753	\$5,919,669	\$5,555,586	\$5,191,502	\$4,827,419	\$4,463,335
Total Non Current Assets	\$6,283,753	\$5,919,669	\$5,555,586	\$5,191,502	\$4,827,419	\$4,463,335
Total Assets	\$7,283,753	\$10,295,898	\$10,793,924	\$11,554,105	\$12,526,902	\$12,689,589
Liabilities						
Accounts payable and other current liabilities	\$0	\$2,527,770	\$2,699,551	\$2,904,422	\$3,109,293	\$3,175,474
Minimum Alternate Tax	\$0	\$0	\$0	\$0	\$0	\$0
Post Import Loan	\$0	\$0	\$0	\$0	\$0	\$0
Bank overdraft	\$0	\$0	\$0	\$0	\$0	\$0
Total current liabilities	\$0	\$2,527,770	\$2,699,551	\$2,904,422	\$3,109,293	\$3,175,474
Long term borrowings	\$5,550,000	\$5,550,000	\$5,211,111	\$4,872,221	\$4,533,332	\$3,777,776
Deferred tax liability	\$0	\$528,469	\$344,853	\$613,113	\$923,759	\$892,776
Total non current liabilities	\$5,550,000	\$6,078,469	\$5,555,963	\$5,485,334	\$5,457,091	\$4,670,552
Total outside liabilities	\$5,550,000	\$8,606,239	\$8,255,514	\$8,389,756	\$8,566,385	\$7,846,026
Shareholders funds						
Shareholders Initial funds	\$1,733,753	\$1,733,753	\$1,733,753	\$1,733,753	\$1,733,753	\$1,733,753
Retained earnings	\$0	-\$44,094	\$804,656	\$1,430,596	\$2,226,765	\$3,109,810
Total shareholders' Funds	\$1,733,753	\$1,689,659	\$2,538,409	\$3,164,349	\$3,960,518	\$4,843,563
Total Liabilities	\$7,283,753	\$10,295,898	\$10,793,924	\$11,554,105	\$12,526,902	\$12,689,589

Cash flow Statement	2020	2021	2022	2023	2024	2025
Profit before Tax	\$0	\$484,375	\$665,134	\$894,200	\$1,137,384	\$1,261,494
Adjusted for Depreciation	\$0	\$364,084	\$364,084	\$364,084	\$364,084	\$364,084
Cash Operating Profit	\$0	\$848,458	\$1,029,218	\$1,258,283	\$1,501,467	\$1,625,577
Increase/(Decrease) in Current liabilities						
Accounts payable and other current liabilities		\$2,527,770	\$171,781	\$204,871	\$204,871	\$66,181
Income Tax Paid		\$0	\$0	\$0	-\$30,568	-\$409,432
Total Change in Current Liabilities	\$0	\$2,527,770	\$171,781	\$204,871	\$174,303	-\$343,251
(Increase)/Decrease in Current Assets						
Closing stock	\$0	-\$2,297,973	-\$309,548	-\$197,887	-\$197,887	-\$63,925
Trade and other receivables	\$0	-\$2,010,726	-\$290,027	-\$174,606	-\$174,606	-\$56,404
Total Change in Current Assets	\$0	-\$4,308,699	-\$599,575	-\$372,493	-\$372,493	-\$120,329
Cash flow from Operating Activities	\$0	-\$932,471	\$601,423	\$1,090,661	\$1,303,277	\$1,161,998
Change in Term Loan	\$5,550,000	\$0	-\$338,889	-\$338,889	-\$338,889	-\$755,556
Change in Post Import Loan	\$0	\$0	\$0	\$0	\$0	\$0
Change in Equity Share Capital	\$1,733,753	\$0	\$0	\$0	\$0	\$0
Cash flow from financing Activities	\$7,283,753	\$0	-\$338,889	-\$338,889	-\$338,889	-\$755,556
Change in fixed Assets	\$0	-\$6,283,753	\$0	\$0	\$0	\$0
Change in Capital WIP	-\$6,283,753	\$6,283,753	\$0	\$0	\$0	\$0
Cash Flow from Investing activities	-\$6,283,753	\$0	\$0	\$0	\$0	\$0
Net cash Generated/(Used) for the year	\$1,000,000	-\$932,471	\$262,534	\$751,772	\$964,388	\$406,441
Opening cash and cash equivalents	\$0	\$1,000,000	\$67,529	\$330,064	\$1,081,836	\$2,046,223
Opening Bank overdraft	\$0	\$0	\$0	\$0	\$0	\$0
Net opening Cash and cash equivalents	\$0	\$1,000,000	\$67,529	\$330,064	\$1,081,836	\$2,046,223
Net Closing cash and cash Equivalents	\$1,000,000	\$67,529	\$330,064	\$1,081,836	\$2,046,223	\$2,452,664
Represented By						
Closing Cash and cash equivalents	\$1,000,000	\$67,529	\$330,064	\$1,081,836	\$2,046,223	\$2,452,664
Closing Bank overdraft	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$1,000,000	\$67,529	\$330,064	\$1,081,836	\$2,046,223	\$2,452,664

FCC Approval & Detailed report



FCC/M&A/06/2019/10

6th May, 2019

Agri Vie Fund II(Pty) Limited
C/o Clyde & Co. Tanzania,
11st Floor, Golden Jubilee Towers,
Ohio Street,
P. O. Box 7839,
DAR ES SALAAM

RE: MERGER APPLICATION BETWEEN AGRI VIE FUND II (PTY) LIMITED AND PEE PEE TANZANIA LIMITED OF PP HOLDINGS LIMITED

Reference is made to the above mentioned merger application.

Kindly be informed that the Commission in its Case Hearing Meeting held on the 30th April, 2019 decided on the said application. Pursuant to Rule 42 (14) (a) (i) and (b) of the Competition Rules, 2018, please find the following enclosed with this letter;

- i. Merger Clearance Certificate (Form FCC 18); and
- ii. Copy of Reasons for the Decision of the Commission

We look forward to your continued cooperation,

FAIR COMPETITION COMMISSION

Zaytun Kikula
For; **DIRECTOR GENERAL**



FCC.18

FAIR COMPETITION COMMISSION

THE COMPETITION RULES, 2018

RULE 42 (14) (a) (i)

MERGER CLEARANCE CERTIFICATE

(Issued under section 11 of the Fair Competition Act, 2003 and Rule 42 (13) (a) and (14) (a) (i) of the Competition Rules, 2018)

1. **Agri Vie Fund II (Pty) Limited,**
C/o Clyde & Co. Tanzania,
11th Floor, Golden Jubilee Towers,
Ohio Street,
P. O. Box 7839,
DAR ES SALAAM
2. Merger Application No.6 of 2019 between **Agri Vie Fund II (Pty) Limited (Acquiring Firm)** to acquire **Pee Pee Tanzania Limited (Tanzania Subsidiary)** through acquisition of **P P Holdings Limited (The Target Firm)** by Acquiring Firm.
3. On 27th February, 2019 you applied for approval of a merger by the Fair Competition Commission pursuant to Section 11 of the Fair Competition Act No. 8 of 2003.
4. After reviewing the information you provided, the Commission approves the merger pursuant to section 11 (3) of the Fair Competition Act No. 8 of 2003 and Rule 42 (13) (b) of the Competition Rules, 2018.
5. This approval is not subject to any condition.

6. The Fair Competition Commission has the authority to revoke its own decision to approve or conditionally approve the merger under rule 48 if
- (a) The decision was based on incorrect information or which a party to the merger is responsible;
 - (b) The approval was obtained by deceit; or
 - (c) The firm concerned has breached an obligation attached to the decision.
7. Pursuant to Rule 24 (1) of the Competition Rules, 2018, we the undersigned Commissioners have so decided.

SN	Name	Designation	Signature	Date
1.	Prof. Humphrey P.B. Moshi	Chairman		30/4/2019
2.	Mr. Felix George Kibodya	Member		30/4/2019
3.	Mr. Fadhili Josiah Manongi	Member		30/4/2019
4.	Prof. Marcellina Mvula Chijoriga	Member		30/4/2019

8. Contact

The Fair Competition Commission
 GEPF House 2nd and 3rd Floor,
 Plot No. 37, Regent Estate,
 Bagamoyo Road,
 P.O.Box 7883
 Dar es Salaam, Tanzania

Telephone: +255 (0) 22 2926128/29/30/31
 Telefax: +255 (0) 2926126
 E mail: info@competition.or.tz
 Website: www.competition.or.tz



FAIR COMPETITION COMMISSION

MERGER ANALYSIS

**ACQUISITION OF SHARES IN PEE PEE (TANZANIA) LIMITED BY AGRI-VIE FUND-II (PTY)
LIMITED**

April , 2019

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1.0 Introduction

On 27th February, 2019, Clyde & Co. Tanzania, of 11th Floor, golden Jubilee Towers, Ohio street, P. O. Box 80512, Dar es salaam, Tanzania, acting on behalf of Agri-Vie Fund-II (Pty) Limited notified the Fair Competition Commission (FCC) of their intention to indirectly acquire 40.66% capital shares in Pee Pee (Tanzania) Limited. The notification made pursuant to Section 11(2) of the Fair Competition Act No. 8 of 2003 (FCA) and Rule 33(1) of the Competition Rules, 2018.

The Commission on 6th March 2019 issued the Notice of Complete Filing (FCC Form 11) to the Acquiring Firm as per requirement of Rule 35 (1) (a) of Competition Rules, 2018. On 20th March, 2019 the Commission issued ninety days Prohibition Notice (FCC.14A) notifying the Acquiring Firm that the transaction is in examination phase and that it is prohibited for period of 90 days, serving for investigation and approval. The FCC. 14A is expected to expire on 18th June, 2019.

2.0 Parties to the Application

2.1 Agri-Vie Fund-II (Pty) Limited (The Acquiring Firm)

Agri-Vie Fund-II (Pty) Limited (hereinafter referred to as the **Acquiring Firm**) is a private company limited by shares incorporated in the Republic of Mauritius with Registration Number 135895. The address of the Acquiring Firm is situated at Abax Corporate Services, 6th Floor, Tower A, 1 Cybercity, Ebene Mauritius.

2.1.1 Table 1: The Acquiring Firm Ownership Structure

S/N	Name of Shareholder (Investor)	Committed Capital	Percentage Shareholding
1	Electric Olive 11 Proprietary Limited	USD 50 Million	49.9001996
2	Norwegian Investment Fund for Developing Countries	USD 15 Million	14.9700599
3	Belgian Investment Fund For Developing Countries	USD 7 Million	6.98602794
4	European Investment Bank	USD 13.2 Million	13.1736527
5	Societe de Promotion et de Participation pour la cooperation economique	USD 10 Million	9.98003992
	Fonds d'investment et de Soutien aux Entreprises en Afrique S.A.S	USD 5 Million	4.99001996
Total		285,444	100

Source: extracted from Acquiring Firm's submission

2.1.1 Activities of the Acquiring Firm

The principal activity of the Acquiring Firm is to operate as a Closed-end Fund; and to invest in food and agriculture business companies in Sub-Saharan Africa to generate risk adjusted investment returns as well as demonstrate positive development impacts.

2.2 P P Holdings Limited (The Target Firm)

P P Holdings Limited (herein thereafter referred to as Target Firm) is a company incorporated under the laws of Isle of Man under registration number 066537C. The Target Firm is a parent company of the Pee Pee (Tanzania) Limited by

99.99%, shareholding, Pee Pee (Tanzania) Limited is a Private Limited Company incorporated in Tanzania with a Registration Number 24636. With registered office at Pee Pee (Tanzania) Limited is at Plot No. 2, Kange Heavy Industrial Area, P. O. Box 34, Tanga, Tanzania.

2.2.1 Ownership Structure of the Target Firm

Table 2: Pre-Merger Shareholding Structure of the Target Firm

S/N	Name of Shareholder (Investor)	Shareholding %
1	Manipu Holdings (Devani Family)	50.10
2	Mr. Ashvin & Mrs Hemlata Mavani	24.4
3	BFJ Limited (Mr. Suraj & Mrs Urvi Devani)	25.50
Total		100

Source: Acquiring Firm submission

2.2.2 Activities of the Target Firm in Tanzania

In Tanzania, the Target Firm manufactures and sells woven packaging products, through its subsidiary Pee Pee (Tanzania) Limited, the extensive product range consists of Purdue Improved Crop Storage (PICS) Hermetic Storage Bags, IMARA Tarpaulins, Leno net bags and basic woven sacks for the agricultural sector and cement, sugar, fertiliser and lime packing bags for the industrial sector.

3.0 Objective of the Proposed Transaction

The objective of the proposed transaction for acquirer to expand its scope of production and fills the supply gap existence in the relevant market. The increased demand in post-harvest hermetic storage technology by farmers has caused supply gap, which requires additional capacity building.

Hence, to fulfil the above objective, on 6th February 2019, the Acquiring Firm entered into share purchase agreement with Target Firm's shareholders; to the effect that Acquiring Firm propose to acquire 40.66% of the issued share capital

of the Target Firm. The consideration for the proposed acquisition is valued to be 1 million USD.

Table 3: The post-merger shareholding of the Target Firm will be as follows:

S/N	Name of Shareholder (Investor)	Percentage %
1	Manipu Holdings (Devani Family)	29.73
2	Mr. Ashvin & Mrs Hemlata Mavani	14.48
3	BFJ Limited (Mr. Suraj & Mrs Urvi Devani)	15.13
4	Agri Vie Fund II	40.66
Total		100

4.0 The Rationale for the Proposed Transaction

In Acquiring firm's perspective, the proposed transaction would enable the Acquiring Firm to curb the potential market of approximately 30 million hermetic bags of which the market players are currently servicing only 6%. Hermetic packaging is gaining popularity due to its socio economic impact especially on smallholders by helping them save their crop from pest infestation without using harmful chemicals. Hermetic crop storage is a catalyst in organic food supply chain as it helps in post-harvest crop protection without using any pesticide. 40% of smallholder farmers and 50% of commercial farmers attribute pest infestation as the prime cause of harvest crop losses. Hermetic crop storage is a catalyst in organic food supply chain as it helps in harvest crop protection without using any pesticide.

The rationale for the acquisition as submitted by the Acquiring Firm is justifiable.

5.0 Purpose of the Analysis

The purpose of this analysis is to ascertain whether the transaction is likely to have adverse effects on competition as provided under Section 11(1) of the FCA. According to this section, a merger prohibited if it creates or strengthens a position of dominance in the market. Control of mergers and acquisitions play an important role in ensuring that markets in different sectors of the economy remain contestable. It is the responsibility of the FCC to examine merger applications and exemptions with a view to establish their likely effects to competition.

Based on the fact that in this modern era of industrial organization, mergers and acquisitions are viewed as essential for sustained economic expansion, the spirit of the law is not to prevent or restrict in any way the merger transactions or business expansion in Tanzania. FCC is aware that combination of resources through a merger or an acquisition, firms are able to increase efficiencies through reduced costs, strategic reorganization, adoption of new technologies and combined expertise. FCC is equally aware that mergers and acquisitions are the quickest means for firms to source capital that can transform them to more efficient and competitive firms.

Therefore, the test is whether the post-merger firm will result into either creation of a dominant position or strengthening the existing dominant position that in turn may restrict, distort or lessen competition in the identified relevant market.

6.0 Public Notice

Pursuant to Section 65(2)(g) of the FCA, the FCC invited parties (both legal and/or natural) who deemed themselves as having sufficient interests in the proposed transaction or if the proposed transaction is not objected to, it will have or is likely to have material effect to their interest to register their interests (if any) or file any information that will assist the FCC in reaching a just and

reasonable decision with regard to the Acquiring Firm's application for the intended merger. The said public notice published in the Daily News and Habari Leo newspapers of 20th March 2019 respectively.

6.1 Response to the Public Notice

The FCC did not receive any response from the public before the lapse of fourteen days from the first date of publication of notice.

7.0 Analysis of the Industry and Market

The proposed transaction falls within the Manufacturing of Packaging Bags for agricultural and Industrial products subsector. The parties venture in production of hermetic bags, Tarpaulins and woven packaging for agricultural products and industrial products in Tanzania.

Packaging bags are by products of Polyprone (Extrusion and Lamination grade), LDPE (Film and Lamination grade), Masterbatches, Calcium fillers, Inks, Colour and pigments. The inputs for production of these bags sourced from industries such as Desbro Tanzania Limited (a company recently acquired by Brenntag), Kansai Plascon Limited, Colours and compound Limited, Sarrchem International Limited and Somochem Limited. The material for production of these bags accounts roughly 68% of the total cost of production.

A hermetic storage vessel allows farmers hermetically to store their crops while at the same time avoiding the use of any chemicals. Tarpaulins, used for drying and sorting produce as well as for shade, woven bags for packaging of agri produce, specifically grains, sugar, tea and fertilizers, Wove Bags, for the packing of agri produce, specifically grains, sugar, tea and fertilizer.

Purdue Improved Crop Storage (PICS) bags are bags produced and sold to smallholder farmers and used for storing of grains. Although there are several hermetic bag brands in Tanzania and in the region, PPTL has the exclusive

license for the PICS bag brand in Tanzania and several other countries in the region. PICS Bags proved to reduce post-harvest losses. Small-scale farming households across sub-Saharan Africa frequently face post-harvest grain losses due to a number of preventable reasons. The Food and Agricultural Organisation (FAO) estimates show that in 2017 above 37 percent of food produced in sub-Saharan Africa is lost between production and consumption. These estimates have motivated efforts to address post-harvest losses; interventions typically focus on improving on-farm grain storage techniques for small-scale farmers.

The PICS hermetic Bags have gained popularity in Southern Highlands and are improving their market in Northern and lake zone. The product sold all over Tanzania and exported to East Africa Community Countries and SADC region. The proportion of export sales to total sales of PPTL has increased from 8% to 13% in year 2016 to 2017 respectively to around 20% in year 2018. Exports predominantly comprise of Hermetic bags, Agri bags and Tarpaulins. With the help of increased production capacity, PPTL expects to sustain and potentially improve proportion of export sales.

Apart from smallholder farmers, corporate clients such as cement Sugar, Lime and salt industries are also demanding packaging bags. For cement bags for example, Tanga Cement is PPTL's principal customer and accounts for 90% of purchase of the Target firm industrial packaging materials. The estimated increase of production as the result of this proposed transaction will allow PPTL to serve the increasing demand in Tanzania industries and neighbouring Zambia.

In order to supply the products to its end user customer, the Target Firm is distributing its products through 10-12 major zonal and regional distributors located countrywide. Each distributor services the requirements of between 30-60 sub-vendors at district and ward level. In certain cases, products also supplied directly to farmers associations. For industrial customers, goods supplied

directly to the end user industries under standard negotiated agreement. The Target Firm currently have supply agreements with industry players such Tanga cement Plc, Kilombero Sugar Company Limited and others. These agreements generally reviewed annually as per the buying policies of the customer.

In competition position, there are several key players in Tanzania packaging industry. These include powerful players such as A-Z Limited, AZAM, Hill and Harsho Group and many other Agri bag producers. The acquiring firm is an investment firm and it does not have a presence in Tanzania.

7.1 Market Definition

7.1.1 Product Market

The product market defined as Manufacturing and distribution of Packaging Bags for agricultural and industrial products.

7.1.2 Geographical Market

The area under consideration is the Mainland Tanzania.

7.1.3 Relevant Market

The relevant market defined as Manufacturing and distribution of Packaging Bags for agriculture and industry products in Mainland Tanzania.

7.2 Market Structure and Concentration

The market structure of the Target firm Tanzania subsidiary (Pee Pee (Tanzania) Limited **PPTL**) operate with focus of four key product line: Agri bags, tarpaulins, cement bags and hermetic bags. The market for manufacturing of these products (except for the market of manufacturing of hermetic bags) dominated by Chinese manufacturers and A-Z limited. The distribution of market shares for these market players are shown in the below table in section 7.2.1.

7.2.1 Market Share

The estimated market shares of the Manufacturing of Packaging and distribution of Bags for agricultural and industrial products, given in Table 4 below.

Table 4: Pre and Post-Merger Market Share of players in the relevant market.

SN	Player	Market Share in %
	Agri Bags market	
1.	Chinese players	48
2.	A-Z Limited	18
3	Pee Pee (Tanzania) Limited (Target Firm)	14
4.	Others	20
Total		100
SN	Tarpaulins market	
1	Chinese players	75%
2.	A-Z Limited	15%
3.	Pee Pee (Tanzania) Limited (Target Firm)	7%
4.	Others	3%
Total		100
SN	Cement Bags market	
1.	A-Z Limited	70%
2.	Pee Pee (Tanzania) Limited (Target Firm)	26%
3	Others	4%
Total		100
SN	Hermetic Crop Storage Bags market	
1.	Pee Pee (Tanzania) Limited (Target)	51%
2	A-Z	32%
3	Others	17%

Source: Acquiring Firm's submission

7.2.2 Market Concentration

The information in Table 4 above shows that, since the Acquiring firm has no presence in the relevant market therefore the proposed transaction will leave the relevant markets unchanged and the approval of the proposed transaction will not increase the concentration level in the relevant markets.

8.0 Effects of the Acquisition

8.1 The Prohibition Test

Pursuant to Section 11(1) of the FCA, a merger prohibited if it creates or strengthens a position of dominance in a market. Therefore, the test is whether the post-merger firm will result into either creation of a dominant position or strengthening the existing dominant position. To understand what a dominant position is, section 5 (6) of the FCA, provides that a firm will be considered to have a dominant position if both (a) and (b) apply:

- (a) Acting alone the post-merger firm can profitably and materially restrain or reduce competition in the market for a significant period of time; and
- (b) The post-merger firm's share of the relevant market exceeds 35 per cent.

The prohibition test employed into two segments of the relevant market is to shape the verdict of the merger application. The analysis is as provided hereunder.

8.1.1 Unilateral Effects

Generally, the issue to be established in this part of analysis is whether the resulting firm will be able to unilaterally exercise market power through raising prices, reducing output, quality or variety in a bid to gain unjustifiable profits. This particularly provided for in Section 5 (6) (a), but read together with Section 5 (6) (b), for this case both (a) and (b) must apply.

The acquisition is for the injection of capital by the Acquiring Firm to the Target Firm. There are no perceived unilateral effects as the result of the proposed transaction.

Thus, the FCC concludes that pre and post-merger scenarios will neither create nor strengthen a position of dominance in the relevant market.

8.1.2 Coordinated Effects

Coordinated effects may arise where the transaction reduces competitive constraints in a market, thus creating or strengthening the conditions that facilitate the ability of competitor(s) to coordinate their competitive behaviour. Coordinated behaviour in an anti - competitive way can take various forms, for example on prices or coordination through customer/market allocation. Such coordination results in a loss to customer welfare.

There are no anticipated coordination activities because of approval of this transaction.

The FCC concludes that approval of the transaction may not assist the Acquiring Firm to indulge into coordinated conducts that can harm competition in the relevant market.

8.1.3 Barriers to Entry

There are no significant barriers to entry in the relevant markets.

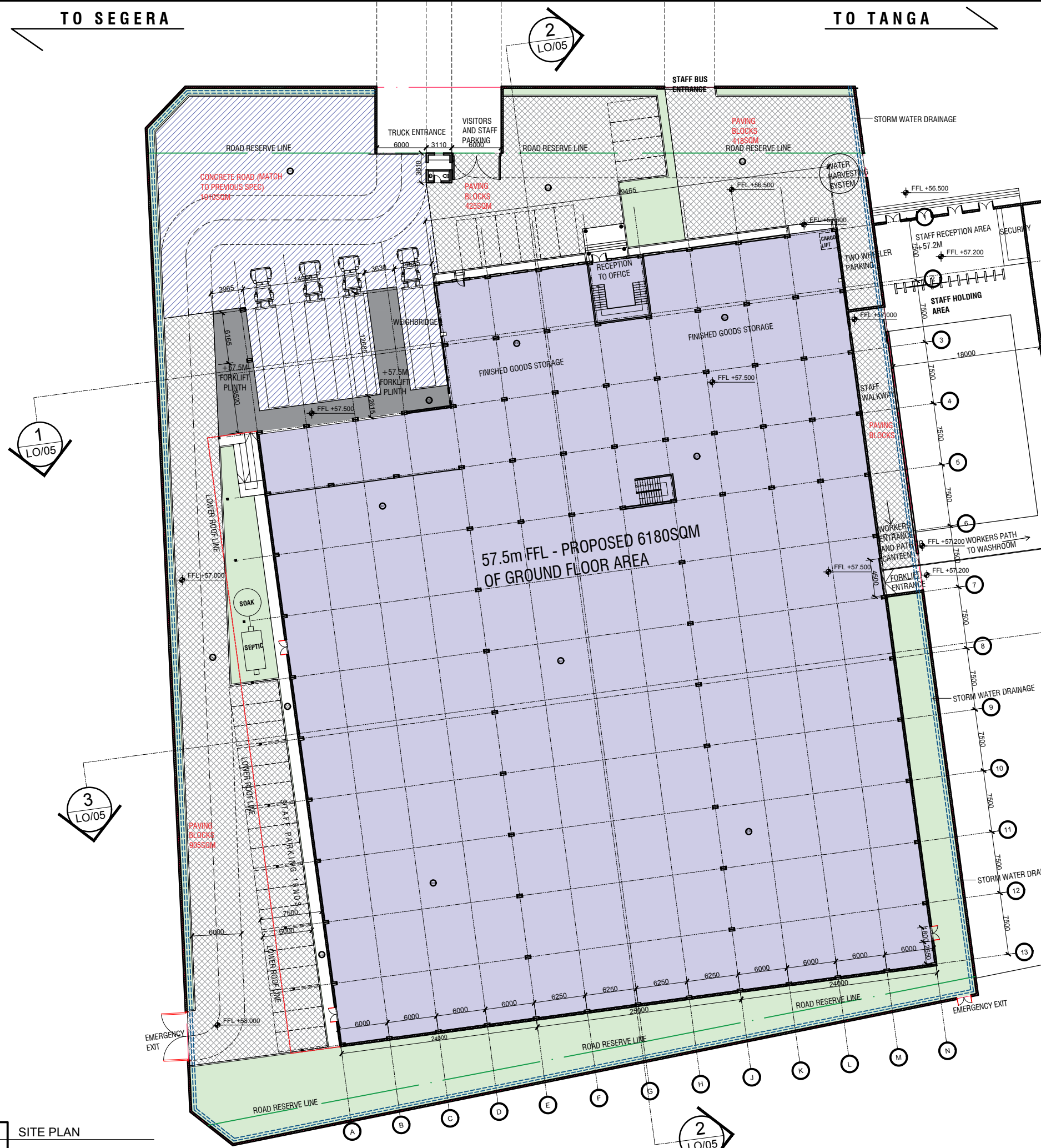
FCC concludes that there are no significant barriers to entry in the relevant market.

9.0 Conclusion

- i. The relevant market defined as Manufacturing and distribution of Packaging Bags for agriculture and industry products in Mainland Tanzania.
- ii. Pre and post-merger scenarios will remain the same for both perspectives of Section 5 (6) (a) and (b) and thus having no possibility of creating or strengthening a position of dominance in the relevant market.
- iii. The approval of the transaction may not assist the Acquiring Firm to indulge into coordinated conducts that can harm competition in the relevant market.
- iv. There are no significant barriers to entry and expansion in the relevant market.

Building Architectural drawings

Do not scale from drawing. Contractor to check all dimensions on site. Report discrepancies to the architect.



SCHEDULE OF AREAS

PLOT AREA.....	10,951.3 SQM
GROUND FLOOR AREA:	
FACTORY.....	6,180.0 SQM
GUARDS HOUSE.....	11.6 SQM
FIRST FLOOR	
FACTORY.....	1435.0 SQM
TOTAL FLOOR AREA.....	7,626.6 SQM
PLOT RATIO.....	0.69

- NOTES:**
- REFER TO STRUCTURE ENGINEER DRAWING FOR RC. COLUMN SIZES & OTHER STRUCTURAL DETAILS.
 - STEEL DETAILS SHALL BE PROVIDED BY SUPPLIER.

- REVISIONS:**
- A - Updated Wall types and indicated legend, wall shifted to grid K 12.10.2019
 - B - Cut mezzanine level one grid short, added one cargo lift and changed slightly the position and step count on existing stairs and cargo lift. All Roller shutter doors are 4.0m high now. 29.10.2019
 - C - Adjusted mezzanine floor layout and reduced cargo lift and stairs on ground level. Schedule of Areas updated 02.03.2020

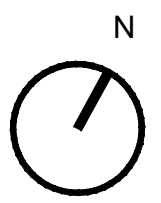
EDGE PLAN DEVELOPMENT LTD
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 E-mail: edgearch@gmail.com

PEE PEE TANZANIA LIMITED
 PLOT 3,4
 P.O. BOX 34
 KANGE, TANGA

SCHEME DESIGN
 PROPOSED
 SITE LAYOUT PLAN

Date	02.03.2020	Scale (A1)	1:500 @ A3
Drawn by	HM		
Drawing No.	19TZ50/LO/001	Rev	C
Cad File	19TZ50-LO-001.dwg		

1 SITE PLAN



Do not scale from drawing. Contractor to check all dimensions on site. Report discrepancies to the architect.

REVISIONS:
A - Updated Wall types and indicated legend, wall shifted to grid K 12.10.2019
B - Cut mezzanine level one grid short, added one cargo lift and changed slightly the position and step count on existing stairs and cargo lift. All Roller shutter doors are 4.0m high now. 29.10.2019
C - Adjusted mezzanine floor layout and reduced cargo lift and stairs on ground level. 02.03.2020

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PEE PEE TANZANIA LIMITED
PLOT 3,4
P.O. BOX 34
KANGA, TANGA

SCHEME DESIGN
PROPOSED
MEZZANINE FLOOR PLAN

Date	Scale (A1)
02.03.2020	1:500 @ A3
Drawn by	HM
Drawing No.	Rev
19TZ50/LO/002	C
Cad File	
19TZ50-LO-001.dwg	

2
LO/05

1
LO/05

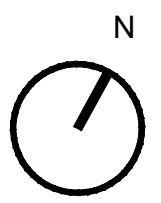
3
LO/05

VOID

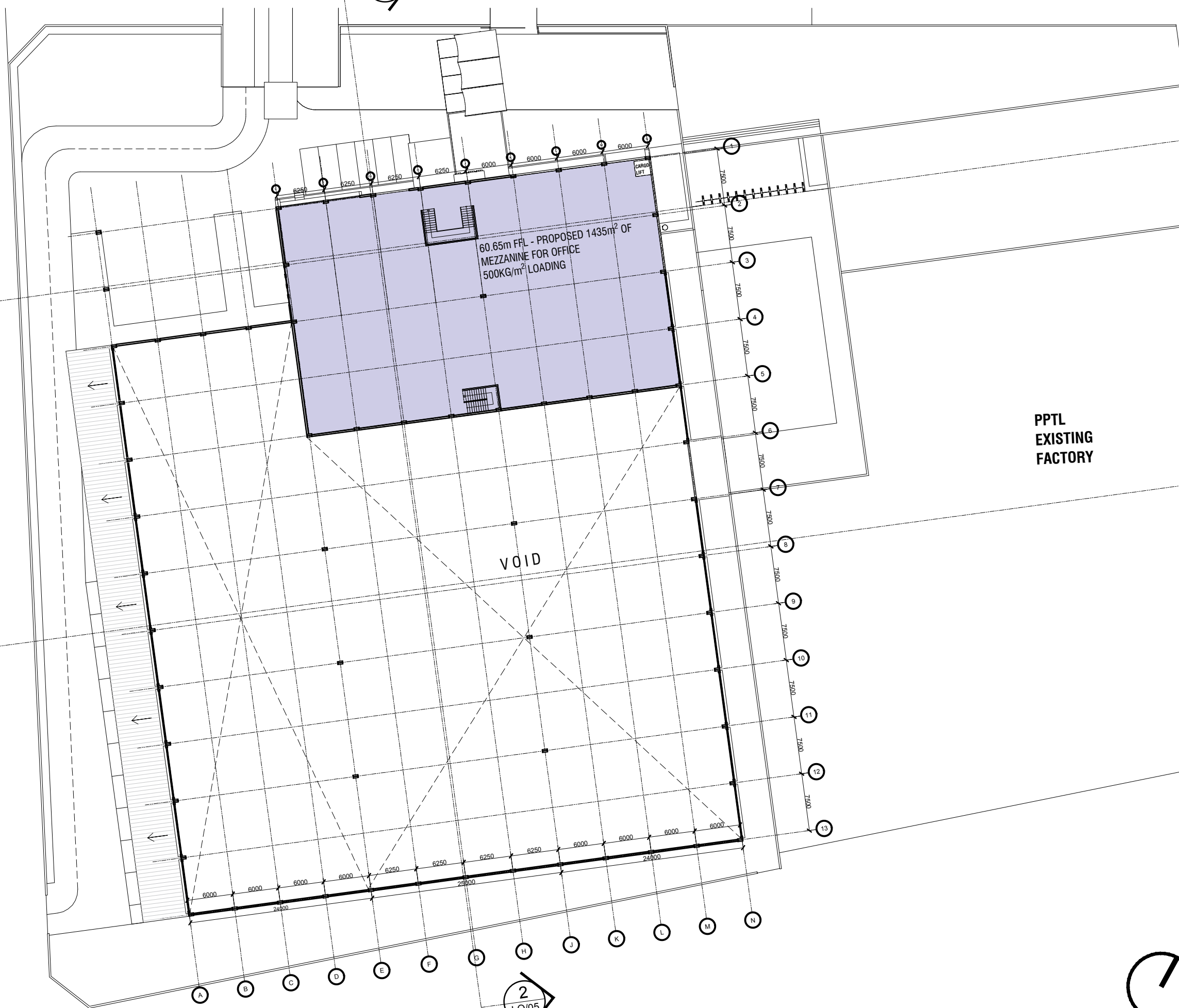
60.65m FFL - PROPOSED 1435m² OF MEZZANINE FOR OFFICE 500KG/m² LOADING

PPTL EXISTING FACTORY

2 FIRST FLOOR PLAN



2
LO/05



Do not scale from drawing. Contractor to check all dimensions on site. Report discrepancies to the architect.

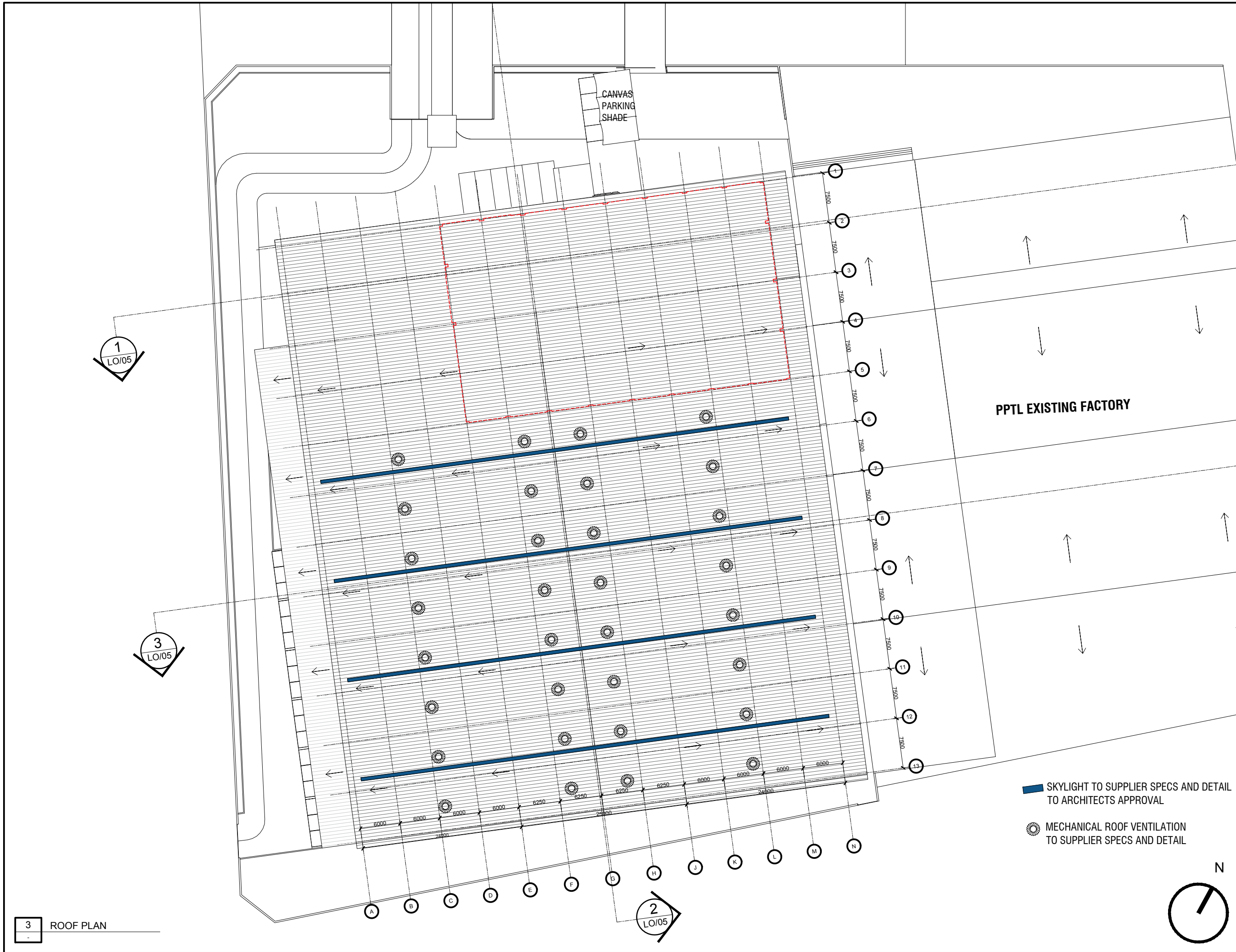
REVISIONS:
A - Reduced amount of Skylight and ventilation fans
02.03.2020

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KANGA, TANGA

SCHEME DESIGN
PROPOSED
ROOF LAYOUT PLAN

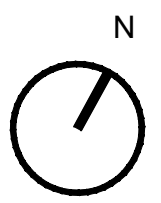
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Drawn by	HM		
Drawing No.	19TZ50/LO/003	Rev	A
Cad File	19TZ50-LO-001.dwg		



PPTL EXISTING FACTORY

SKYLIGHT TO SUPPLIER SPECS AND DETAIL TO ARCHITECTS APPROVAL

MECHANICAL ROOF VENTILATION TO SUPPLIER SPECS AND DETAIL



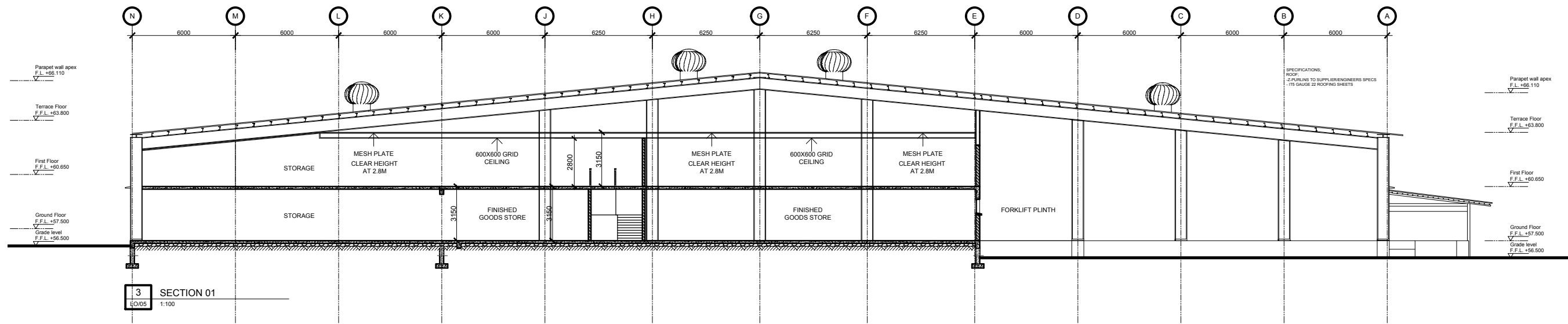
3 ROOF PLAN

1 LO/05

3 LO/05

2 LO/05

Do not scale from drawing. Contractor to check all dimensions on site. Report discrepancies to the architect.



REVISIONS:

- A - Updated Wall types and indicated legend, wall shifted to grid K 12.10.2019
- B - Adjusted slab above first floor to mesh panel as per supplier detail 02.03.2020

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PEE PEE TANZANIA LIMITED
 PLOT 3,4
 P.O. BOX 34
 KANGE, TANGA

SCHEME DESIGN
 PROPOSED
 SECTION 1-1
 SECTION 3-3

Date	Scale (A1)
02.03.2020	1:250 @ A3
Drawn by	HM
Drawing No.	Rev
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Cad File	
19TZ50-LO-001.dwg	