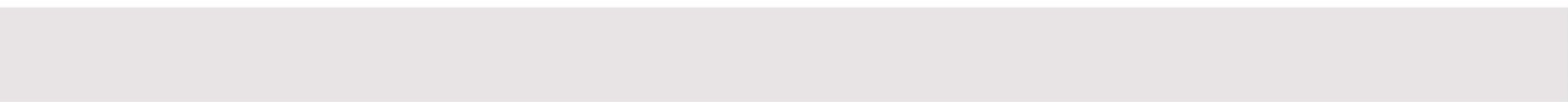


Musika External Review

Final Report



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ABBREVIATIONS

AAER	Adopt, Adapt, Expand, Respond (the system change framework)
AAI	Agri-business Accelerate Initiative (a Musika funded initiative)
AHS	Annual Household Survey
BanQu	A digital payment platform introduced by Zambia Breweries
EPB	Environment Protection Brief
GEWEL	Girls Education and Women's Empowerment and Livelihoods
LVSCC	Livestock Veterinary Services Consultation Centre
MRM	Monitoring and results measurement
MCC	Milk Collection Centre
MSA	Market system analysis
MSD	Market systems development
Norad	Norwegian Agency for Development Cooperation
OECD DAC	The Organisation for Economic Cooperation and Development, Development Assistance Committee
PROFIT	Production, Finance, and Improved Technology – a USAID funded programme that was the precursor to Musika
RALS	Rural Agricultural Livelihood Survey
UBA	United Bank for Africa
ZEMA	Zambia Environmental Management Agency

1. INTRODUCTION

The Musika Development Initiatives Zambia Ltd, commonly referred to as Musika, is a Sida supported institution, mandated to stimulate and support private investment in selected Zambian rural markets, with a focus on increasing benefits to poor smallholder farmers (see Box 1).

Musika is a not-for-profit company that was registered in July 2010 to reduce poverty and create wealth in rural Zambia by stimulating business relationships between the corporate sector and smallholder farmers. It aims to be a market facilitator, in line with the Market Systems Development (MSD) approach. Musika's origins are a USAID funded private sector development programme, PROFIT, and a substantial proportion of the staff that worked for PROFIT make up the current Musika team. Musika's core funding is currently provided by Sida Zambia, and since 2018 it started to receive funding for specific activities from Norad, WorldFish, TechnoServe and Irish Aid. Musika works in four main thematic areas: business and finance, agriculture technology, agriculture diversification, and environmental markets. It also has several cross-cutting themes including gender, environmental stewardship and nutrition. By the end of the second quarter 2021, Musika's interventions resulted in increased incomes for 300,000 smallholder farmers, of whom just over 90,000 were women (source: Musika Quarterly Report 2021).

Box 1: Musika in a nutshell

COVID 19 has caused several delays and changes to the 2020 (now extended to 2021) external review of Musika. However, the review's dual purpose is as originally planned: to evaluate Musika's performance to date and to assess the appropriateness of its current approach and organisational capacity for achieving its objectives and associated targets. The review has had three main phases: an inception phase in August 2020, an interim phase in November/December 2020 (which was added to take account of delays caused by the pandemic) and now, the final consultation and analysis phase. The first two phases have been completed and this report is the key deliverable for the final consultation and analysis phase.

The views expressed in this report are those of the authors. We would like to thank the Musika team who were very generous with their time and have been extremely patient with the long review process which has involved several phases and countless virtual meetings. Their enthusiasm and openness is remarkable. Thank you also to the Musika partners, the non-partners, and the farmers and other stakeholders, who were willing to share their experiences and thoughts with the review team.

2. FINAL PHASE: PURPOSE, APPROACH AND METHODOLOGY

Purpose

The final phase of the review has three interconnected aims:

- to update the December 2020 interim report with a more detailed assessment of Musika's performance (in the selected focus intervention areas) than had been feasible in the interim phase;
- to update the interim report findings on Musika's approach and organisational capacity, taking into account any new information relating to performance and any changes made in the eight months since the interim phase;
- to provide Sida with the information it needs to decide how it can best support Musika in the future; and

- to provide Musika with information and advice to help shape its strategy and approach going forward.

To achieve these aims this phase of the review has used the three assessment areas that have framed the methodology throughout the review process: performance, approach and capacity. In this phase, the review team have updated the interim phase findings with the latest performance data (in the focus intervention areas), supplemented where appropriate by learning from the field research conducted as part of the review process. Although the considerable delays that the COVID 19 pandemic has forced on the review process have been frustrating, the silver lining is that these have provided an opportunity to revisit and assess Musika's response to the interim report, which was circulated in December 2020. While it has been less than a year since the interim report was finalised, Musika has made a concerted effort to respond to many of the key issues it raised.

This report is an update to the interim report, and has been written, as far as possible, as a standalone report – with the understanding that not all readers will be able to read the reports from earlier phases of the review process. As such there is some repetition with these earlier reports. The interim phase of the review process found that aspects of Musika's approach were negatively impacting its ability to achieve sustainable impact, at scale. Emphasis in this phase of the review, as agreed with Sida, has been placed on assessing performance, but also, in light of the interim phase findings, on assessing Musika's approach, and identifying key areas and priorities for reform. The report as a whole, and the 'Approach' section in particular, is also intended to be useful for Musika, as it transitions from the partner-centric approach it has adopted in the past to a more systemic approach.

Review Approach

This section of the report summarises the approach the review team adopted for the final phase of the review¹. This phase was guided by the same key principles that were followed throughout the review process, in particular: *flexibility*, in order to respond to findings, challenges and opportunities that emerged during the research process; *independence*, so as to take an objective view of findings, while also being *collaborative*, actively seeking inputs from the Musika team; and making effective use of *learning from experience elsewhere*.

This phase also applies Springfield's tried and tested analytical lens that has been used throughout the review. This analytical lens is based on an understanding of what it takes to be an effective agent of market systems development (MSD). It provides a framework for evaluating Musika's performance, approach and organisational capacity in relation to tried and tested principles of market systems development and yields findings and conclusions that account for Musika's goal of stimulating sustainable systemic change at scale. The framework has three assessment areas. At the start of the final phase of the review, the team identified priority questions to address (to the extent that information is available) under each of these areas in this final phase, as follows:

- Performance:** this assessment area evaluates Musika's progress to date in terms of stimulating sustainable systemic change, progress against cross-cutting themes, and engagement of the poor. The priority questions to address were:

¹ A fuller explanation of the Springfield approach can be found in the Interim Report.

- What are the *key results* for each intervention area, including updates on any changes since the interim report?
 - What are the key behaviour and performance changes in the target functions (at the ‘market system change’ level)?
 - What are the key behaviour and performance changes in terms of increased access to goods and services, or growth of enterprises?
 - What are the key benefits for Musika’s target group?
 - How *sustainable* are these achievements? Is there any evidence of improving *scale* (beyond direct Musika activity)? Is there any evidence of system change?
 - What performance data is missing, if any?
- ii. **Approach:** this assessment area mirrors the performance assessment area but with a specific focus on the appropriateness and feasibility of Musika’s approach to achieving its performance goals. The priority questions to address were:
- How well does Musika’s approach fit with a systems focus? What would Musika need to change to adopt a more systemic approach?
 - Has Musika made any changes to its approach in response to the interim report, or for any other reasons? If so, what are these changes?
- iii. **Organisational capacity:** this assessment area looks at Musika’s capacity to effectively implement its approach, in terms of institutional structures and staff capacity. The priority questions to address were:
- Does Musika have the capacity required to effectively make a shift to an MSD approach and, if relevant, what areas need strengthening?
 - Has Musika made any changes since the interim phase? If so, how effective have these changes been and are any further changes required?

Review Methodology

The methodology originally proposed for this phase of the review has had to be adapted due to COVID 19 related travel restrictions, which have not only caused delays to the review process but have also prevented two members of the four-person review team from travelling to Zambia. This has necessitated adaptations to both the scope of the final consultative and analytical phase of the review, and the methodology used.

The main change to the scope was to limit the review’s focus to three of the four intervention areas that were covered in the interim phase, and to shorten the field work to 8 days. For primarily pragmatic, logistical reasons, the three intervention areas selected were Tree-growing, Dairy, and Digital Finance. As originally proposed, the review team has relied on Musika’s monitoring and results measurement data to assess performance, with some opportunity to validate and better understand the nuances of reported results through interviews with market players and programme partners. As only half the review team was able to be in country and conduct interviews, this reliance on Musika data has been heavier than it might otherwise have been.

The overall methodology used for this phase of the review was adapted to take account of there being just two team members in Zambia. The following methods were used:

- a) **Desk research:** the team revisited key reports and reviewed new reports and MRM data produced by Musika since the last phase of the review, building on the desk research done during the interim phase
- b) **Musika consultations:** remote interviews and discussions with Musika staff and management
- c) **Field research:** interviews, including some small group interviews, with key stakeholders including farmers, Musika partners, non-partners, and other key system players/informants in the three intervention areas in the Southern, Copperbelt, Central, and Lusaka provinces
- d) **Clarification, discussions and debriefing on the interim report and preliminary final phase findings** with Musika staff and management, conducted remotely
- e) **Final analysis:** bringing together all the findings from the above, and report writing

Musika consultations

Due to the restrictions imposed by COVID 19, discussions with Musika staff and management were largely conducted remotely. In an attempt to compensate for the loss of detail and insight that is inevitably gained by interviewing and working alongside teams in person, repeated and lengthy virtual interviews were conducted with a wide range of Musika team members. An estimated 50 hours of remote interviews were conducted with review team members between the two phases, the vast majority of which included at least two review team members. In addition, the two in-country review team members travelled with Musika team members during fieldwork and were able to ask further questions and discuss Musika's approach informally.

Field research

Two members of the review team, already based in Zambia, were able to travel to rural regions to interview partners, non-partners and farmers during a seven-day field trip. Table 1 summarises the number of stakeholders that were interviewed during the field work (with more detail included in Annex 3). All interviews were semi-structured and relatively informal. Some were conducted as group interviews, and some were conducted individually. In some places, it was also possible to make observations (such as at milk collection centres). In order to cover as much ground as possible during the field work period, the review team members divided up to conduct interviews individually, and the stakeholders who were interviewed were largely selected by Musika.

These interviews provided useful perspectives and an opportunity to add detail to our understanding of the context and Musika's work. However, the field work cannot, and was not intended, to fill the gaps in Musika's monitoring and results measurement; indeed, given the nature of the sampling strategy (convenience sampling, conducted by Musika) and the small number of stakeholders consulted, the field work's findings should be interpreted with caution.

Intervention Area	# Partners interviewed	# Non-partners interviewed	# Farmers/ growers interviewed (individual and group meetings)	# MCCs (Dairy only)	# SMEs (Digital finance only)	Other stakeholders
Dairy	2 processors 3 vet service providers	1 vet service provider	25	3 (linked to partner processors)		Dairy Association of Zambia

				3 (not linked to partner processors)		
Tree growing	3 nurseries	1 nursery	6			Local Leader/Chief in Solwezi
Digital finance	4 platforms		12		6	

Table 1: Summary of interviews held during the review's field work

Regular review team briefing sessions were held to the degree that was feasible, so as to ensure effective sharing of learning and coordination. The review team shared preliminary findings with the Musika team during the review process.

As with the interim report, given the necessity of conducting this process partially remotely and virtually, the review has been cautious when drawing conclusions on the basis of limited information. The report highlights varying levels of confidence in the conclusions drawn.

3. FINDINGS

This section of the report summarises the performance of Musika's work in the three focus intervention areas of tree growing, dairy and digital finance. As explained in the previous section, the findings are based primarily on Musika's MRM reports, discussions with the technical and MRM teams, and supplemented by anecdotal findings from the review's field research.

As discussed in the approach section, and below, Musika does not yet frame its interventions in terms of supporting functions in market systems, as would be typical when using the MSD approach. However, as this review has been asked to assess Musika's performance through a market system lens, the selected intervention areas have been analysed in those terms here. In addition to providing Sida with an analysis of performance through a systems lens, this analysis also provides Musika with an illustration of how it could frame its interventions in the future, as it moves towards embedding the MSD approach more fully in its operations. Annex 1 provides an analysis of the progress made in each of these intervention areas, in terms of behaviour changes and performance changes in the relevant market systems. The behaviour changes are analysed using the MSD System Change framework, commonly called AAER (Adopt, Adapt Expand, Respond). AAER facilitates a fuller exploration of the sustainability and scale of key behaviour changes in each of the market systems that Musika is trying to change. The framework has recently been adopted by Musika's MRM team for reporting.

This section takes each of the three intervention areas in turn, reporting on the results in terms of impact, scale, and sustainability; and in terms of the cross-cutting themes of gender, poverty and environment. Each intervention area sub-section ends with conclusions, based on the reported findings.

Tree growing

Background

Musika's work in the tree-growing, or 'trees on farms,' system started in early 2019 and is a key intervention area within its Environment Markets thematic area. The primary rationale for selecting this sector is a growing recognition of the negative impact of climate change on agriculture in Zambia, including smallholder farmers, and of the opportunity, through increased tree planting, to both generate incomes, and improve soil health for smallholders, as well as establish environmental protections. In addition, Musika identified the potential for increased fruit tree growing to complement its work in nutrition.

Soon after starting work in this sector, Musika recognised that there were minimal immediate incentives for smallholders to plant indigenous trees which provide no income and which government regulations prevent farmers from cutting down. Musika therefore quickly shifted its focus to fruit trees (avocado, lemon and so forth) which can deliver both an environmental benefit (through improved soils and disincentivising the use of trees for charcoal), while also eventually generating an income for the smallholders from fruit sales. At that time, demand for the fruit from trees had been growing, with promising opportunities in citrus and avocado emerging, but there was relatively limited involvement of smallholders in this market system.

Musika's interventions focused on several of the constraints in the fruit tree growing system which in combination were preventing smallholders from planting and growing fruit trees:

- smallholder farmers had limited knowledge of the commercial potential of growing fruit trees (in terms of income and climate resilience);
- nurseries typically weren't focused on the smallholder market;
- typically, smallholders, especially those in rural areas, were only able to access slow growing varieties which were the main type of seedling sold by small nurseries that served smallholders; they had limited access to, or understanding of, the value and benefits of improved tree seedlings which while more expensive, grow faster, produce fruit more quickly and have a lower failure rate;
- smallholders often had limited technical knowledge about how to plant and maintain trees effectively.

In the period since the interim phase of this review, demand for many types of tree fruit has continued to grow – the most obvious example being avocado, termed 'green gold' by the *Zambian Business Times*.² This increase in sales has taken place during the COVID 19 pandemic – for now there is no information as to whether it would have been a greater increase without the pandemic. As with other intervention areas, the main challenge presented by the pandemic was the restrictions on physical gatherings which limited both promotional activities as well as training and extension.

Musika's work in the tree growing sector

Musika's work in the tree growing sector did not start with an analysis of the market system and what was and was not working for smallholders (and why). Instead, Musika decided to focus its work

² The Lusaka Avocado Multipurpose Cooperative (LAMC) recently signed a deal with an Italian company (Algeo SRL) to eventually provide 960 MTs of avocados per month. Currently LAMC cannot come close to this target and is hoping to partner with avocado farmers across the country. *Zambia Business Times*. Issue #69, 26 August – 15 September 2021.

exclusively on nurseries and after some false starts identified several nurseries to partner with. There are seven nursery partnerships currently ongoing, and one which has closed.³

Five of the partner nurseries were already selling to smallholders before partnering with Musika, but they were doing so in low numbers, with a focus on other markets including NGOs, primary schools, government institutions and commercial farmers. Four of the partner nurseries (Havilla, Lutawo, Khondwani and Radical Farmer) were already selling improved tree seedlings, but in small numbers and mostly not to smallholders. The key behaviour change introduced through Musika's work with nurseries is that nurseries now recognise and work to meet the growing smallholder farmer market for fruit tree growing. This has involved partner nurseries making several changes to the way they do business, in particular:

- changing growing practices to increase production of (and in some cases introduce) improved seedlings. Nurseries are now able to produce the improved seedling in greater quantities and throughout the year;
- introducing and expanding the range of fruit tree seedlings stocked, to provide a wider selection to smallholders;
- undertaking promotional activity that specifically targets smallholders to help raise their awareness of the benefits of fruit tree growing and of improved seedlings in particular;
- employing an expanded sales and outreach modality, enabling nurseries to reach more rural areas; and
- developing and delivering new extension and training services that target smallholders.

The support Musika provided to nurseries has varied by partner⁴, but includes the provision of equipment such as greenhouses, netting and irrigation systems to enable increases and year-round production of improved seedlings; vehicles to assist with extension outreach and deliveries to new rural markets; and grants to support the development and provision of training and extension services to smallholders. In part Musika's assistance has bought down partners' perceived risk of venturing into the smallholder market and/or investing in improved seedlings, and in part it has enabled the partner nurseries to diversify to fruit trees (and improved seedlings), increase production and expand to more rural areas much faster than they would have otherwise been able to do.

Moving forward, Musika is keen to scale up its work in the tree-growing sector, primarily through its existing nursery partners. It is also exploring options of working with traditional leaders as change champions in rural areas; two existing partners – Havilla and Lutawo – are piloting this approach.

Reported results

This section summarises the key results achieved in the tree growing sector, as reported by Musika. Monitoring in this intervention area has many gaps and where feasible, Musika's data has been supplemented with findings from the field research conducted as part of this review. However, it is

³ Ongoing partnerships are with: Rainlands, Lutawo Paradise Gardens, Khondwani, Radical Farmer, Better World Energy, Munich Advisory Group, and Havilla gardens. Closed partnerships are with: Albida

⁴ Musika's partnership with BetterWorld is slightly different from its other tree-growing partnerships, in that it has joined other funders (such as the Irish Embassy in Lusaka and the University of Reading in the UK) to help pilot growing Pangamia trees on abandoned waste lands (e.g. post-copper mining).

important to note that this is anecdotal information that cannot replace the need for more systematic monitoring by Musika.

Impact on farmers

- Musika reports that 8,108 farmers have bought improved tree seedlings, and had access to extension and technical support, from the eight partner nurseries. There has been a gradual increase in the number of women buying trees, in 2020 estimated at c. 50 %.
- These are believed to be under-counts as Musika started measuring outreach only in the last two years. Musika's monitoring data does not reveal whether these farmers are new to tree-growing (just that they are new to the partner nurseries). Tree growers interviewed as part of the review's field research had been growing trees before Musika's intervention but had benefited from extension, and access to improved seedlings. However, the partner nurseries that were interviewed during field research for the review indicated that they had attracted new customers who had just started growing trees.
- Musika does not yet monitor whether the tree growers its partners sell to are all smallholders. The partner nurseries interviewed as part of the review sold seedlings to large commercial farmers, government programmes, NGOs, as well as smallholders, but all stated that the latter was an important and also a growing market for their businesses. The tree growers interviewed as part of the review seemed to be medium-smallholders, but this is a small sample and there is no way of knowing how representative these interviewees were of the wider population of farmers purchasing seedlings from partner nurseries.
- Musika assumes that 100% of trees sold are actually planted, but does not track this. This assumption was validated by the tree growers that were interviewed during the field research.
- Musika also assumes that the majority of farmers who purchase seedlings benefit from the embedded services introduced by the nurseries, especially information about tree-growing (and conservation farming) practices. This is an untested assumption, that was partially validated by the field research: the tree growers connected to partner nurseries that were interviewed claim to have introduced new practices, such as establishing fire breaks, and producing and using their own compost, but they also report a resistance to investing in inputs for trees. More systematic monitoring is needed to understand which practices have been adopted by tree growers (and why). Currently Musika's Annual Household Survey (AHS) assesses the proportion of farmers who claim to practice some form of conservation farming (25% in 2020), but it does not disaggregate tree-growers from other farmers in that survey, nor further investigate which practices have been adopted.
- Musika anticipates positive impacts on incomes and on climate resilience for smallholders planting improved seedlings and adopting better tree-growing practices. However, neither of these impacts has been monitored. This fundamental gap in monitoring is primarily because of the time it takes for fruit trees to produce a harvest, and to substantially improve soils. However, after three years it is reasonable to expect some early signs of income and climate resilience impact and this gap in monitoring needs to be urgently addressed. Tree-growers interviewed during the field research mentioned benefits of using home grown compost and that by growing vegetables alongside the trees they use less water. Again, this needs to be verified through rigorous monitoring.

Scale

Musika's approach to scale in this intervention area has focused on its partner nurseries, their adoption of new practices and expansion of activities (three partners, Lutawo, Khondwani and Havilla, have expanded to additional rural areas, so as to reach new customers).

These changes in practice have resulted in substantial increases in sales by partner nurseries year-on-year with 1,500 improved seedlings sold in year one, 144,519 in year two, 131,725 in year three, and 113,694 as per quarter two) in year four. Nurseries interviewed indicate that Musika's support has been instrumental in enabling this expansion.

In addition, partner nurseries have told Musika of at least six non-partner nurseries who have started to replicate some of the changes in practice that partner nurseries have adopted, including promoting and offering smallholders improved seedlings and providing extension services. This has not been facilitated or monitored by Musika, but it is plausible – likely, even – that this has happened because of non-partner nurseries copying partner nurseries' innovations, and that a substantial number of smallholders have benefited from the non-partner nurseries who have adopted similar changes in behaviour. This would mean that the number of tree growers Musika's work has benefited is far greater than has been counted. Even more importantly, it might mean that there is even greater potential for replication (and hence scale) if the spread of innovation was actively facilitated.

In the absence of an in-depth market assessment, Musika is not able to ascertain if there are any other barriers to inclusion in the tree growing system which may be preventing larger numbers of smallholder tree growers from participating.

Sustainability

There are encouraging signs of sustainability from the following indications of partners owning and adapting the adopted practice changes:

- Three partners (Lutawo, Khondwani and Havilla) have invested their own funds to expand to new regions.
- At least four of the partner nurseries, Havilla, Munich, Kondwani, and Lutawo have invested their own funds in extension activities for smallholders. Havilla reported during the review's interview, visiting most of its customers to provide customised technical support and has developed its own demonstration farm.
- In terms of adaptation, three nurseries have invested their own funds in new and slightly adapted equipment to help them expand their year round production of improved seedlings: Havilla has constructed more than twenty nursery boxes for growing improved seedlings (at a cost of c. \$400 each); three partners (Havilla, Kondwani and Radical Farmer) have developed and invested in their own irrigation systems; Kondwani has built its own, lower cost, greenhouses, and Radical Farmer has diversified into the lemongrass market and plans to pay farmers with fruit trees as a market expansion technique.

However, there are also signs of partners anticipating similar levels of support from Musika to help them expand further or even maintain the changes they have made thus far. For example, Lutawo has requested support to expand its operations to five more districts, and Albida, a closed partnership, has asked Musika for seedlings and machinery. These indications of dependency were also noted during the field research and compounded by partners' use of Musika for other forms of support –

such as technical and business advice (noted by Rainlands and Havilla) or help navigating import problems during the COVID 19 pandemic (BetterWorld).



Gender

Musika's monitoring data suggests that the proportion of women farmers purchasing improved seedlings from its partner nurseries is gradually increasing, and now stands at c. 50%. Musika encourages its partners to recognise women as active participants in the market system, but it is not clear whether this encouragement or other causes are behind this trend. Partner nurseries are owned by men, although they employ both men and women workers. Musika is planning to investigate further whether tree-growing is emerging as a popular livelihood for women in smallholder households (both women and male headed households) and crucially what this means for them in terms of livelihoods, agency and wellbeing.

Poverty

Smallholder tree growers have to invest land, labour and money into an endeavour which will not produce an economic return for several years. As such, it might not be an intervention area which, at least initially, attracts (and benefits) the poorest farmers. The Rural Agricultural Livelihoods Survey (RALS) 2019 provides only limited information regarding the poverty level of the smallholder farmers benefiting from this intervention and partners do not, and have no incentive to, record their customers income or land-owning status. The tree growers interviewed as part of the review's field

research appeared to be a combination of medium and small holders but as explained above, it is important not to read too much into this small sample⁵.

Two partners, Rainlands and Havilla, mentioned during interviews for this review that subsidies are required to attract smallholders to buy fruit trees. Musika has supported a small pilot subsidy programme with three of its partners, reaching 370 tree growers. The results of this pilot, including its impact on the partners and tree growers, have not been monitored.

With the limited information available, it is not possible to draw firm conclusions about the wealth and/or vulnerability of smallholder tree growers benefiting from Musika's intervention, and this important issue needs further investigation – to prove or disprove assumptions and if necessary to investigate options to facilitate changes that could improve the inclusivity of the system.

Environment

Environmental protection and climate adaptation are key ambitions for this intervention area, with targeted benefits including a reduction in soil erosion, establishing wind bridges for homes and tree root systems strengthening the nutrition of farm soils. For now, there is insufficient data to comment on whether, or the degree to which, these goals are being met. As noted above, Musika's AHS assesses the proportion of farmers, working with Musika partners across all of its interventions, who report practicing some form of conservation farming practices, but it does not disaggregate tree-growers from other farmers. It would be useful to know how many of these are tree growers and are applying these new practices to their trees, which practices have been adopted (and why), and also, crucially, whether climate resilience benefits are being accrued as a result. Musika is keen to improve its monitoring to capture this data.

Conclusions for tree growing

Tree growing is a valid sector for Musika, notwithstanding concerns regarding its poverty focus, as it is a good fit with its environmental and climate resilience related ambitions.

Several partner nurseries have changed their behaviours and as a result are better serving a greater number of smallholder tree growers, in more rural areas, with improved seedlings and extension. While the expansion may have happened without Musika support, the changes in production, an increased focus on smallholders, and the bundling of improved seedlings with conservation farming extension, are significant changes that can very likely be attributed to Musika's support.

Partners have reported to Musika that there has been some "crowding in" taking place with new and/or existing non-partner nurseries replicating some of the behaviour changes adopted by the partner nurseries, but this needs to be verified, to better understand the degree to which this is taking place, and whether it needs some facilitation to maximise potential scale and impact. To the extent that it is happening, it is a very positive indication that the incentives to adopt and sustain the changes supported in partner nurseries are strong. More generally, Musika reports a growing awareness of the threat of climate change and the importance of tree growing and improved tree-growing practices

⁵ Tree growers interviewed as part of this review, appear to have mixed income/asset levels. For example: one grower relies on a construction business to provide the main source of household income and is using part of the profits from this to invest in fruit trees; another is a member of a tree growing cooperative and also runs an agro-dealer business, although this is not a profitable business at present; and another has a substantial farm (38 ha, but only a small proportion is developed) with livestock and 3,000 avocado trees. He also receives remittances from urban based relatives.

among farmers in Zambia. This is combined with a growing demand for tree fruit, such as avocado. These changes have, and are likely to continue, to strengthen the incentives for farmers and nurseries to invest in the changes Musika is supporting in this sector.

Analysing these changes through a market systems lens, these are changes which address, albeit to a limited degree, constraints in key functions in the fruit trees market system, namely information, farmers' technical knowledge, nurseries' technical knowledge and access to equipment. However, Musika's ability to address these constraints sustainably and at scale, in a way that would trigger wider systemic change, is fundamentally limited by its focus on partnerships with nurseries and addressing the constraints at the individual partner level rather than for the system as a whole.

The selection of nurseries as partners was not based on an analysis of the tree growing market system, and a subsequent prioritisation of the changes that were needed to make it work better for smallholder farmers. While nurseries have proved to be constructive partners in partially addressing some of the system constraints, there are three fundamental problems with designing interventions around a set of similar partners when trying to achieve system change in a sector:

- Firstly, on their own, nurseries are not necessarily able to address constraints to the degree or scale that is needed without the involvement of other players. This is true even if they have the incentives to change, and their capacity to do so is strengthened by Musika. For instance, one of the key constraints identified was that farmers did not have access to good information about the opportunity that fruit trees, and improved fruit tree seedlings, presents – in other words, the information function wasn't working well. Analysis of *why* this was the case might have led to the emergence of multiple, reinforcing options for ensuring that a substantial number of farmers get improved access to information, from multiple players (including but not limited to nurseries). Because Musika has focused on nurseries, these additional options were not explored.
- Secondly, nurseries are not the right players to address every important constraint in the tree growing sector. For example, Musika identified that one of the reasons nurseries were slow to adopt the necessary technologies for producing improved seedlings, and one of the reasons they did not produce them throughout the year, was that they struggled to acquire the necessary equipment, such as greenhouses, netting and so forth. Further analysis of why the equipment market system was not working well for small scale nurseries might have revealed constraints in the supporting functions of this connected system (such as finance, information, or suppliers' knowledge of the demand etc). Musika provided assets and grants to overcome the problem of a lack of equipment, and although this support helped its partner nurseries in the short term, it also side-stepped the system level constraint. As they expand, partner nurseries will need more equipment, and perhaps even more importantly, non-partners will also need equipment, but without Musika's ongoing support they will not be able to get it.
- Thirdly, and relatedly, a focus on nurseries led Musika to focus on the addressing the constraints that were most relevant to partner nurseries, rather than analysing the system as a whole. Other supporting functions and rules in the market system have not been assessed and are not currently included in Musika's plans or intervention design. Figure 1 shows some of the supporting functions and rules that might be relevant in fruit trees market system, based on the analysis done by this review. A more in-depth market system analysis would be able to produce a more accurate system map, and would provide the evidence base to

prioritise the supporting functions and rules which are most constraining the system's performance for smallholders.

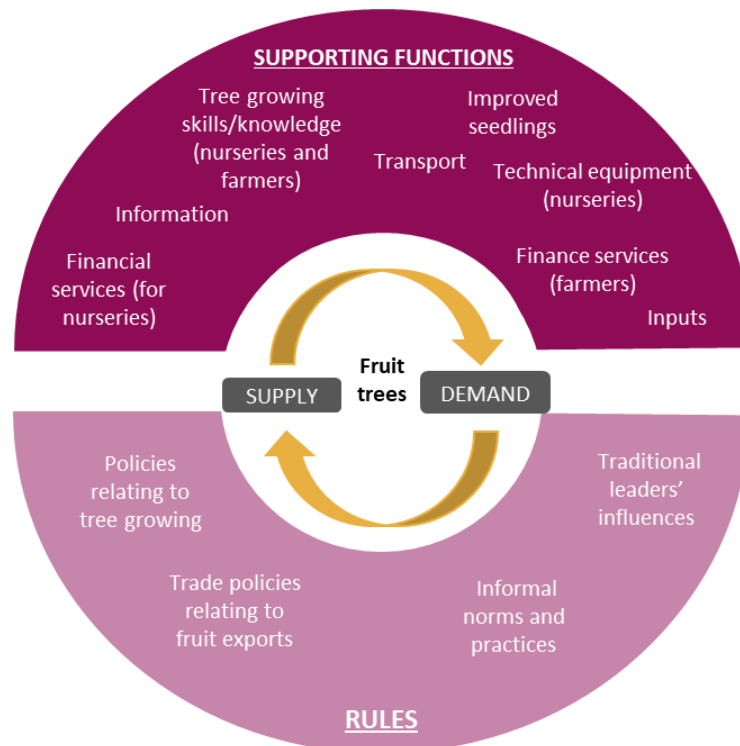


Figure 1: The tree growing market system

These examples illustrate that by focusing on a single set of partners and their performance, rather than conducting a market system analysis, prioritising key functions and rules to address, and then finding the right players to perform each key, prioritised function differently, Musika has unintentionally *limited the scale, depth and sustainability* of its work.

None of this is news to Musika – and a recognition of these issues underpins its ambition to shift from a partner focus to a one which focuses on systems. In the last few months, Musika has started to explore options for working with traditional community leaders, as champions of tree growing and environmental and climate smart standards. Working beyond nurseries is a positive move; but before proceeding further, it would be useful to undertake a market systems analysis to assess where else in the system (or connected system) there are constraints for smallholder tree growers, which ones are most relevant and feasible to address, and where a real opportunity for change lies.

As things stand, there is still the potential for benefits to accrue to farmers, though it will clearly take time for these to become apparent. We don't yet know whether, or to what degree, farmers are benefiting from the changes adopted by nurseries, in terms of income and/or climate resilience. However, there should already be indications of whether farmers are planting trees, which (if any) good tree growing practices they are adopting, and after almost three years, whether the early adopters are starting to reap any benefits. These indicators are not yet being monitored; doing so is important, not only in assessing the efficacy of the work, but also to enable adaptations to intervention design if needed.

In terms of gender, there are positive signs of an increasing number of women, in absolute terms and as a proportion of smallholders buying improved seedlings, and getting involved in tree-growing. Musika recognises that this trend needs to be better understood – and the real-life implications for rural women in smallholder households (both female and male headed households). This will be an important piece of analysis to better understand whether it is possible, and how, to improve women's engagement in this system.

When it comes to environmental issues, this intervention area offers real opportunities for impact – in terms of the benefits that will naturally accrue from more tree-planting as well as building climate resilience for individual smallholders. The limited monitoring information available makes it impossible to assess the level of impact to date, or, crucially, if adaptations are needed to improve this.

There are significant gaps in monitoring and impact data for this intervention area, many of which have been highlighted above. In a nutshell, and given its current intervention approach, Musika needs to better understand:

- changes in partner behaviour (and how much is genuinely new);
- changes in farmer behaviour (and reasons behind any variations or low levels of good practice adoption);
- subsequent impact at farmer level (in terms of yields, income, nutrition, and different aspects of climate resilience);
- characteristics of the farmers involved, especially in terms of poverty;
- the nature of the impact on women; and finally
- the degree and scale of crowding in taking place with changes in non-partners.

Dairy

Background

The key rationale for Musika to work in dairy is the opportunity for increased and more stable income for livestock farmers, particularly as part of a diversification strategy. Currently, demand for milk outstrips supply in Zambia but despite this, prior to Musika's intervention most of the milk produced by small-scale livestock producers was either consumed by the household, sold informally as raw milk or even went to waste. Productivity (yield per animal) was low, and according to a Musika study in Namwala District in Southern Province in 2015, even among those who sell milk, dairy is not typically the main source of income.

Musika recognised that in areas where smallholder farmers own cattle, dairy represented an opportunity to diversify income streams. Given fierce competition for milk that meets quality standards, and the fact that processors struggled to source enough milk to meet their needs without importing powdered milk, there seemed to be strong incentives for private sector firms to invest in sourcing from smallholder farmers.

The challenge for processors was that with rates of production so low among rural farmers, it was not cost effective to source milk from smallholders and they could not source enough to meet their processing capacity. Furthermore, storage and collection was extremely difficult, given poor road infrastructure, lack of reliable electricity in some areas, and the lack of an effective aggregation

function for milk sourced from farmers with only a few animals, who were dispersed across large distances. Milk from rural areas also could not be guaranteed to meet quality and hygiene standards.

Meanwhile numerous factors constrained milk yields and milk quality. Farmers had very little access to technical advice about production practices or about hygiene and quality standards. Public veterinary services were available, but were relatively ineffective at providing the vaccination programmes, drugs, services, and information needed to combat animal disease. Animals were often undernourished and perhaps most importantly, many farmers were milking beef cattle rather than dairy cattle. Access to adequate water for the animals was another factor contributing to low productivity.

In the period since the interim report, demand for dairy products has only grown, in part because of supply chain interruptions caused by COVID 19. Prices at the local level increased at an unprecedented rate (for example, according to Musika's monitoring, between April and December 2020, the price of milk went up by 200%; it has further increased by 100% so far in 2021), allowing farmers to negotiate with multiple buyers and providing incentives for farmers to enter the dairy sector and invest in their animals. This has led to new and strengthened relationships between farmers and offtakers, as well as a greater willingness to invest in veterinary services by smallholder farmers. However, scarcity has also driven up the cost of inputs, including veterinary medicines and animal feed. In some cases, this led to reduced investment in veterinary services. It is unclear whether, on balance, smallholder farmers are able to make higher profits, as these changes have been noted by Musika, but not tracked quantitatively. It is also unclear how long price increases will remain (beef prices also rose, but have since fallen again).

The previous government's 2021 budget presentation showed efforts to promote local production and processing, with the introduction of an import and excise duty on powdered milk. There is a need for more targeted, and better implemented, policies in the dairy sector – for example on rangeland use, disease control, drug use, access to water and dairy product importations. The newly elected government has indicated a willingness to work with Musika and other knowledgeable stakeholders on developing and consistently enforcing such policies.

Musika's work in dairy

Musika's work in dairy is one of several intervention areas in livestock markets – Investment Focus 2 in the Agricultural Diversification practice area. To date, when Musika has reported on its work in dairy, it has referred to its work with processors, aggregators, and farmers – an area of work it is no longer active in. However, applying a more systemic lens, it's clear that other areas of Musika's work are also relevant to the dairy, because they are focused on improving supporting functions of the dairy market system.

For example, Musika's work with private veterinary services is intended to address issues with veterinary medicines, veterinary services, and artificial insemination (breeds), as well as technical advice. Some veterinary companies also supply and/or advise on feed, and Musika has also formed partnerships with feed companies. Meanwhile Musika's work with processors was intended to address issues with aggregation, storage and transportation of milk, and technical advice for farmers about hygiene and quality standards.

This review has focused on Musika's work with processors and with private veterinary companies. Due to the constraints imposed by COVID 19 and the revised methodology adopted (see Section 2), this

review was only able to focus on Musika's work in dairy in Southern Province and, to a very limited extent, in Central Province.

The key behaviour change introduced through Musika's partnerships was processors starting to source (or investing more substantially in sourcing) milk from smallholder farmers, providing a reliable route to formal markets for milk that meets quality standards. This involves processors establishing or supporting farmers or dairy associations to upgrade rural milk collection centres (MCCs). The processors also provide training and technical advice on hygiene and quality standards to the dairy cooperatives that operate the MCCs, which they in turn provide to farmers. Some processors provide other embedded services, such as working with veterinary services (overlapping with another Musika intervention area) to enable farmers to access services, vaccinations and/or drugs as required. Prior to intervention, processors such as Parmalat had been sourcing from smallholders in some areas, but they had not penetrated the regions targeted through the Musika partnership.

The support Musika provided to processors included providing milk cooling tanks for linked milk collection centres (MCCs), milk transportation tanks and vehicles, technical support, and linkages, for example to veterinary services they could work with in rural areas.

Musika partnered with Varun in Central Province, Zammilk in Western Province and Parmalat (now Lactalis) in Southern Province, all three of which invested in sourcing milk from smallholder farmers and working with MCCs. None of these partnerships are still live; the partnership with Parmalat/Lactalis closed in 2019 and the partnership with Varun closed at the end of 2020.



Several different behaviour changes were introduced through Musika's partnerships with veterinary extension workers and veterinary companies. Initially, Musika worked with individual public veterinarians and veterinary extension workers in rural areas, encouraging them to form small private companies and offer improved veterinary services. These small vet enterprises grew quickly, demonstrating a potential market for private vet services and attracting the interest of large

veterinary companies. Musika then partnered with larger veterinary companies to link them to the small vet enterprises who could act as agents for them, enabling them to reach rural areas with vet services, animal health inputs including drugs, and artificial insemination services.

Musika's support included providing larger vet companies with evidence that reaching a more rural market could be possible and profitable, and providing linkages to veterinary agents in rural areas, technical advice in setting up the new business model, and assets including vehicles. Musika partnered with fifteen vet companies to pilot the expansion of private veterinary services into rural areas through agents, thirteen of whom have adopted the model and expanded their offerings into rural areas.⁶ Of these, six partnerships are currently live.

Reported results

It was not possible to disaggregate dairy farmers from other livestock farmers in some of Musika's monitoring data, and some of these results relating to dairy occurred before Musika was using its current MRM system. To date, Musika has also monitored its work with veterinary services and with processors as separate intervention areas, and the available data primarily records outreach by intervention area, rather than benefits in the dairy market system. Nonetheless, applying a systemic lens, the review attempted to use the available data to assess the combined impact of both intervention areas on the dairy sector, as they address different (but mutually reinforcing⁷) supporting functions in the dairy market system.

There are substantial gaps in Musika's monitoring for this (and the other) intervention areas. Where possible, information from the review's field work has been used to supplement the available information, but by definition it is largely anecdotal and cannot fill the gaps in monitoring data or be relied on for decision making without further validation.

Annex 2 provides a more detailed analysis of these results, structured within the AAER framework.

Impact on farmers

- In 2014, Musika recorded 412 farmers selling milk to Lactalis (at the time, Parmalat) through MCCs. As of the most recent data, this had increased to 5,250 farmers. Farmers interviewed during the review's field work say that as more and more farmers have heard about the benefits of milk production as a source of income, there has been a boom in the number of farmers investing in cows for dairy purposes only. They also reported feeling more confident to invest in dairy as they see increased competition between processors (see 'Scale').
- According to the most recent AHS survey (2020) yields among Lactalis suppliers have increased from an average of approximately 2.1 litres per cow per day to 2.5 litres per cow per day, and yields per household have increased from 10.2 litres per day to 17.6 litres per day, on average. Dairy farmers linked with Musika partners indicated an output of 953.8 litres of milk per cow

⁶ Musika's partners are: Vet24, Silverlands, Bimeda, Munzuma, LVSCC, Ultravetis, Leife, Zambef, Vines, Leloisa, Agri-CM, Hopevet, Agriserve, Zambona, and Amatheon. Leloisa and Leife have not sustained adoption of the model.

⁷ For example, better animal health leads to better productivity, which means there is more milk available to sell to processors, providing a stronger incentive for processors to invest in the rural market. Processors are also incentivised to invest in better animal health, and Lactalis, for example, works with a veterinary service to make veterinary advice and artificial insemination services available for free to farmers who supply to them. Farmers are also more incentivised to invest in veterinary services when they are confident that there is a market for their milk, and selling their excess milk to processors provides them with more disposable income to spend on veterinary inputs.

per annum, compared to 942.5 litres per cow per annum for farmers not linked to Musika partners. In 2014, when the MCCs were started in Namwala, Parmalat collected 319,785 litres of milk from them. In 2020, they collected 708,960 litres of milk from the MCCs.

- Farmers interviewed during the field work for this review also reported that the amount of milk collected per farmer has increased, irrespective of the season. They attribute this to better knowledge and healthier cows (thanks in part to better access to feed and fodder).
- According to Musika, Lactalis report that the quality of milk being provided has improved, though information about quality is not being systematically monitored and captured by Musika.
- The price of milk increased from an average of ZMW3 per litres in 2015 to ZMW3.5 per litre in 2017, representing a 17% improvement. The price has increased dramatically since then (farmers in Southern Province reported price increases from K5 to K11 in 2021) but multiple factors can contribute to price increases and this may not be stable. One factor that was mentioned both by Musika and by some farmers in the field work is that increased competition among processors is perceived to be a contributing factor, but it was not possible to validate this further.
- Given all these changes, it is reasonable to assume that the bulk of the additional 4,838 farmers who are supplying to Lactalis have been able to increase their income as a result of benefiting from the embedded services and access to formal market Lactalis provides. This assumption is supported by the available evidence, although it is not systematically measured by Musika. The 38 farmers linked to Parmalat/Lactalis who were surveyed for the AHS 2020 all reported an increase in income, and a Musika analysis of the data from the RALS 2019 suggests that dairy farmers' income has increased by 56% in nominal terms, equivalent to a 3.5% gain in real terms, taking inflation into account.

This is further supported by interviews with farmers undertaken for this review: while they could not pinpoint how much of their income comes from milk sales, they did report an increase in how much money they have been able to earn from selling milk. Farmers interviewed said that they are now able to build better houses for themselves, sponsor their children's education, feed their dependants, and afford medical bills for the household as a result of partaking in milk production.

Although the links between changes to key supporting functions and changes in the dairy market system have not yet been well established by Musika's monitoring, the changes that drove income increases were likely driven by changes in supporting functions:

- All the farmers linked to Lactalis who were surveyed for the AHS 2020 (38 farmers) reported receiving technical information, which may have contributed to productivity increases.
- 39,000 farmers have been recorded as users of improved veterinary services supported by Musika (this includes beef cattle farmers). This is supported by evidence from both veterinary services providers who confirm that they offer these services to rural farmers and report growing demand, and by farmers interviewed for the field research who confirmed that they increasingly use these services. The presence of improved vet services implies greater access to technical advice, artificial insemination services, veterinary services like dipping and spraying, and veterinary drugs. Improved animal health may also have contributed to productivity increases.

- According to interviews done with MCCs for this review, Lactalis offers artificial insemination to its farmers as an embedded service, and also offers vet services for free as long as the farmer supplies milk to them. Some MCCs not linked to Musika partners also offer similar services, though they are financed differently. Zimba Dairy extends veterinary services inclusive of artificial insemination on credit to the farmers that supply milk to its collection centre, and Kalomo Dairy offers veterinary services including artificial insemination to its farmers, financed by contributions from farmers to the cooperative. Musika has not tracked if the behaviour of these non-partners has been influenced by Musika's partners.
- Musika has not yet done systematic monitoring of improvements to the quantity, quality, price or timing of veterinary service delivery. Anecdotally, farmers interviewed for the review reported that the veterinary services available from private sector providers was better quality than those available from public sector providers.
- In the 2020 AHS, 92% of the farmers linked to Lactalis reported that being linked to one of the Lactalis-linked MCCs reduced the distance they needed to cover in their operations. It is (logically) assumed that this leads to time and cost savings but this is not tracked by Musika. Some farmers interviewed for the review commented that having MCCs closer saves them time and transportation costs, and reduces wastage due to spoilage.
- In the 2020 AHS, 53% of farmers reported that they received payment through a bank account rather than in cash (compared to 25% in the control group). See the section on 'digital finance' for more information on the ways in which this might benefit farmers.

Scale

Scale of processor behaviour changes

- Lactalis fully adopted the change, extending their operations to reach more farmers by equipping five new MCCs with Musika's support. Whilst Lactalis acknowledges that they may have expanded their operations even without partnering with Musika, its view is that it would have been slower than it was.
- Lactalis has since expanded further, opening another three MCCs in the region without Musika's support. It intends to continue expanding, including into parts of Western Province. According to Musika's tracking, an estimated six to eight MCCs are now aggregating milk to sell to formal markets in Namwala, supported with storage and transport by Lactalis.
- Two processors that Musika has not partnered with have reportedly begun sourcing milk from smallholder farmers. One of these - Finta - has been in the market for a long time but did not previously engage much with MCCs or smallholder farmers. The other is a new player in dairy – Dairy Gold. The Musika team are confident, based on their knowledge of the market, that these companies have started engaging with smallholders (or, perhaps, expanding to engage more with smallholders) as a result of the proof-of-concept Musika partners have demonstrated, but Musika has not collected information about this yet, nor intervened to facilitated scale-up. As the MCC model of aggregation was running prior to Musika's interventions in the dairy sector, and as this has not been monitored, it is not possible to draw conclusions on attribution. Nonetheless, these signs of (possible) crowding in are very encouraging.

Scale of veterinary service behaviour changes

- Musika has recorded two examples of unsupported veterinary companies expanding their operations to reach rural farmers. Commercial farmers in Mazabuka set up a franchise of Livestock Services in Mazabuka in order to reach rural farmers. According to conversations between Musika and Livestock Services, this was inspired by observing Griffins (a company offering agricultural inputs through a digital platform) and Silverlands. Twapona Agrovot has also expanded to offering inputs to rural farmers, but the reason for this change is not known.

Sustainability

Sustainability of processor behaviour changes

Lactalis fully adopted the changes Musika supported, extending their operations to reach more farmers by equipping five new MCCs with Musika's support. Whilst Lactalis acknowledges that they might well have expanded their operations even without partnering with Musika, its view is that it would have been slower than it was.

Lactalis have continued to invest and expand, for example by switching all but one of the cooling tanks Musika provided for larger ones. It is also starting to pay suppliers through digital platforms. Lactalis has a genuine incentive to continue with this investment, as offtake volumes have increased substantially, from 319,785 litres of milk collected from MCCs in 2014 to 708,960 litres of milk from the MCCs in 2020 (this is partly through sourcing from more farmers, and partly from per animal and per household increases).

Encouragingly, Lactalis reports that over the last year, productivity has improved among rural farmers thanks to changes in rural MCCs' practices. These MCCs now provide a series of embedded services themselves, including technical advice and information, equipment maintenance where needed, linkages to feed companies, and veterinary advice and artificial insemination.

Of the six MCCs visited during field work – three of whom were linked to Lactalis and three of whom were not – all had suitable equipment. However, nearly all the MCCs explained that their equipment was initially bought for them with donor funds (including through Musika). This suggests that, despite Lactalis' investment in equipment, there is still a need for MCCs and processors to be more independent of donor funding in order to be sustainable. (Note that there are two models for sourcing equipment – some MCCs buy their own equipment and then look for a buyer for their milk; others find a buyer who then sources equipment for them. Musika supports the latter model, which has much greater prospects for long-term sustainability.) Five of the six MCCs interviewed, including all three Lactalis-linked MCCs, reported being able to maintain their equipment, usually through a technician from the processor. Lactalis maintains the equipment at the MCCs it sources from.

Overall, signs of ownership by Lactalis and sustainability are strong in Southern Province. Currently most of the results come from one firm – Lactalis – which does represent a risk to resilience, but the fact that other processors have started sourcing from smallholder farmers is encouraging.

In Western Province, Zammilk found that the information originally obtained on milk supply and stability did not prove accurate and the low levels of productivity among Western Province farmers meant the operation was ultimately not commercially viable. After three years and after multiple attempts to address the obstacles, Zammilk withdrew from operations in the province.

Varun continue to source from smallholder farmers in Central Province during the dry season (they have found the road network too poor to source from rural areas during the rainy season), but they have shifted to other areas because the farmers initially targeted through the Musika partnership were not able to sustain the levels of productivity required.

To date, there are not yet many other changes in the wider system that support the changes that have been sustained and indicate likely resilience, though the Dairy Association of Zambia has invested in the sector, including in equipment for MCCs.



Sustainability of veterinary service behaviour changes

Signs of sustainability vary among partners. Some partners have made their own investments, showing ownership of the new model. For example, Musika supported Silverlands with seven spray stations, and they now have thirty-four. Similarly, Musika supported Munzuma with spray stations, and a local fabricator in the area, who can make similar equipment at a cheaper price, has started supplying these directly to smallholder farmers. Another positive example is Bimeda, who has continued to provide dipping services since the partnership with Musika closed.

However, others have not been able to continue operations. For example, Leife withdrew its services from Northern region after Zambeef withdrew as, without a commercial market for meat, farmers were not inclined to invest in vet services.

To date, there has been little monitoring of wider system responses and how they may support or undermine the resilience of the changes Musika has supported. From their general knowledge of the market, the Musika team point to the importance of policy development and enforcement for the dairy sector. This is a work in progress and Musika hopes to work with the Dairy Association of Zambia to promote the development and enforcement of supportive policies. Monitoring and inspection from the Zambia Medicines Regulatory Authority is expected to promote growth in the veterinary services sector, as it will restrict unlicensed and unknowledgeable individuals from selling cheap medicines without technical advice to farmers. Overall, the market is still relatively nascent.

Gender

Dairy is traditionally male dominated. Some farmers reported that women are not really involved in dairy farming at all, but others say that women are more involved with dairy businesses than they are with beef. According to the 2019 RALS data, 85% of Musika beneficiaries from dairy are male-headed households, while 15% are female-headed households. According to research Musika did in Southern Province, milking cows and selling milk tend to be male dominated, but most farmers report sharing decision-making between men and women.

During field research, male farmers said that men tend to rear the animals, deliver the milk to MCCs and receive the proceeds of sales, while women assist in the milking of cows. Apparently, those who own their own cows delegate the handling of them to men in the household or extended family. According to Lactalis, 12% of the farmers supplying to Lactalis MCCs are women, but it is not clear whether they are supplying milk from female-headed farms, or from male-headed farms, nor whether the women who deliver the milk receive the proceeds of sales.

Musika encourages its partners to recognise women as active participants in the market system, and to target services and products towards them as well as towards men. LVSCC conducted a women's needs assessment, partly funded by Musika, and found that women were more likely to request information from LVSCC by phone, rather than in person, due to cultural norms that make it uncomfortable for female farmers to attend events alongside male farmers, or engage men in person. Nearly a quarter of women surveyed for the needs assessment highlighted their discomfort in accessing LVSCC, saying things like *"Husbands (men) don't allow us to attend activities at the spray races," "it's difficult to do what men do especially mix with them in meetings where at times you have to oppose them"* and *"It is a challenge for me as a woman to mingle with men."* This was echoed by interviews conducted for this review, with farmers reporting that women cannot attend meetings with men, or argue and debate with men in public. The LVSCC assessment also found that women were more likely than men to report time challenges, lack of support services and veterinary needs as obstacles. The most comfortable means for engagement for both genders was WhatsApp. Lactalis did report that in Chitonga a women's group was created to encourage participation in dairy, and that MCCs were encouraged to hire women, but conceded that overall women's role in the sector was not well established.

Poverty

Farmers' poverty levels are not monitored by Musika. Instead, Musika rely on an assumption that smallholders in rural areas are, by definition, sufficiently poor to fall into Musika's target group. On average, farmers linked to Musika partners owned one more dairy animal than those not linked (7 cows, compared to 6 in the control group according to AHS data from 2020) but no conclusions can be drawn from this information, in part because the difference is too small to be significant, and in part because the numbers do not explain why there is a difference between linked and unlinked farmers (if indeed there is one). This issue needs further investigation.

Environment

Dairy presents an interesting dilemma with respect to Musika's cross-cutting issues of environment and climate change resilience. Arguably, increasing dairy production can support farmers to achieve climate resilience through agriculture diversification, but increased dairy production also has negative environmental impacts, including contributing to greenhouse gas emissions which in turn contribute

to climate change. The greater the opportunity for increased incomes in the dairy and beef sectors, the more farmers are interested in keeping cattle. This leads to further problems with soil erosion and degradation due to animal movement and uncontrolled grazing. Lack of sufficient water for animals is also a serious problem in the dry season; this exacerbates the problem further.

Musika has attempted to provide support to partners to manage some of the environmental risks associated with dairy farming. For example, its plans include supporting the safe use of potentially harmful chemicals, and working with government and the Dairy Association to develop livestock management policies that will help address the overgrazing problem. The government has already started mapping the rangeland areas and Solidaridad has started implementing a project on rangeland management in the Kafue plains. Musika has started discussing how to best support this process, scale up management practices that work, and bring in enforcement of more holistic livestock and management policies. Currently there are few incentives to follow the existing regulations on animal movement.

Musika has also worked with veterinary service providers to mitigate the impact of acaricides and other drugs that are environmentally detrimental (particularly for fish). One Musika-supported company reported that it has a system in place to promote the disposal of chemicals at appropriate livestock service points, and this is being used by its farmer groups. This is another area for Musika to monitor more closely in the future.

Conclusions for dairy

Some of the changes that Musika has supported in the dairy sector are significant. In particular, private veterinary companies' expansion of their services into rural areas and, correspondingly, rural farmers' greater willingness to invest in private veterinary services are important changes that point to increasing commercialisation of the sector and that seem to be increasingly widespread across the system. These changes both supports and are supported by farmers' improved access to formal markets through MCCs linked to processors.

The AHS data suggests that farmers are benefiting from income increases as a result of these changes, but it only compares farmers linked to Musika partners with farmers who are not linked to Musika partners. This is somewhat validated, albeit anecdotally, by the field work conducted for this review, and by Musika's analysis of the RALS 2019 data, but better baseline data and closer monitoring would provide more credible information about whether these differences in income really represent income *increases* as a result of the changes Musika partners have made, with Musika's support.

Thus far there has been significant variation in results between regions. Interventions in Southern Province, where the dairy sector was already more productive and commercially oriented, have been much more successful than interventions in Central Province and Western Province. This suggests that the interventions might not be sufficient to address the key underlying constraints in the sector (if it is even feasible to do so), though they are able to accelerate benefits to rural farmers.

An analysis of the changes made through a 'systemic change' lens further supports this conclusion. In Southern Province, MCCs had already started aggregating milk for sale to processors, and Lactalis (then Parmalat) had already started sourcing from them. According to Lactalis, Musika's support accelerated expansion, in part through the purchase of assets. This is not a systemic change, as it does not sustainably address the underlying constraints that had prevented expansion from happening at a faster rate previously. One of these constraints was the low levels of productivity from rural farmers,

particularly in Western Province and Central Province. Addressing this will require digging into the supporting functions, and *their* supporting functions, to assess why productivity is so low and whether it can feasibly be improved (through processors or other players). Figure 2 shows some of the supporting functions and rules that may be relevant to the current underperformance of the dairy market system, based on an analysis of information available to the review team. Going forward, it would be valuable for Musika to refine and further develop a system map of the dairy market system, and then to assess which supporting functions are most relevant, and represent a feasible opportunity for sustainably improving productivity. Once productivity is increased, processors are likely to move into sourcing without additional support, as their incentives are strong.

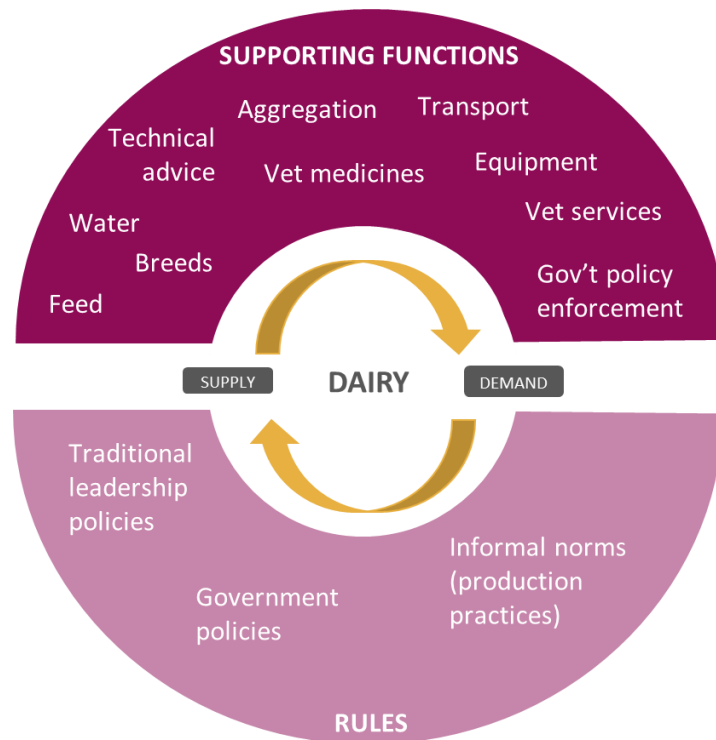


Figure 2: The dairy market system

There seems to have been more systemic change in the functions affected by Musika's work with veterinary services (such as breeds, technical advice, vet medicines, vet services). The business model and linkages to rural agents that Musika provided to veterinary companies were important for convincing those companies to expand into more rural areas. However, the assets Musika provided do not seem to have addressed systemic constraints, and it is not clear whether those companies were able to invest in such assets themselves, and if not, why not. There seems to have been little analysis of the underlying constraints that had prevented veterinary companies from expanding to rural areas previously. For example, if there really is a business case for private veterinary services in rural areas (and there does seem to be a compelling one), why hadn't the private sector recognised it yet? If it was simply a lack of market research, would providing that information to private sector companies, without any assets, have changed their behaviour? If not, why not? Furthermore, if it could be profitable, then why weren't private companies willing to take the risk without support in order to maximise their profits? If the companies had recognised the opportunity, but had decided that investing in rural areas would not be profitable without an initial subsidy, then providing that subsidy will not generate systemic change, unless Musika is willing to provide the subsidy to every single

veterinary company needed to serve rural areas of Zambia. If the problem was that there was no network of accessible and competent rural agents, and no means of linking to those that did exist, how could this be addressed sustainably, rather than through the direct delivery of training done through Agribusiness Accelerate Initiative? These are the kind of questions that a systems change lens raises. It will likely require further research to answer these questions satisfactorily, especially as pursuing answers to them often raises further questions.

To date, there has been limited adoption among non-partners of the changes Musika has supported. However, it is still relatively early days, and encouragingly there are signs of copying that suggest Musika is having a wider impact beyond their partners. Musika has not yet monitored these changes, but it is beginning to do so, and may well find it is impacting more farmers than it has reported to date. If it begins addressing systemic constraints, rather than changing partners' behaviour one-by-one, this is only likely to increase.

Musika has indicated a desire to move into addressing more industry-wide constraints in the dairy sector, by working with associations, traditional leaders, and government on policies and enforcement. This is positive. However, it is important to recognise that addressing systemic constraints does not just mean working on rules that affect all players. It can also involve working on the kinds of constraints Musika has focused on to date, such as farmers' lack of access to quality veterinary services, but doing so in a way that changes the way the function works across the system as a whole. This means any partnerships become *pilots* of a solution for the system, that others can then adopt, rather than *providers* of a solution to the system.

When it comes to gender it will be important for Musika to move beyond encouraging its partners to be gender inclusive, towards assessing systemic constraints in a gender disaggregated way and then designing interventions that attempt to address constraints for women as well as constraints for men. For example, the model for provision of technical advice could involve non-contact mechanisms, making it more accessible for women. This is only likely to work sustainably and at scale if there is a genuine incentive for private sector partners to be more gender inclusive, irrespective of whether Musika wants them to or not (in other words, if there is a genuine business case). Ascertaining whether this is the case in the dairy sector will likely require more research. If women are not important players in the sector, there seems to be little commercial incentive for processors or veterinary companies to change their practices to be more gender inclusive, and gender inclusivity may require involving different players, with different incentives.

The environmental challenges create a genuine dilemma for Musika, as the more farmers that commercialise and improve their incomes through the dairy sector, the greater the potential for environmental degradation. Musika is well aware of the dilemma and committed to mitigating negative environmental impacts. The review was not able to ascertain to what extent, with appropriate policies and mitigations, it is feasible to increase incomes through dairy whilst mitigating the negative environmental impact. It is clear that for Musika to be able to balance these competing goals, considerable further investigation is needed on the feasibility of achieving systemic changes that have environmental protections integrated into them.

As with tree-growing, Musika needs to have a better understanding of the 'baselines' in the dairy sector (for processors, MCCs, vet companies, vet agents, and farmers), so that it can be clear about what changes have occurred. Going forward it will also be important to monitor impact at the farmer

level more closely (who is benefiting, how they are benefiting, and how much change has happened). To capture wider systemic changes, it is important to monitor non-partners too, as Musika now recognises and is beginning to do.

Digital finance

Background

The digital finance intervention area was started in order to address the need for greater financial inclusion, which was identified as an issue in many of Musika's intervention areas. In other words, from a systems perspective, digital finance is a supporting function of several of the other market systems that Musika works in.

This intervention area addresses multiple needs through digital platforms, including non-financial needs like agricultural education (see Figure 3 below). The rationale, and the mechanism by which farmers are expected to benefit, is slightly different for each of these platforms, as are the constraints that have prevented or slowed expansion of digital platforms to rural areas previously.

Musika's work with digital platforms did not start with a market system analysis that investigated systemic constraints, but was based on knowledge gleaned from the available literature, as well as on Musika's experience in the market. Musika has learned that some of the key constraints to expanding to reach a rural customer segment, that affect all of the digital service providers include:

- limited information among farmers about the benefits of digital platforms, and a lack of trust in the services, leading to a reluctance to use them
- a limited number of access points in rural areas
- the learning curve inherent in using new digital platforms, exacerbated by limited financial and/or digital literacy
- the cost of onboarding (in part due to limited digital literacy and limited information about the potential benefits of the services, and in part due to distances between rural householders who are potential users)

Other constraints to expansion into rural areas affect some of the services in particular. For example, constraints that affect e-commerce platforms include the challenge of building a network of agents in rural areas who have access to sufficient capital to carry a float, the costs of transportation to rural areas, and exchange rate fluctuations (many input suppliers import their products in dollars and so the prices they charge on the local e-commerce platforms are affected by the prevailing exchange rate).

COVID 19 has been both an accelerator and an obstacle for expansion of digital services to rural areas, and hence to this intervention area. On the one hand, there has been a growing willingness to adopt digital platforms, though providers report that growth in usage has predominantly been in peri-urban and urban demographics. There have also been policy changes to facilitate digital transactions, such as the Bank of Zambia removing transaction charges on transactions less than ZMK150 for a period, and doubling the daily transaction limit on digital wallets from ZMK10,000 to ZMK20,000. With increasing competition among digital solution providers in urban and peri-urban areas, there is a growing incentive for firms to invest more in rural areas. However, many firms also suffered from the impacts of COVID 19 and scaled down their operations to survive. Cost-cutting measures, such as redundancies, impacted rural customer segments more heavily than urban ones, as onboarding rural

customers is an intensive process. Restrictions on gatherings, travel and face-to-face contact also impacted firms' ability to conduct outreach activities and to on-board new customers in rural areas.

Musika's work in digital finance

Musika's work in digital finance currently consists of eight live partnerships. Each of these offer different digital solutions to rural households, farmers and/or enterprises (see Figure 3), which address different underperforming supporting functions of different market systems, with different theories of change for how they will benefit Musika's target group. Consequently, they cannot meaningfully be presented as a single intervention area, or a single market system, though there are important areas of overlap between them.

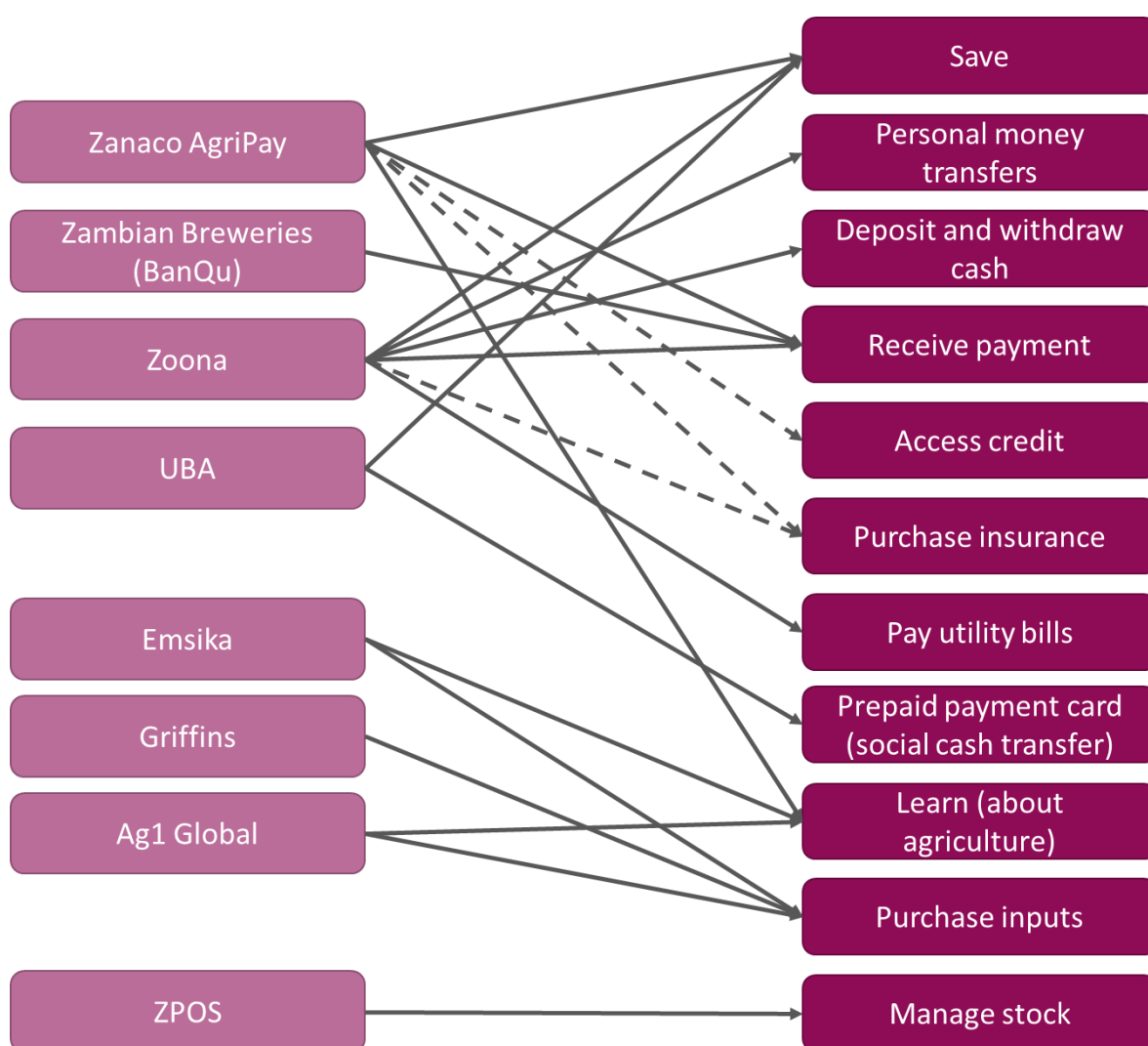


Figure 3: Musika's live partnerships in digital finance (left) and the services they offer to users (right)

What all of these digital solutions have in common is that they make services more accessible in rural areas. With few banks and limited inputs available from local retailers, rural farmers have historically had to rely on travel to urban centres to access the services these platforms provide. As transport can be expensive, time-consuming, and inconvenient, being able to access services locally through digital platforms represents either a cost-saving for the farmers who would have otherwise travelled to access services, or the difference between accessing a service and not being able to. Overall, the

intention is that by enabling better access to digital platforms, rural farmers will be able to more easily and more securely transact, save, access credit and access information.

Although the exact nature of Musika's involvement and support varies from partner-to-partner, broadly speaking, Musika's primary means of support was to provide digital service providers with resources that helped them to circumnavigate the constraints in the system that prevented expansion to rural areas. To take e-commerce digital platforms as an example:

- Musika provided e-commerce firms with linkages to agribusinesses in rural areas who were participating in Agribusiness Accelerate Initiative (AAI)– a training programme for micro and small enterprises run by Musika and funded by Norad.
- Musika provided vehicles which made it possible for the businesses to hire delivery personnel in rural areas, circumnavigating some of the issues with the underperforming transport function.
- Musika provided business advice to support expansion into rural areas.
- For one partner, Musika paid the salary of a member of staff whose role is to promote the platform to farmers, allowing it to provide better information and promotion about their platform to potential customers.
- For another partner, Musika provided a web developer to assist in constructing the online platform.

Although Musika's partners provide various services, the support provided by Musika was similar, and addressed similar constraints.

Reported results

As Musika's work with digital platforms has, to date, included partners offering such a variety of digital solutions to rural markets (a consequence of being partner-centric rather than focusing on changes in how a market system works), it is challenging to assess the scale and sustainability of key changes across a system. In order to retain the systemic lens of this review, we have attempted to use the available information to assess the sustainability and scale of two of the key changes Musika is trying to achieve through its work with several digital platform providers, namely:

- Smallholder farmers have better access to quality, affordable agricultural inputs through digital platforms, driven by e-commerce agricultural input suppliers expanding their services to rural areas;
- Rural householders are able to transact securely, and to build up a financial history through doing so, driven by financial service providers making digital platforms available in rural areas.

We have also reported results that relate to impact on farmers from all of Musika's partnerships in this intervention area.

Impact on farmers

Based on Musika's monitoring, at least 23,489 farmers have improved access to services through digital platforms provided by Musika partners. This is the number of Musika's partners' clients who have accessed services through an agent (by the second quarter of 2021, 239 additional access points had been created by Musika's partners since support started). Given that there are also clients who

have used the services online rather than through in-person access points (which is not currently monitored), this is likely to be an under-count.

There has been a considerable increase in the number of people using digital platforms provided by Musika partners year-on-year (1560 users in 2018, 1491 users in 2019, 7733 users in 2020 and 12,714 users in 2021 thus far), but this is partly because Musika has formed more partnerships as time has gone on. Nonetheless, partners do report growing interest in their products from smallholder farmer customer segments, as the following quotes from interview done for this review indicate:

- *“Small scale farmers are increasing in numbers”* (SME digital platform agent, Mkushi)
- *“[Since COVID19] the business is still being visited by mainly smallholder farmers, who are the majority consumers of the products sold.”* (Digital platform agent, Monze)
- *“We are attracting more smallholder farmers these days,”* and *“[An opportunity is that] small scale farmers are beginning to know the platform.”* (Digital platform service provider, Mkushi)
- *“There has been an increase in smallholder farmers”* (Digital platform service provider, Mazabuka)

Musika’s assumption is that farmers who use digital platforms benefit from doing so in a variety of ways, including:

- increased transparency in transactions, and the ability to keep accurate records of transactions
- money is held securely, preventing misuse or theft which can more easily occur with cash
- slowly building a financial record, which may provide opportunities to access credit and other financial services in the future
- e-commerce users have better access to better quality and more affordable farming inputs – technology and equipment – that was previously inaccessible (as farmers were previously limited to what local agrobusinesses had in stock)
- more accessible, and cheaper, financial services, when compared to formal banking and micro finance institutions
- reduced transaction costs, especially on transportation time and costs

Some of these benefits (such as reduced transportation costs) were mentioned by farmers, agents and service providers interviewed for the review, when asked about the benefits of using digital platforms. Thus far, Musika have not monitored to what extent, or how much, farmers have actually benefited from these changes.



Scale

Scale of changes relating to e-commerce platforms

All three of Musika's e-commerce partners – Emsika, Griffins and Ag1 Global – are expanding their services into more rural areas, with Musika's support. For example, Emsika started in Lusaka, expanded to working with 9 agents in Eastern Province and 1 in Copperbelt, and has now expanded again to work with a further 6 agents in Central Province. They have provided information about their services to over 50 small businesses, with the intentional of recruiting more agents. Griffins started in Southern Province and Central Province, expanded their reach within these provinces with Musika's support, to connect to agents Musika linked them too, and have since expanded into Western independently.

So far Musika has not noted signs of other e-commerce agricultural input suppliers expanding their services to rural areas, although they do not systematically track other suppliers. This may be because Musika has supported partners to overcome issues with underperforming functions in the e-commerce inputs market directly, rather than changing how the functions worked, which would benefit non-partners too. For example, there are now many more access points (through small businesses operating as agents) thanks to the linkages Musika has provided its partners with. However, this may not be easily scalable or sustainable, as currently Musika's e-commerce partners rely heavily on Musika to link them to reliable rural agribusinesses who could act as agents for them, which Musika does by drawing on the database of businesses participating in Agribusiness Accelerate Initiative (AAI), a time-bound, donor-funded training programme.

Scale of changes relating to financial transaction and banking services

Zanaco AgriPay, Zoono and UBA provide users with a variety of services, that all relate to financial transactions. AgriPay is largely used to enable offtakers to pay farmers securely. It has been integrated into Zambia Breweries' traceability system – BanQu - and is being used by other buyers too. It also provides the option for a savings account, but this does not yet pay interest. Zoono has adapted its operations in response to competition, and is now a distributor of other service providers' products. It is attempting to improve interoperability between platforms, which has previously been a challenge in Zambia, and to make the services on its platform more accessible in rural areas. Thus far, UBA is one of several secure platforms for women to receive cash transfers from the World Bank funded 'Girls Education and Women's Empowerment and Livelihoods' (GEWEL) project, and it provides the option for a savings account, but as with Zanaco's account, this does not yet pay interest. These services are all being offered in rural areas, with Musika's support.

In terms of scale, there are numerous providers entering the digital financial services market, and many of these are focusing on the peri-urban and rural markets as competition increases in urban markets. These include mobile networks (like Airtel, MTN and Zamtel), and financial institutions, who are increasingly digitising. This expansion cannot, however, be attributed to Musika's work, although the presence of Zanaco and Zoono may have been 'proof of concept' models for some new entrants. The extent to which this is the case has not been monitored by Musika, and no evidence either way was captured during the review fieldwork.

Sustainability

Sustainability of changes relating to e-commerce platforms

There are strong signs of ownership with Musika's e-commerce partners investing in and adapting their approach to rural areas, given that this is relatively new intervention area (initially started in 2018, and then refocused in 2019, with market research still ongoing in early 2020). Emsika for example, has developed an e-learning portal on their website, of their own initiative and in response to farmer requests. It is broadening its supplier base, and network of agents and is expanding into other parts of the country. Emsika has also invested in transportation, delivery and promotion, buying its own delivery truck, taking on the salary of the personnel initially supported by Musika and hiring an additional member of staff.

Griffins has also shown strong signs of ownership. It has continued investing in promotional activities and training for the agents it has engaged, it has adapted the model from the one initially trialled with Musika to make it more cost-efficient for agribusinesses to stock their products and reducing the time lag from order to delivery, and, like Emsika, it is expanding into new areas (see above).

A risk to resilience is that the resources Musika provided to partners are not readily available in the system (for example, where would e-commerce providers get access to vehicles, linkages and technical advice without Musika?), but there are changes happening independently in the system that will further enable the changes that have been supported by Musika. For example, there is a newly formed association – the Digital Practitioners' Association – which it is hoped can play a role in linking service providers to rural agribusinesses who can act as agents, perhaps replacing some of the linkages support Musika has provided. The Bank of Zambia has enhanced regulations to be more enabling to digital platforms, spurred on by COVID19, while institutions such as the Payments Association of Zambia are supporting the e-commerce agenda. Mobile network coverage and access to phones are

also growing in rural areas, and the FISP e-voucher scheme also played a role in enhancing small holder farmers' access to digital platforms.

Sustainability of changes relating to financial transaction and banking services

Signs of ownership and sustainability vary between providers. Zanaco has found that many of its users only use their account once, or use it very infrequently.⁸ For now, accounts that are not used regularly become dormant – something that farmers in the review's field research reported as a frustration. Zanaco did not expect AgriPay to be immediately profitable, and thus far the costs of development and rollout have been heavily subsidised by donors; nonetheless, it is still investing in improving the platform. Zambian Breweries have also continued to adapt its online payment platform (which integrates AgriPay) to respond to challenges. These investments are indicators of ownership, but given the high level of donor funding and involvement to date, it is not yet possible to assert that the innovations introduced are sustainable.

Zoona has recently changed its strategy and business model, as it had not previously been able to compete with mobile network providers who entered the market. Musika supported this process, and Zoona also did several branding pilots that were not supported by Musika. According to Zoona reports (made available to Musika) initial results from the branding pilots showed a +12.5% growth in transactional value of the rebranded outlets compared to non-branded outlets, with a variance of +7% to +30.3% depending on the branding design and location. Zoona's conclusion is that it needs to re-brand its entire network, and promote the diversity of products it makes available from just one location to both existing and potential customers. Zoona express a strong commitment to continuing to reach the rural market, as this is core to their success as a business.

As with e-commerce providers, increasing digitisation provides an enabling environment for the changes Musika is supporting.

Gender

The potential for improved access to digital services to particularly benefit women is high. In other intervention areas, such as dairy, women face cultural barriers when engaging in person-to-person activities such as buying or selling, but digital services provide a means for women to access services remotely. Currently, more men than women use the platforms (64% of Musika partners' users between 2019 and 2021), but this is likely driven by whether the products are being used in male- or female-dominated sectors, not by the products themselves. Musika's view is that digital transacting platforms have the potential to play an important role in women's economic empowerment, by providing more accessible and convenient means of participating autonomously in the formal financial sector. This is not systematically monitored by Musika but it was echoed by farmers, agents (both male and female) and service providers in the review's field research. For example, a group of (mixed gender) farmers who were interviewed said that AgriPay *"has enabled women to receive their finances straight to their bank account which enables them to use the finances as they please which is usually maintenance of the home and children."* Another example comes from a female cassava farmer interviewed by Musika, who reported that she had more control over resources in the household now

⁸ According to Musika, Zambian Breweries' experience is that a large number of farmers are migrating from the accounts offered by Zanaco to mobile money services offered by mobile network operators.

that she had access to digital platforms. Previously, her husband made transactions in person, and then controlled the cash which he had in hand.

Poverty

Musika does not monitor the poverty levels of digital platform users. However, the incidence of rural poverty in Zambia is as high as 80% in some areas,⁹ and Musika therefore assumes that the users of these platforms in rural areas are most likely to be the poor. According to field research done for the review, there is a mixture of rural, peri-urban and urban users of the platforms, and likely a mixture of demographics with respect to poverty too, though platform providers do report growing interest and use among smallholder farmers. It would be valuable for Musika to monitor users' poverty levels in the future.

Environment

There are no observed environmental impacts, largely because of the nature of the intervention. It seems plausible that use of digital platforms reduces use of transportation and therefore may contribute to a reduction in CO2 emissions, but this is speculative. The flip side of improving smallholder access to inputs and chemicals through the digital platforms, it that this may result in an over-use or wastage of chemicals, but to date this has not been assessed. It has been suggested that the disposal of equipment related to digital finance may have negative environmental impacts – this is not assessed by Musika and did not emerge during the review's field research but could be explored in future. Observations from the field suggest that waste from digital equipment itself is less of a problem (because of the limited scale of this technology to date) than waste and residue from the inputs and chemicals made more readily available through digital e-commerce platforms.

Conclusions for digital finance

This intervention area is a difficult one to manage and monitor with a systems change lens, as it has historically been very partner-centric, and consequently the current partnerships do not all relate to the same market systems or the same theories of change. This does not diminish Musika's achievements. While it's hard to fully attribute the innovations Zanaco, Zoono and UBA are rolling out to Musika's work, as they were (to varying degrees) already providing these services and targeting smallholder farmers prior to partnering with Musika, Musika's support has been valuable to these firms. As the Musika team itself acknowledges, these companies probably would have rolled their services out to rural areas with or without Musika's support, but the support accelerated the process and widened the scope of these providers' push into more rural markets.

More encouragingly, Musika's work with e-commerce platforms does seem to have changed the inputs markets system in a significant and likely sustainable way, by making a wider range of inputs available to farmers through digital purchase and delivery. To date, there has been limited adoption of this change among non-partners, though digital finance and digital platforms in general are a fast-growing sector and this is a relatively new intervention area. A remarkable number of farmers has been reached through Musika partners, though it is not clear how, or how much, they have benefited.

⁹ See World Bank Poverty and Equity statistics for Zambia from April 2020, available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_ZMB.pdf

It is worth noting that it was not the financial or asset support that was most valued by partners. Rather, according to partners interviewed for the review, support with linkages, which addressed several interconnected issues that had previously made forming a network of access points difficult, including that the agrobusinesses approached to act as agents were also more inclined to trust the ecommerce providers because they were linked through Musika. As one interviewee put it, *“As an upcoming e-commerce platform, we needed to build confidence in their customers and Musika played the role of building confidence to agro dealers on our behalf.”* This is one of many examples that show that while financial and asset support has played a large role in the way Musika has formed and managed partnerships (see ‘Approach’), the market players interviewed value the knowledge and relationships Musika has at least as much, if not more, than what they can offer financially.

Moving forward, the priority for this area of work is to identify which digital solutions to focus on, by assessing the key problems in digital markets, and which digital solutions represent a relevant, feasible opportunity for change. Having chosen one or more digital solutions, it will then be important to further analyse these as market systems in their own right, as illustrated in Figure 4 for the inputs through e-commerce market. This will enable Musika to prioritise underperforming supporting functions and rules, develop a vision and design interventions to pilot solutions systemically.

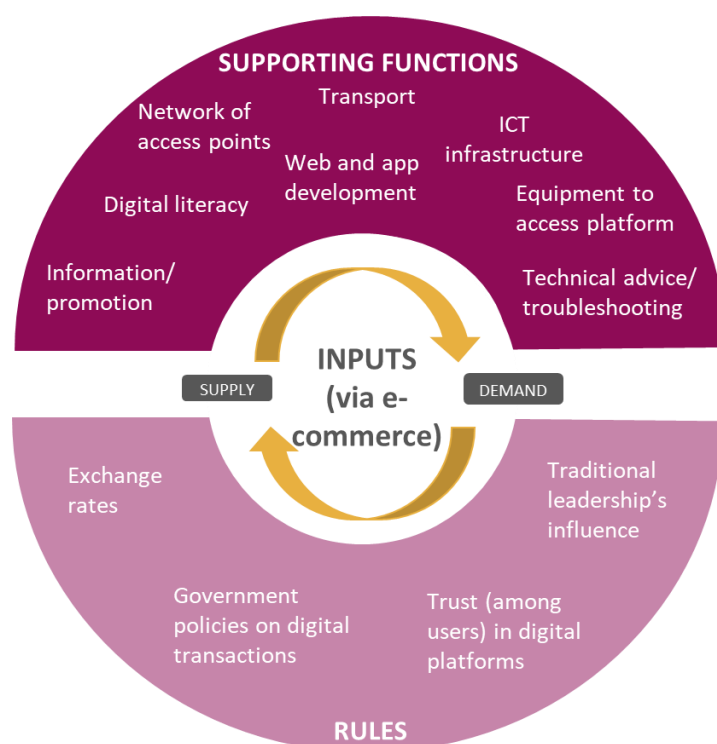


Figure 4: The inputs (via e-commerce) market system, is itself a supporting market of many agricultural market systems

Organising its work by market/function will likely lead Musika to decide that some of its partnerships are important for testing business models or other innovations, and that others do not address the priority functions and/or rules they are targeting. Those that do not address targeted functions can either be pivoted to better address the prioritised functions or can be slowly phased out (when contracts end). Meanwhile, it may be necessary to form new partnerships with players suited to bringing about change in the prioritised functions or rules.

Looking to the future, Musika has indicated an intention to partner with players that have a sector-wide perspective, such as industry associations. This is positive if (and only if) those partnerships are formed because they will address an underperforming supporting function or rule that has a relevant and feasible opportunity for change.

Having developed a strategy and vision for change, and identified partnerships to pilot innovations, it will be easier to generate results chains for each intervention, and to monitor the assumptions embedded in them more closely. In particular, it is important to monitor how, and to what extent, farmers benefit from using digital platforms, as well as which farmers are benefiting most (in terms of poverty levels).

As with the other intervention areas, once pilots have proven successful (as they have been with e-commerce) it will be important to consider ways of facilitating scale-up, and of monitoring both supported and unsupported expansion of the innovation.

Monitoring is especially important when it comes to gender, as there may be unique benefits for women in this area of work that are not yet being captured. The theories of change for benefits to women may differ from those for benefits to men; this is to be expected, and gender disaggregated results chains can be generated. This is an area where it would be worthwhile investing in qualitative research to find out what women themselves see as the potential benefits of digital platforms, what constrains access for them, and, for users, what impacts (including unintended and unexpected benefits and challenges) they experience.

Approach

Musika's ambition is to use a market system approach to achieve sustainable impact at scale for smallholder farmers. This section considers the extent to which the MSD approach is being successfully applied. Findings are based on in-depth discussions with the Musika team, both during the interim phase and the final consultation phase of this review, as well as on the review team's experience of what is required to apply the market systems approach effectively.

It is important to note that since this review's interim phase, Musika has made a commitment to fundamentally shift its approach from what Musika has termed "hybrid MSD" to fully adopting a market system development approach. This decision was primarily in response to the review findings reported in the interim phase. The review's discussions with senior management, technical, MRM and cross-cutting teams in the final consultation phase suggest that this decision is widely owned and supported, demonstrating one of Musika's major strengths – its open culture combined with an emphasis on learning and improvement.

However, as Musika also recognises, the decision to shift to a more systemic approach has substantial implications across the Musika organisation and throughout its approach and operations. The interim phase report outlined the aspects of Musika's approach that would need to change in order to make this shift a reality, and these have been largely confirmed by the findings of this final phase of the review. It would not have been feasible for Musika to make these changes in the short intervening period, and without substantial support. Consequently, to a large degree the findings from the interim phase still stand; this section then expands on the interim phase findings by assessing Musika's work in relation to each of the components of the MSD approach.

This final phase of the review has afforded an opportunity to better understand the degree of change that is needed, and where priorities lie. The bulk of these findings have been discussed with the Musika team, however the nature of the partially virtual process during this phase of the review, means these discussions are more limited than they would have been if we had been able to have the full review team in-country.

Approach to achieving scale, sustainability and resilience

The interim phase of this review identified several weaknesses in Musika's approach that were undermining its ability to achieve sustainable impact at scale in the markets in which it works. Scale in a market system is achieved through a) a partner expanding its implementation of a change, b) through replication of a change by other players, and also, c) through a response in the system which enables greater expansion. Musika has had success with several partners scaling up a change in a way that has benefited farmers, and seems likely to benefit more farmers. There is a clear ambition within the team for changes introduced through Musika interventions to be replicated, but historically it has generally been assumed that this will happen organically, without any Musika facilitation and without designing the initial pilot to stimulate scale. Musika's experience, like wider experience in the field, has shown that scale – especially scale caused by the spread of change from one player to another – does not often happen without an analysis-driven strategy in place to support it.

Strategies for achieving scale have not been routinely built into Musika's research, selection, design and management processes. Instead, as the tree growing intervention area shows, partnerships have been typically treated as the intervention by which changes, and impact will be achieved, rather than as a pilot of changes that, if they occurred at scale, could have a much wider impact. Ideally an in-depth assessment of what is preventing players in general (rather than just a potential partner) from adopting a change would be done, and subsequent strategies for achieving scale would be considered, before piloting the change with a new partner. This is not yet happening consistently.

In terms of sustainability, Musika is aware of the need for there to be strong ownership by partners of the changes they effect, and there are elements built in to Musika's systems to encourage this. For example, Musika requires substantive evidence of partners' commitment to co-invest, monitoring this with contract milestones, and it avoids working with companies' corporate social responsibility divisions where incentives do not support sustainability. Musika also monitors some indicators of ownership, such as the expansion of changes by partners. However, as discussed in detail below, Musika's grant and asset allocation process, which is central to their facilitation approach, risks undermining its commitment to sustainability. Further, scale and sustainability are closely linked, and the risks to sustainability in a single partner are exacerbated when sustainability is considered at scale. If a change is dependent on too few players, it jeopardises sustainability. It is therefore important to consider not only how Musika's partners might sustain a change, but also how that change could be adopted across the market system, and what, if anything, is preventing this from happening.

Long-term sustainability is most likely when either a 'response' from the wider system, or interventions in other functions, embed changes more deeply within the system, and thereby build its resilience. When this happens, multiple complementary changes generate feedback loops that reinforce each other and make it more likely that the changes will last, even if a particular firm changes its ways of working or a government changes its policies.

Achieving this requires a deep and ongoing understanding of the system, strategies that aim to address the constraints preventing this from happening, and typically, time. For a long-term institution such as Musika, this is feasible – and should be part of what sets them apart from shorter-term programmes. However, the review has found no evidence that these considerations are included in Musika’s current approach, except as part of Musika’s very recent commitment to adopt a more systemic approach overall.

The majority of the aspects of Musika’s approach that have been identified for improvement stem from Musika’s partial adoption of a systems approach. Until recently, its approach was largely partnership-oriented rather than market-system oriented. The implications of its decision to shift to a focus on systems over partners, if fully embedded, will be far reaching, impacting the why, what, who, and how of Musika’s work.

In the sections below we outline each of the key components of an MSD approach, and assess Musika’s approach to them through a systems lens. For some of the priority areas we have included a short set of specific actions to consider, primarily to illustrate the kind of practices that need to be addressed – but these are not comprehensive, and will be subject to discussion and adaptation as Musika embarks on this change process.

Sector selection

Musika’s sector selection has largely been driven by the need to find sectors that align with Musika’s goals, with a portfolio approach allowing some degree of flexibility (Musika rightly recognises that not every one of its objectives can be feasibly pursued in every sector it works in). To date, sector selection has been based on Musika’s own knowledge about needs and opportunities and on information gleaned from the private sector. Sometimes, work in a given sector has been driven by a partner who approaches Musika but more often Musika was already interested in the sector before it started to evaluate a particular partnership. Unsurprisingly, the review found no notable changes in the way Musika selects sectors since the recent decision to shift to a more systems-oriented approach, because no new sectors have been selected in this period.

Musika’s opportunity-driven approach to sector selection has largely resulted in a set of sectors that present feasible opportunities for change that are relevant to the target group. It is possible that this approach has worked well to date because most of the initial sectors were fairly obvious choices in terms of their appropriateness for, and fit with, Musika’s strategic priorities, and in terms of the opportunities for impact they present. As Musika moves forward, it will likely consider working in less obvious, riskier, sectors, and for this, it would be helpful to give the sector selection process more structure. For instance, developing and applying selection criteria would enable a clearer comparison of the sectors and their potential to achieve sustainable impact at scale. The following broad criteria, typically used for this purpose by MSD programmes, are a helpful starting point, and could be adapted to reflect Musika’s specific interests and focus:

- a) relevance (alignment with Musika’s target groups, such as poor rural women and men/youth);
- b) opportunity (to address constraints or build growth/competitiveness); and
- c) feasibility (to ensure change and scale are possible, and that the status quo is not entrenched).

The research questions implied by these criteria should be answered by market-wide research rather than through existing partners or players being assessed for partnership.¹⁰ This will require changes to the way Musika undertakes sector scoping and market systems analysis (see below).

Adopting this approach to sector selection, and the recommendations made below about market system analysis, will also have implications for how Musika frames its interventions. As discussed briefly in the Performance section above, Musika currently groups interventions around themes, with intervention areas focused on specific changes in specific sectors. While this seems logical, it is not systemic, because the relationship between different changes (and intervention areas) is not clear or coherent. For example, in the dairy sector, it makes sense for Musika to work on improving veterinary services specifically because this is an underperforming function of the dairy (and other) market systems, and because improving its performance can result in improvements in benefits for smallholder farmers. If Musika adopts a more systems-oriented approach, it will be important to select areas of work first through assessing the relevance, opportunity and feasibility of given sectors, and then by working out what the constraints for smallholders are in those sectors, and by targeting specific underperforming supporting functions to address priority constraints. Different intervention areas will then complement one another, to have in combination a more substantial impact on the sector. This process is explored in greater detail in the following section. Making this change will require a fundamental re-framing of current intervention areas around systems, and may lead to some intervention areas being dropped and others being prioritised.

Reforming the sector selection process is relatively straightforward, but is not currently a priority for Musika in relation to the other recommended changes.

Market system analysis

Building an understanding of the markets in which Musika intervenes is an essential step for deciding whether to work in a particular system (see above) and for guiding decisions on where, how, and with whom to intervene in that system. Understanding how a system is and isn't working for smallholder farmers – and digging down to uncover why – requires rigorous and in-depth analysis that, crucially, *goes beyond the constraints and opportunities affecting individual firms (potential partners)*, to the constraints and opportunities affecting all the players performing a given function in the market system. The timing of research and analysis is also important. Whilst this is certainly not a linear process, as Figure 5 illustrates, to design pilot interventions that will address systemic constraints, analysis must be geared towards identifying system-wide constraints and their underlying causes, and must precede and inform partner selection.

¹⁰ In fact, prior to sector selection Musika likely would not yet know who prospective partners might be, given that feasible and relevant opportunities would not yet have been identified.

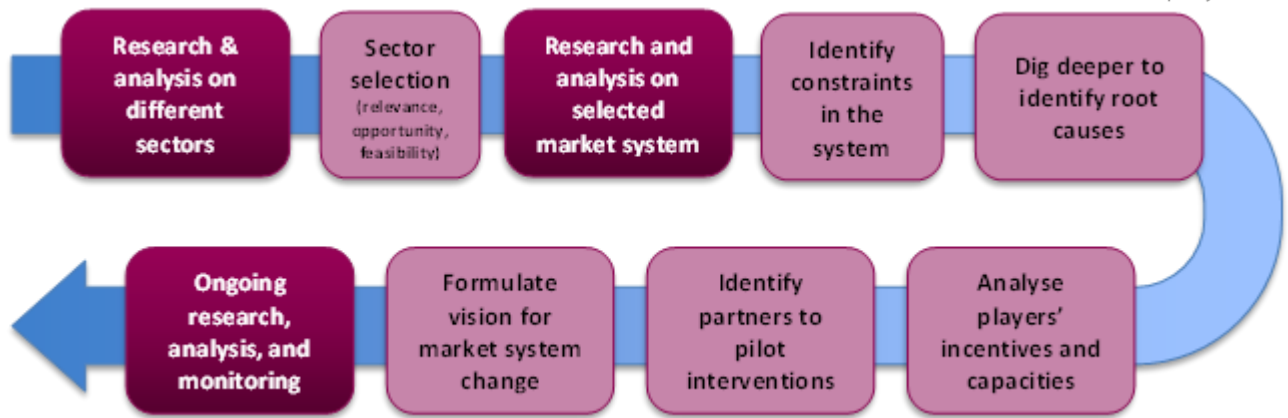


Figure 5: Research supports the intervention design process

Historically, once a sector – or a need or opportunity within a sector – has been identified, Musika has undertaken modest analysis of the constraints affecting smallholder farmers and the players that interact with them. The limitations of these analyses have been recognised, and as a result there has been a concerted effort in the last several years to increase the level of market analysis undertaken before and especially during interventions. In the interim consultation period, teams reported that this increased level of analysis, and an effort to better document the analysis that was undertaken, had benefited their work. An example of this would be the efforts that were made to hire consultants to conduct market system analyses of the sectors Musika is already working in. Understandably, in the eight months since the interim phase, and in a period dominated by COVID 19 related restrictions, there has been limited opportunity to further improve the way that Musika undertakes market diagnosis in response to the recommendations made in the interim report, though it is commendable that in two recent cases, Musika has opted to undertake analysis before deciding whether and how to intervene.¹¹

These changes demonstrate the growing value placed on analysis within Musika, as well as the team's characteristic willingness to adapt. However, thus far, much of the analysis work is outsourced (for example in discrete market system analyses), and is done after partners have already been selected and work has started. It is certainly valuable for the technical team to request an in-depth investigation from the research team to better understand an issue that has arisen in the course of their work – this is to be encouraged – but it cannot *replace* early-stage analysis which lays the foundation for intervention design.

Musika's approach to market system analysis also remains overly partner driven. While focusing on potential partners' constraints has enabled Musika to identify some important system-wide constraints, this has largely happened because Musika found out about a partner's constraints, and these constraints turned out to be important in the system more widely, rather than because the wider constraints were first identified, and a relevant player was then selected as a partner to pilot a solution.

¹¹ In relation to the impact of COVID 19, Musika is undertaking research to understand better how the pandemic has impacted the sectors it is working in, before deciding if and how to intervene to mitigate the pandemic's impact; and in the Tree-growing and other sectors, Musika is undertaking analysis to better understand how traditional leadership systems work before deciding whether and how to engage with them.

While the difference seems subtle, analysis affects intervention design, so Musika has ended up addressing constraints in a way that enables partners to overcome them, but that does not permanently change the way the wider system works. For example, in the tree growing intervention area, Musika's support has been instrumental in helping partner nurseries deal with challenges to growth and expansion – including by providing vehicles that has enabled them to reach new rural markets, by providing equipment that has enabled tree grafting to take place year-round, and by supporting them to provide training and extension services. As a result, partners have expanded their business. On the face of it this is a success. However, the interventions have not resulted in changes in the system: there is no mechanism for other nurseries to overcome these same challenges (or others that they may face) and replicate what the partner has done and achieved, if they don't get the same support from Musika or another project.

The risk is that that a partner-focused approach to analysis will ultimately limit the depth, scale and sustainability of impact from interventions. There is also a risk that key functions that need to be addressed are missed, because they are not directly relevant to a specific partner. For example, lack of access to water seems to be a critical constraint in the dairy market system; if a more thorough analysis of the system as a whole had been undertaken prior to intervention, this function may have been prioritised (if change is feasible).

Musika's analysis also needs to dig beyond presenting constraints, to the causes of those constraints. Musika has a good understanding of the immediate constraints affecting smallholder farmers and their partners in the markets they work in, but the review found several instances where the analysis had stopped short of identifying the underperforming functions driving the constraints identified. For example, in digital finance, Musika's partners have been supported to build a network of rural agents, but so far little attention has been paid to why service providers were not easily able to form such linkages themselves, and how this could be changed across the system. In practice, digging deeper to identify the underperforming functions driving a constraint will also help in identifying system-wide constraints.

Three key recommendations for change were made in relation to the market system analysis process during the interim phase of this review. These are still relevant:

- The *timing* of the analysis – it is critical that future MSAs happen before intervention design or partner selection, so that they can be used to drive market selection decisions and are the basis for intervention design and partner selection.
- The *depth and breadth* of market system analysis – future analyses need to go beyond identifying the immediate constraints affecting smallholder farmers and the players they interact with (such as private sector firms, associations, government bodies and traditional leaders), to also assessing why these constraints exist in the system. An important question for the analysis to address is 'why hasn't a proposed solution already emerged in the market?' The answers can dramatically impact decisions about where and how to intervene. It's also important that market system analyses look at constraints that affect all or most players, rather than just those that affect a few.
- *Who does the research* – learning from Musika and elsewhere suggests that market research and analysis is most effective when technical teams are substantially involved in the research process. Doing the research themselves allows technical intervention teams to build relationships with a wide range of players, including those they may eventually end up partnering with. It also builds a strong understanding of the market system, which is valuable for future intervention management.

Box 2: Market System Analysis: options for reform

Moving forward, improving market system analysis is emerging as a priority area of reform.

Intervention design and partner identification

Musika's partner-centric approach has perhaps been most obvious in the way it develops and designs its interventions. Musika typically equates interventions with partnerships, and partners have been identified through a challenge fund mechanism, by organisations approaching Musika directly, or occasionally by the relevant technical teams' knowledge of the market. Potential collaborations are then developed into proposals which are taken through a stringent, transparent, internal grant and asset allocation process, which commendably involves staff from across Musika including those in cross-cutting roles. As noted in the interim report, these processes are thorough, pay a lot of attention to the partner's commitment to the proposed change, and are highly attentive to fiduciary risk.

However, this approach for identifying partners and designing interventions is inherently problematic from a systems change perspective. In market systems development, interventions and partnerships are not necessarily the same thing. An intervention is an activity, or series of activities, that aims to address the underlying causes of a constraint in a system. Interventions are therefore focused on introducing an innovation to the market in a sustainable and scalable way, and with a clear theory of change for how the innovation will change the performance of a market function, which in turn will improve the way the focal market system works, which is expected to benefit a given target group. An intervention could involve one or more partners, and it may, albeit rarely, involve no partners at all.

When the focus is on a partner, rather than an intervention, the risk is that the support provided will, at best, address the partner's constraint, and even then, typically only for a limited time. The goal, in contrast, is to address constraints that affect numerous players in the system, in a way that is self-sustaining. For instance, when Musika provides a vehicle to a partner to help it address a specific expansion constraint, this will only address the problem of transportation for the recipient and not for the other players in the system. Even for the partner, the solution is limited, as the partner will eventually need additional vehicles to expand to different regions or to serve a growing customer base. There is no potential for proof of concept or demonstration with this approach either – other nurseries, or veterinary companies, or milk processors (all of which are types of players that Musika has supported with vehicles) may well recognise that having a vehicle would enable them to expand their operations to rural areas too, but they still have no way of addressing this problem, other than asking Musika to buy *them* a vehicle too.

To genuinely address constraints at the system level requires a different approach to intervention design. Instead of solving a partner's problem, the objective of a partnership is to pilot a solution which addresses the constraint across the whole system. Using the above example, if the constraint preventing key market players from expanding their business to smallholders is a lack of transport, the next question would be "why is lack of transport such a widespread problem?" This would require further analysis. For example, it could be that firms are not convinced that the smallholder market is sufficiently profitable to justify an investment in the vehicles required to reach them, or it could be that they are convinced of the business case but do not have access to the capital required to purchase or lease a vehicle. These would lead to quite different interventions – perhaps in-depth market research in the former case, perhaps a partnership with a truck dealer to test an embedded financial service, or a partnership with a bank to pilot more affordable loans in the latter case. Pilots would

need to be developed to test an innovation in one or more functions, and if successful, the potential for facilitating others to replicate the innovation could be explored. This is a hypothetical example – we don't have a deep enough understanding of the systems in question to know whether any of these are feasible or not. However, the example illustrates the difference between a partnership-led and a systems-led intervention design, and it shows how analysis drives intervention design in a systems approach.

In an attempt to achieve scale with its current approach, Musika has often intervened in the same way with multiple partners (of the same type). This is an inefficient approach to achieving scale. For example, Musika's support to veterinary companies has been remarkably successful. It makes sense that Musika partnered with several veterinary companies in different regions to test the model. But to reach scale, rather than continuing to partner with more and more veterinary companies (thus far Musika has partnered with fifteen), it would be better to analyse the underlying constraints that prevent veterinary companies from entering the market without support, and design interventions to address these underlying constraints. This might mean working with different players – and not with veterinary companies.

When taking a partner-focused approach, there is also a risk that an intervention will simply accelerate or expand existing models, rather than introducing new way of working or business models that benefits Musika's target group. Whilst expansion of a model to a new area, especially to new customer segments that are hard to reach, can indeed be considered an innovation in its own right, it is only really a form of systems change if a permanent change (to how market system functions are performed) has happened that enables the expansion to happen, and therefore can benefit multiple players, not just a partner. For example, if Musika's support leads a dairy processor to start sourcing from a new segment of smallholder farmers, because it now understands that it can be profitable to do so with a model that includes embedded services, this can be considered a system change, but if Musika's support only leads a processor to expand its existing operations into new areas more quickly than it otherwise would have done, as is arguably the case with Lactalis, this is not a system change (as the system has not changed and other players will not benefit).

Musika has acknowledged that its approach to intervention design needs to change. It has started to introduce the AAER framework¹² although currently this is primarily used by the MRM team for reporting. This framework could help both technical and MRM teams to focus on the change or innovation being introduced, and to design interventions (and monitor their progress) in terms that support both sustainability and scale. Starting the process of adopting AAER is a commendable step forward and the challenge now is to embed the framework more deeply and widely so that it influences intervention design, approval and monitoring processes more profoundly.

As Musika has recognised, much of its work to-date has been in identifying and supporting first movers to adopt a new way of working. To facilitate a more systemic intervention design, Musika needs to a) support first movers to adopt a new way of working *by addressing the underlying reasons that had*

¹² The systemic change framework (commonly called AAER) provides two main phases in an intervention process: the piloting phase (during which partners *Adopt* and ideally then *Adapt* the identified changes in behaviour, demonstrating a degree of ownership of the change); and the crowding-in phase (during which similar players copy the original partners, thereby *Expanding* the change process, and non-competing players *Respond* to the changes taking place by adjusting their practices. For more detail see <https://www.springfieldcentre.com/wp-content/uploads/2015/11/2015-09-M4P-Op-Guide-Sept2015.pdf>

prevented the change to date (in AAER terminology **adopt to adapt**), and b) if needed (i.e. if copying doesn't happen spontaneously), support early majority and late majority movers to adopt and adapt the new way of working themselves by designing interventions that address the underlying reasons that prevent them from following suit (in AAER terminology **expand**, and in some cases, **respond**).

Specific changes Musika could consider making to the intervention design and approval process include:

- Building intervention design on improved market system analyses (see Box 2). Deeper analysis will reveal how and where to intervene and will likely also identify potential partners to work with, along with activities that do not involve partners.
- As part of the intervention design process, developing a vision for how the system and its supporting functions could work in the future. This involves identifying different types of players to do and to pay for new ways of working in the long term. The “Who Will Do, Who Will Pay” framework may be useful.
- Developing pilots to test innovations that aim to address system-wide constraints – and that could lead to replication and expansion across the system, if successful. Closely monitor these pilots for maximum learning.
- Using the MSA to identify and assess the appropriateness of potential partners, considering both their incentives and capacity to change and, crucially, what has stopped them from making these changes before. As noted in Box 4, below, this process for partner identification is very different to a challenge fund approach.
- Using the AAER framework to help guide intervention design as well as for monitoring and results measurement.
- Using results chains to demonstrate how the vision is expected to come about through the intervention (or range of interventions). Interventions might include those that do not involve grants or assets (although as discussed below these can be legitimate facilitation techniques too).
- Realigning intervention approval processes to focus on the proposal's relevance to the identified constraints and on the feasibility of achieving the vision sustainably and at scale.
- Existing partners that fit well into intervention designs that lead to systems change can be managed to support this process. Partnerships that do not fit well into a new set of interventions targeting system change can gradually be phased out, as their contracts come to a close. This will inevitably take several years.

Box 3: Intervention design and approval: options for reform

Senior management and technical staff have all expressed enthusiasm and a commitment to making the recommended changes, following Musika's decision to fully adopt an MSD approach. It is important to recognise that this is the area where changes are most likely to be disruptive to existing organisational structures (though changes across all components of the MSD approach are mutually complementary). In particular, Musika will likely need to revisit its reliance on challenge funds as a way of identifying potential partners. Whilst a challenge fund provides a framework for a transparent partner selection process, it is inherently unlikely to identify the most suitable organisations for addressing underlying system constraints (see Box 4).

Challenge funds are popular mechanisms for allocating development support because they are low-cost, transparent and fair. However, it is difficult to use challenge funds to advance a systems change approach, for the following reasons:

- The end prize of a grant or asset creates incentives for engagement that obscure the permanent incentives in the system. The players incentivised to apply for a challenge fund may not be the players incentivised to adopt a new way of working.
- Experience shows that some players with genuine incentives to adopt new ways of working are put off by challenge funds, which are often equated with distortive aid support accompanied by heavy reporting requirements and bureaucracy. Consequently, a challenge fund may not attract the players Musika most wants to work with.
- Effective intervention management requires a high degree of flexibility and intervention adaptation. Challenge funds, by their very nature, require upfront decisions and commitments that can limit flexibility during the intervention process.
- Challenge funds cannot replace in depth system analysis – the purpose of which is not only to identify system level constraints, and their causes, but also to assess potential partners, and their incentives (and capacity) to change their behaviours.
- Challenge funds do nothing to test the appetite for replication of a new way of working across a system. In fact, by their very public nature, they may distort existing incentives for replication by creating an expectation among players across the system that they will be ‘rewarded’ or compensated for adopting the new way of working.
- A challenge fund’s inherent focus on a grant or asset, limits the facilitation options open to Musika. Sometimes what is needed to facilitate change is technical advice, information, linkages or other resources which are not readily advertised through challenge funds.
- Challenges funds position Musika as visible, donor-funded grant makers rather than as behind-the-scenes, business minded facilitators.

Box 4: Challenge funds in market systems development

Intervention management (approach to facilitating change)

The majority of Musika’s interventions start with the assumption that money or assets are the solution, rather than with a full assessment of the reasons why solutions to the identified constraints have not already emerged in the system. Whilst Musika’s technical teams provide highly valued support to market players in addition to grants or assets, the latter remain the dominant form of support, and are often the default facilitation mechanism used by Musika.

This now appears to be expected by market players – multiple partners and non-partners interviewed during the field research for this review made it clear that they are hoping for asset or grant support from Musika to help them expand operations. Grants and equipment are valid facilitation tools, but when grants and assets dominate, there is a risk that behaviour change is being temporarily incentivised, and as such is less likely to be sustained.

It is also clear that Musika staff develop close relationships with partners and that they are responsive to partners’ changing needs in a way that is highly appreciated by partners. Indeed, technical teams frequently provide forms of support that go beyond grants and assets, often (but not always) informally, in the form of information, linkages, research, technical advice and so forth. Partners place a high value on this support – indeed in interviews for the review, partners across the three focus intervention areas asserted that linkages, technical and business advice are the form of support they value the *most*. Despite this, these forms of support are not typically formally recognised within Musika – the support doesn’t go through an approval process and is not incorporated into intervention results chains or monitoring systems.

By under-recognising this type of support, Musika risks its technical teams unintentionally acting as market players. It is addressing what may be system-wide constraints by delivering support services directly to individual partners, rather than intervening to address the reasons for system-wide underperformance, be it a lack of information, weak linkages or other factors.

Specific steps to consider in reforming the intervention management process are outlined in Box 5. This is a priority for Musika, linked closely to intervention selection and design.

Specific steps to consider in reforming the intervention management process include:

- Ensure that both within Musika and externally, it is understood that working with Musika does not automatically mean that grants and/or assets will be forthcoming.
- Reduce Musika's visibility as a grant-making organisation (for example, avoid press releases that focus on grant-making, avoid putting Musika's logo on donor-funded assets and programmes, reduce exposure through challenge funds etc.)
- Only use grants or assets as a support mechanism when it is clear what innovation is being piloted, why a grant or asset is needed to pilot that, and how that innovation is expected to lead to sustainable and scalable changes to how functions work.
- Whatever form of support is being provided – whether information, linkages, grants, assets or something else – consider how that resource will be provided to players long-term before incorporating it in intervention design. Musika must take care not to inadvertently become a service provider in the market systems it works in.
- Be wary of the risk of buying a change – including in relation to environment or gender practices. Artificially incentivised behaviour change is rarely sustained, or replicated independently by others.
- Intervention management requires a high degree of flexibility – using timely and focused monitoring information to guide adjustments and adaptations to intervention plans. This means working closely with the MRM team (see below). Use of results chains to actively guide interventions and monitoring of assumptions, can help with this process.

Box 5: Intervention management: options for reform

MRM and reporting and adaptive management

Musika's approach to MRM relies on information collected from partners on a quarterly basis to assess levels of outreach and some outcomes, and on the Annual Household Survey (AHS) to measure outcomes and impact at farmer level. Impact assessments are based on the Rural Agricultural Livelihoods Survey (RALS) which is a panel survey conducted every three years in collaboration with external organisations, though 2019 was the last year for the RALS so the research team are now assessing how to proceed with future impact assessments. For monitoring purposes, Musika supplements these with information gained from informal conversations with partners and other stakeholders, field trips to gather information as needed, and specific research studies focused on an issue they want to understand in more depth. Taken together, Musika therefore has access to a wide range of information, which they can use to monitor their progress, although some critical gaps remain.

Musika has recognised that despite these efforts and competences its MRM systems are not effectively measuring impact or delivering the kind of monitoring information needed to enable adaptive intervention management. To change this, there are several areas that Musika needs to address, detailed below:

Monitor interventions rather than partnerships: The MRM team has made commendable efforts to shift to intervention-based measurement, but because intervention design has not yet changed, the

MRM team are currently still monitoring 'groups of partnerships' (organised by practice area) rather than interventions, as defined under 'Intervention Design' above. This is challenging; it would be more practical to aggregate and make sense of results, which often depend on related activities, if they were grouped by intervention, rather than by practice area or sets of partnerships. Better and more consistent use of results chains, developed in collaboration with technical teams, would help this process.

Connect the different streams of information: Currently, aspects of MRM are managed by different teams within Musika: the MRM team, the research team, the technical thematic area leads in headquarters, and the regional managers. When information is not fully joined up between these different parts of the organisation, it is more difficult to get the full picture of what is happening with an intervention and in a timely way that maximises its usefulness. Disconnects can also lead to inefficiencies.

Again, commendable efforts have been made to address this, especially since the interim phase of the review. Several of the technical teams reported working more closely with both the research team and the MRM team, and finding that helpful in implementing different interventions. Importantly, technical team members are increasingly integrating MRM into their jobs, and using MRM for adaptive management as well as reporting, backstopped by the MRM team. The research and MRM teams also now regularly join the technical team's weekly review and are communicating more closely with one another. The need to develop workplans and results chains collaboratively, is recognised.

However, despite these efforts there is still disintegration that results from the way information is managed. A step forward, based on the positive experience of other MSD programmes, would be to make intervention results chains the hub that connects all the available information. Thus each intervention would ideally have a detailed results chain that maps the logic of expected change and the embedded assumptions. Every box in an intervention results chain should then have one or more indicators associated with it, and those indicators should be designed to assess:

- a) whether or not the change in that box has happened
- b) the depth (or extent) of the change, to date
- c) the scale of the change, to date,
- d) whether there are any signs of the change becoming sustainable
- e) whether there are any signs of the change becoming resilient

If all the information collected through the AHS, RALS, partner monitoring, non-partner monitoring, field visits and informal monitoring was then fed into this central hub, technical and knowledge management teams would be able to much more easily assess if change was happening as expected, and if not, where the logic was breaking down and/or where there are crucial gaps in data.

Monitor impact on farmers on an intervention-by-intervention basis: Currently, results chain indicators aspire to measure partners' outreach to smallholder farmers, but do so in aggregate across a series of partnerships that are not necessarily part of the same intervention. This makes it very difficult to see how a particular intervention is performing, especially as results chain indicators do not go as far as assessing impact on farmers. Instead, the AHS measures differences in access, outcomes and impact between farmers who are linked to Musika partners and those who are not. This works as one mechanism for gathering information about Musika's work, but as it is disconnected from the logic of individual interventions, it does not lend itself to being used for adaptive management and it

does not clearly show the links between a change in a market system and the benefits that accrue to farmers as a result, making attribution difficult. This also has an impact on intervention management, as assumptions embedded in interventions' theories of change at the outcome and impact levels are not easily checked.

Closer monitoring of pilots would be helpful. For instance, the limited monitoring of the pilot subsidy programme that Musika funded, targeting low-income smallholder tree growers, is a missed learning opportunity. Improved monitoring would help the team (and partner nurseries) understand whether the pilot effectively engaged the targeted growers, whether it resulted in increased sales and therefore gave nurseries the incentives to invest their own funds in similar schemes, and whether it genuinely benefited the smallholders who took part.

At the partnership (outreach) level, there are good signs of adaptive management. When partnerships have not proceeded as expected, Musika staff follow up by discussing the situation with partners and investigating in the field, to analyse why assumptions have not held. Multiple examples were given to the review team of times the technical team had to work with partners to revise their assumptions and change or add to a partnership agreement in order to respond to monitoring data. This positive use of data seems to have increased in recent years, as technical team members have got more directly involved with MRM (rather than seeing it as playing primarily a reporting function) and as MRM has increasingly been emphasised as a critical function within the organisation. This all suggests that if information was more readily available about how interventions were or were not working, it would be well used.

Actively monitor the impact of interventions on wider market systems: the shift to a more systemic approach has implications for *what* Musika monitors and measures as well as for *how* it monitors and measures. Until recently, Musika was not monitoring its impact on wider market systems. For example, monitoring of replication and 'crowding in' from non-partner firms was largely anecdotal and was not captured in intervention guides or reports. Laudably, in response to the interim report, the MRM team has gone to considerable lengths to begin monitoring wider system impacts and to incorporate the 'AAER' framework into their monitoring and reporting. This means that as of 2021, Musika is now beginning to record signs of sustainability and scale. This is a very positive change.

So far, this change has been rolled out as an "add on," so, in addition to the existing reporting structure, Musika now reports on indicators that relate to signs of sustainability at the partner level ("adapt"), signs of expansion ("expand") and signs of resilience ("respond") in the different practice areas. Going forward, it would be preferable to organise monitoring and reporting by intervention, as explained above, and to then use 'AAER' to frame *all* of the reported results that relate to behaviour change for a given intervention.

It will also be important for Musika to measure and monitor changes to function performance. This is not included in the AAER framework. For example, if Musika introduces an innovation – such as e-commerce platforms – which are intended to change the way the agricultural inputs function works, it is important to monitor whether, and to what extent, those changes happen. In this example, indicators could relate to the quality, quantity (or variety) or price of inputs available to smallholders, to the timing of availability (for example, are inputs now available year-round whereas previously they were only available in certain seasons), or to the inclusivity of access (for example are inputs now available to women whereas previously they were only available to men).

Capture impact from 'crowding in': shifting to a more systems-oriented monitoring approach will have implications for how Musika monitors impact. Currently, Musika only monitors outreach and impact from partners they have provided grants to, and the farmers linked to those partners. In fact, the AHS uses farmers not linked to Musika partners as a control group. From a systems change perspective, however, any farmer who has access to the innovation introduced (for example, any farmer who uses an e-commerce platform, whether it is provided by Musika partners or not) would be considered part of the treatment group, if they accessed that innovation because the original model Musika supported was replicated by other players. In using this approach, it is important to be attentive to issues of attribution.

Measure outcomes and impacts that relate to Musika's cross-cutting themes: this is important for monitoring the assumptions embedded in different interventions' results chains. For example, and as noted in the performance section of this report, if planting trees and adopting key climate smart practices, is expected to improve soil nutrition, it's important to monitor whether this is actually happening – and to make adjustments to the intervention approach if needed. Similarly, digital platforms are expected to benefit women disproportionately (or at least, differently) to men, but this is not currently monitored and if additional activities are required to maximise the benefits for women, these are not known or being implemented.

Make better use of sustainability monitoring: A strong aspect of Musika's MRM is its commitment to measure what happens with partners for two years after support for an intervention ends. To do this, Musika asks firms to report on the same indicators they were reporting on during the partnership, on an annual basis, following the end of Musika's investment. This, combined with field assessments and the AHS, provide Musika with the potential for learning about what intervention strategies lead to long-term sustainable impacts. Currently, the data from this sustainability monitoring feeds into reporting and is shared with the technical teams to shape planning for new interventions but the review found no evidence that it is yet being used systematically.

To reform Musika's MRM function and make it both a useful management mechanism and a credible results assessment function, requires considerable change. This is a priority for Musika.

There is a wide range of reforms suggested for Musika's MRM function and it will likely be important to develop a clear strategy for doing this, including priorities, resources and so forth. Specific steps to consider as part of this process, include:

- developing measurement systems that are tied to the results chains for each intervention (or in some cases group of connected interventions).
- establishing a more joined up/integrated approach between MRM, research team and tech team, and tying all monitoring to intervention results chains. Effective use of result chains to frame this would help ensure that progress against assumptions – at partner and systems level – are monitored, thereby enabling timely adaptation of interventions as needed. Tight measurement of change up a result chain can also provide evidence (or otherwise) of attribution.
- monitoring impact on farmers through results chains, on an intervention-by-intervention basis. Close monitoring of intervention in this way, to test assumptions and understand what is and isn't happening, requires the ability to activate small low-cost surveys, often fairly rapidly. The ability to do this at short notice is very useful.
- continuing with the process of integrating the AAER framework into both measurement and reporting processes (and intervention management) – to monitor sustainability and scale and to enable action to maximise both. This includes monitoring and incorporating impact achieved through replication and crowding in of non-partners
- accounting for wider system changes in assessments of Musika's impact
- monitoring outcomes and impacts that relate to Musika's cross-cutting themes

Box 6: Monitoring and results measurement: options for reform

Gender

Musika is highly committed to incorporating gender-sensitivity into its work and has made significant efforts to do so in recent years. Since the interim phase of this review, Musika has recruited a new gender lead. The current gender strategy, which has been in place since 2018, is still live, but the gender lead is currently in the process of arranging an audit of Musika's activities and capacities with respect to gender, which will inform the development of a new gender strategy. Based on current thinking, activities that are being considered for incorporation into the new gender strategy include:

- capacity building for staff
- tool and guidance-development for staff, to facilitate more rigorous integration of gender into intervention design and management
- capacity building and/or technical backstopping for partners
- incorporation of monitoring indicators that focus on agency and empowerment as well as access and income
- research on what has been implemented, what the impact has been on women and men and what lessons can be learned for future implementation
- networking, mentorship and communications with other NGOs and development organisations, to facilitate peer-to-peer learning

While some of these activities (such as capacity building for staff, incorporating indicators focused on agency and empowerment, and research and learning) are critical for improving Musika's approach to gender, some are not compatible with a systemic approach (such as capacity building for partners).

This section reviews Musika's approach to the inclusion of women, which has been both integrated and targeted, and makes recommendations for taking a more systemic approach to gender inclusion going forward.

Musika has *integrated* sensitivity to gender in every aspect of their processes, from pre-intervention assessments (such as in assessing concept notes) through partnership agreements and intervention management to monitoring, reporting and communications. Musika's research is gender sensitive, and MRM measures gender-disaggregated outreach. Integrating gender sensitivity in existing technical areas has meant requiring or encouraging Musika partners to include women in outreach and promotion and training, and to monitor women's participation in the core business model being supported. For example, in tree growing Musika monitors how many women purchase improved seedlings from partner nurseries; in dairy, Musika encourages partners to include women in livestock activities and monitor how many women supply milk to partner processors or access veterinary services; and in digital finance, Musika encourages partners to include women in outreach and promotion, and monitor how many women use services on digital platforms. Musika does not just require that partners become more gender-inclusive; they also support them in doing so. In some cases, such as with the veterinary services partner, LVSCC, Musika has funded additional efforts by its partners to assess women's needs and how they differ from men's.

In addition to integrating gender-sensitivity in its usual activities, Musika has also invested in activities with a *targeted* focus on gender. These include research to deepen understanding about gender, such as a 2019 report on 'Gender and Decision Making in Agriculture,' using a challenge fund to look for specific opportunities for women in agriculture, and intentionally engaging private sector CEOs and traditional leaders on social and economic incentives that affect women's wellbeing and inclusion. Overall, Musika has taken a portfolio approach, whereby some interventions are highly beneficial to women and others have a 'do-no-harm' policy. This is a valid and sensible approach, as it enables them to pursue multiple objectives effectively.

Encouragingly, Musika takes a nuanced approach to gender. In line with its theory of change, the focus is primarily on gender-inclusive business modelling, to raise incomes for women and men. However, it's important to note that Musika's policies go beyond advocating for the inclusion of women to considering women's roles, power and risks in different sectors. Both social and economic risks, constraints and impacts are considered. To date this nuanced perspective has not yet had a significant influence on intervention design (at least in the intervention areas the review focused on), but the recently recruited gender lead has rightly highlighted this as an area to develop in the future. In particular, it will be a priority to move beyond a focus on "inclusion" to a focus on "benefits" for women, and to consider those benefits not just in terms of income increases, but also in terms of women's agency (for example, to consider how additional funds are invested, saved or spent). Musika has rightly recognised that making this shift will require changing the way both analysis and monitoring are done.

Currently, Musika's technical staff have a gender-sensitive understanding of smallholder farmers' relationships to markets and the specific and varying constraints they face. However, this analysis needs to be deepened and better evidenced. Whilst this is largely a reflection of the need to deepen understanding of constraints in markets more generally, rather than a reflection of Musika's approach to gender, it will be important to fully incorporate a more focused gender analyses as part of improved market system analyses. A gender analysis would include an analysis of how men and women relate to the different tasks in the sector (in terms of labour, decision making, benefits etc), what the constraints that prevent men and women benefiting more are, and what the opportunities for systems changes that would benefit men and women are, including the business case for private-sector

involvement where relevant. The gender analysis would therefore be different for each intervention, rather than a blanket approach of inclusion and outreach.

This gender analysis would then shape the intervention design, partner selection and facilitation methods. As with other areas, Musika would benefit from taking a more systemic approach to intervention design and facilitation with respect to gender. This would change current practice in two key ways:

- **incentives:** rather than requiring or encouraging partner firms to be more gender-inclusive, or providing financial incentives (such as through the challenge fund) for firms to invest in women in agriculture, a systems approach would mean looking for what incentives there are in the system for firms (or other players) to change their behaviour in ways that would benefit women. For example, in the dairy system, could MCCs or processors *increase productivity* by sourcing from women-only farmer groups? Could veterinary companies *increase their customer* base by providing information to women remotely? In digital service, could providers *increase their user base*, and *increase the per-customer usage of platforms*, by targeting women? Are there reputational, social or legal rules that could be leveraged in favour of gender equity? These are the kind of incentives that are likely to lead to sustainable and scalable change, as they do not depend on compliance within a partnership or short term ‘incentives’ provided by Musika. Musika has already made efforts to demonstrate the business case for including women as producers, suppliers and consumers to their partners; the more this is the focus (rather than compliance-based partnership agreements or challenge fund incentives), the more likely sustainable and scalable change will be achieved. It should be noted that this approach does require being realistic and recognising that sometimes there is *not* a strong incentive for gender inclusion. In these cases, Musika could either intervene to attempt to change incentives (for example by working with traditional leaders or government), though this is challenging, long-term work, or Musika could accept that in a portfolio approach, not every intervention will achieve every objective.
- **capacity:** applying a systems change approach also means finding ways for the system to address capacity constraints rather than building firms’ capacity directly, as Musika currently does. Usually, if the incentives are strong enough, firms are good at addressing their own capacity constraints, for example by hiring a consultant to advise them on gender or by conducting gender-sensitive market research. There may be a role for Musika to play in providing this kind of technical advice in the short to medium term, especially to pilot interventions, but once a concept is proved, direct delivery of capacity building is not a long-term or systemic solution.

Finally, these changes will require a change to how gender outcomes are monitored, to incorporate benefits and/or disadvantages faced by women. Specifically, it will be important to monitor how women’s roles change and what impact this has not just on their participation, but also on their experiences and agency.

Overall, it is clear that Musika has made genuine and significant efforts to increase awareness of gender across all areas of its activities. Musika staff are very committed to gender-inclusivity in both intervention design and partnership management across the technical and knowledge management teams, with strong support from senior management. The team have made commendable and

ongoing efforts to improve awareness of gender internally and have integrated checks to ensure that gender is also addressed in conversations with external partners. The next steps are to apply a more multi-faceted understanding of gender, designing interventions to benefit women, rather than just to include them, to deepen analysis of the specific constraints and opportunities for women, to design interventions that change incentives and capacities in a systemic way, and to more closely monitor whether, how and to what degree interventions actually benefit women.

Environment and climate change resilience

Musika appears genuinely committed to ensuring that its operations promote environmental sustainability and climate resilience. Using a portfolio approach, Musika has a spectrum of interventions which at one end aim to 'do no harm' and at the other, have a tangible and positive impact in relation to the environment. As noted in the section on gender, above, this is valid. Where interventions risk having a negative impact on the environment, Musika aims to mitigate immediate risks where possible. In the dairy sector this is a dilemma for Musika, as the more farmers that commercialise and improve their incomes through the dairy sector, the greater the potential for environmental degradation. It is clear that for Musika to be able to balance these competing goals, considerable further investigation is needed on the feasibility of achieving systemic changes that have environmental protections integrated into them.

With Sida's assistance, in particular through a two-year secondment of an environmental expert (2017-19), key processes have been introduced which support and require the technical teams to integrate priority environmental concerns across Musika's portfolio. These include the environmental strategy, the grant allocation mechanisms, and an environmental audit process.

The aim of mitigating environmental risks is integrated into Musika's proposal selection and grant allocation process with the aim of ensuring agricultural market growth does not come at the expense of the health of the natural environment and that of the rural population. Each grant step (inception concept note, intervention proposal, Memorandum of Understanding, grant contract and so forth) includes a module regarding the environment. Partners interviewed are aware that they are subject to the Musika audit process and have associated obligations with regard to environmental factors. Environmental audits are undertaken by the MRM and regional teams, with support from the Environmental Markets Lead. Partners are audited quarterly, and a traffic light system is used to monitor progress; as yet Musika has not withdrawn or frozen its support to any partner, as there have only been minor non-compliance issues reported.

All relevant businesses are required to comply with environmental standards set and regulated by the Zambia Environmental Environment Agency (ZEMA). Musika has been working with ZEMA since 2013, primarily supporting the development of its standards and to help raise its profile. In addition, several industry associations provide support as well as audit services to help ensure their members comply with the standards relevant to their sector. This includes the Dairy Association.

As has been noted in the section on gender, a more systemic approach to intervention design with regard to the environment would take on board incentive and capacity concerns. Musika has noted difficulties in incentivising some of its smaller scale partners (as well as the smallholder farmers who work with these partners) to follow all the recommended environmental protection procedures. For instance, the recovery and safe handling of waste chemical containers and safe use of chemicals by small scale farmers is still very much a work in progress. The Environment and Ecosystem Protection

Action Plan¹³ for one dairy partner, LVSCC, consists of a comprehensive list of actions it intends to do better, plans to address these issues, and it also lists associated constraints in ensuring that its smaller scale partners follow suit. Further analysis of approaches to sustainably incentivise farmers to change their behaviours might be useful here. There is relevant experience on changing farmer behaviours – including much trial and error – from other countries and in both agriculture and non-agriculture sectors.

Musika is aware that it has minimal direct influence over a partner's behaviour once its support ends and if the incentives to continue with environmentally sound practices are not recognised by partners, they are unlikely to continue. The work with ZEMA is an attempt to ensure that in every relevant system there is an effective regulatory and supervision function which provides the means and the incentive for firms to comply with the relevant standards. ZEMA is increasingly well known, and it has considerable authority – for instance it can close down a company if it deems it necessary, and without ZEMA's licenses it is very difficult for a company to access credit. However, ZEMA's capacity to be an effective supervisor is also limited. Musika has been supporting ZEMA to explore options for the chemical industry body, Croplife, to be authorised to take on some of ZEMA's role. This is still a work in progress.

These steps are all extremely positive – and demonstrate a real attempt by Musika to work at the system level and develop sustainable means for improving environmental standards and compliance. One word of caution is that it seems that some Musika partners (mostly but not only the smaller companies) rely on Musika to liaise with ZEMA on their behalf, and to help them comply with the Environmental Protection Brief (EPB) process as per ZEMA requirements. For example, the LVSCC Environment and Ecosystem Protection Action Plan mentioned above, calls on Musika to 'engage ZEMA...to validate the plan'. Ultimately it will be important for partners to be able to manage compliance and their relationship with ZEMA, without Musika support.

Musika's commitment to environmental issues has not yet translated through to its results measurement processes and, outside of the environmental audits, the impact of its work is not yet effectively monitored or measured at the intervention level. For instance, in the Tree-growing intervention area, the assumed benefits to soil (and other climate resilient benefits) from planting and growing trees, have not been monitored. However, plans to monitor the effect of its interventions on land use change and forestry, possibly utilizing remote sensing and Geographical Information System mapping to monitor change, are encouraging.

The environment strategy and the related key processes have remained in place and appear to be adhered to by the technical teams. The strategy was developed in 2017/18 with support from the Sida-seconded expert and external consultants. It has not been updated since then, but Musika recognises that an update is overdue, partly to keep it in line with Musika's ongoing overall shift to a systemic approach, partly to respond to changes in the environmental context and climate related challenges in Zambia, and lastly to address some acknowledged gaps in the current strategy, especially in relation to promoting climate resilience measures.

Climate change resilience is a very specific and key challenge, and as noted above Musika does not yet have a strategy focused on this area. Filling this gap would aid the process of streamlining climate

¹³ The LVSCC Environment and Ecosystem Protection Action Plan, November 2019. LVSCC is a veterinary service company.

resilience within its strategies and through its portfolio. This might include improving water storage to address shortages in dry periods; climate smart farming practice changes such as minimum tillage; and tree planting, not only for fruit but for other resilience benefits. Undertaking a climate vulnerability assessment for the regions in which it works would be an important first step in the process of developing this strategy.

One reason that the environment strategy has not been updated, despite a recognition that this is needed, is that the environment team is, as a team of just one, under resourced. This has been recognised and Musika is actively pursuing options to expand the team.

Capacity and organisational set-up

Organisational capacity is a particularly difficult area to assess virtually and with the review's MSD experts not in country, we are hesitant to draw strong conclusions or to make firm recommendations. During this final phase of the review we have sensed an increasing awareness, amongst staff and management, that the shift to a systems approach will involve substantial implications for the way Musika works. The change process will place major demands on management and staff and will likely require some changes in organisational structure. The view of the review team is that Musika has an excellent foundation for making this transformation successful; as senior management says '....the platform is in place.'

It can be informative to learn from the experience of others in terms of what to look for and what is needed for the adoption of a systems approach. A 'comparator model' assessment, included as Annex 2, was conducted during the inception phase of this review, involving discussions with the managers and ex-managers of several leading organisations that follow a systems approach. This assessment found that the organisational traits most frequently cited as required for strong facilitation using a market systems approach include:

- a high-capacity team and a strong organisational cultural that enables internal critique and debate,
- a reputation as, and the skills to act as, a neutral and independent facilitator,
- an appropriate risk appetite and acceptance of failure, and an ability to think long-term
- a high degree of impact-orientation centred on a system change agenda,
- a deep understanding of the markets the organisation works in,
- an ability to be flexible and responsive.

The review found that Musika embodies many but not all of these characteristics. It appears to be a robust, well organised, high-capacity institution, and without exception, the Musika staff and management we interacted with, during all phases of the review process, appear to be highly motivated and passionate about their work. The level of openness to internal and external review and debate is strong within the technical and MRM teams, as evidenced by Musika's internal structures such as the technical committee review, by the clear expectation that people with different specialisms will, and are expected to, comment constructively on the work of others and lastly by team members' responses to this long review process. Musika's culture of openness and interest in learning is hugely valuable, and is a credit to the staff and senior management who have built and retained these characteristics.

Musika staff and management have substantial expertise and experience – and many have in-depth knowledge of the sectors in which they work. Many of Musika’s team have received MSD training and more recently, a virtual MSD course was organised for all staff. The latter was very well received and appears to have been both informative and motivating. However, Musika recognises that significant gaps remain in expertise and experience of implementing a systems approach, and these will need to be addressed as part of the change process.

Musika appears to have a strong brand and reputation, in Zambia and beyond. Having retained several staff members since its inception, Musika has built valuable institutional memory and the review’s field work suggests that it has also developed good relationships with many private sector players across multiple sectors. Musika appears to be seen as a fair, neutral, and high performing organisation. Its support to selected individual partners has the potential to undermine this perception, but there was no indication of this in the field research which included discussions with partners and non-partners. There is, however, a sense of growing dependency on Musika by some partners, with an expectation that Musika will provide long term support and assistance – in grant/asset form and in other ways. As mentioned in the Approach section, this is not helpful.

Musika’s approach to risk taking appears considered. The review was not able to dig into the extent that staff feel empowered to fail – but senior management fully accept that a degree of risk involves a degree of failure and that this should not reflect negatively on the individual staff involved. This is important – learning from other MSD programmes shows that a low rate of failure is in fact a worrying sign, as it suggests too little risk taking and/or insufficiently robust results measurement.

Musika’s organisational set-up makes it different in some important ways to a typical market systems development programme. Compared to the latter, Musika is more long-term, has more scope to draw on a diverse set of funding sources and to deliver multiple different donor programmes simultaneously, and (when approved) it has its own independent business plan and strategy. In part due to its longevity, and also as a Zambian managed entity, it is also more locally embedded. These are key advantages. The following are some partner reflections during interviews held during both interim and final phases of the review:

- *“We trust Musika as a partner.”* (Tree growing partner)
- *“They [Musika] have some good people, much better than other organisations.”* (Tree growing partner)
- *“He really understands farmers and we have benefited a lot from his ability to communicate with farmers in the field.”* (Cassava partner)
- *“Without Musika I would not be where I am today”* (Digital finance partner)

Greater longevity can also enable careful risk taking and allow a longer-term perspective to achieving change, including the ability to tackle issues, such as those in the policy sphere, that are unlikely to have quick solutions. This can enable institutions like Musika to pursue a more ambitious system change agenda than is feasible for (often more short-term) programmes. However, it is important that Musika is attentive to the risks inherent in longevity, in particular that there may be a temptation to remain active in a sector, or with a partner, for longer than is helpful, thereby building dependency as opposed to resilience.

The remaining three characteristics of effective MSD programmes mentioned above (a high degree of impact-orientation centred on a system change agenda, a deep understanding of the markets the organisation works in, and an ability to be flexible and responsive) are an acknowledged work in progress for Musika – and therefore will be central to the change process it is embarking on.

In summary, Musika's key strengths provide a very strong foundation for Musika to build on as it begins to adopt the changes inherent in a shift to a systems approach. It will be important for Musika to develop a change process and strategy, to provide structure and help those involved understand what is happening, when and why, and, crucially, what is expected of them. This will also help senior management, the Board and funders monitor progress. This is a major transformation and Musika should consider bringing on board external support to advise on specific areas of reform and to support the organisation in building the team's capacity to take a systems approach to implementation. However, it is important that this remains a Musika driven and owned transformation.

4. CONCLUSIONS

The review found that Musika is a well-run organization with several strong attributes – these include a culture of openness and learning for improvement, and committed management and staff with a passion for what they do.

The results from all three intervention areas show good results on a partner level. The AHS indicates that generally farmers directly connected to Musika partners are better off than those who are not linked to Musika partners, though it is not possible to ascertain causality from these results. In some instances, such as in the tree growing intervention area, non-partners have started to adopt similar changes to those adopted by Musika-supported partners, suggesting the potential for replication and scale, and there are signs that additional farmers are benefiting indirectly through these non-partners' changed practices (although this needs closer and more systematic verification).

However, as yet there is little evidence of scale, sustainability or multi-function change in the wider market systems Musika is working in, beyond the impact on its partners. In light of this key finding, and a recognition that an ongoing focus on partners instead of systems has been undermining Musika's ability to achieve sustainable impact at scale in the markets in which it works, Musika's recent decision to shift to a systems approach is an important one. The degree to which this decision is currently supported internally by staff, management and the Board is impressive.

The risks faced by Musika are clear – if it continues with its current approach, it is likely to continue to achieve levels of outreach and impact that are similar to its current performance, but with inherently limited scale and sustainability. For an organisation with Musika's strengths and capacity, this would be a major missed opportunity. This is not to say that shifting to a systems approach will be easy; learning from other organisations suggests that changing to a systems approach, rather than starting out with one, is especially hard. The transition will likely involve some short-term negative repercussions which it is important that key stakeholders, including funders and Board members are prepared for. These include a preliminary phase of confusion as partners and non-partners grapple with a changing Musika (in particular one that does not rely on grants and assets as its foremost facilitation mechanism); internal challenges and frustrations as staff and management deal with the change process and an approach which is often more difficult to implement; and an initial slow-down

in both intervention progress and overall spend as the changes are made. One of the biggest risks involved in committing to such a major transformation, is the risk of investing effort in making a change, and suffering some of the short-term repercussions mentioned above, but failing to achieve the benefits associated with the MSD approach. To mitigate this risk, it will be important to consider what is most critical for the adoption of the approach. Critical success factors have been identified for using the MSD approach successfully.¹⁴ These include building and retaining a team with sufficient capacity to implement the MSD approach well, a strong relationship between implementor and donor(s), that supports adaptive management, and a strong and supportive relationships between intervention management staff and MRM staff. It is recommended that Musika is provided with MSD ‘backstopping’ expertise to support it with building these success factors internally.

Musika’s decision to move from a partnership-focused approach to a more systems-oriented approach will have implications across the organisation. It is not a change that can be made in isolated areas of the organisation; shifting to systems-oriented approach in one area of work will both depend on and also necessitate equivalent shifts in other areas of work. The transformation required is significant, but Musika is a high-capacity organisation that is well-positioned to manage this, as long as it is well-supported in the process.

Several factors contribute to the solid foundation that Musika has for building this change process. These include a supportive Board and core funder (Sida), a strong reputation and potential longevity (as compared to a development programme), a technically competent and experienced team, and – not to be underestimated – a remarkably constructive culture which encourages openness, debate and learning. During the final phase of the review, discussions with management and staff suggest a growing awareness of the potential benefits as well as the immediate implications of this shift, and, importantly, the degree of change needed. The key areas requiring change are summarised below and in Table 3.

Market analysis:

Whilst Musika does invest in analysis at an appropriate level of rigour, this analysis is not coordinated or ordered by a systems-change process that would enable Musika to identify and prioritise constraints at the system level or – crucially – to understand what might be causing these constraints and what has prevented players in the market from addressing them previously. Rather, analysis is currently driven primarily by a focus on partners’ constraints and needs, and on the farmers they are connected to. Improving the depth of the analysis, its timing, and ensuring involvement of Musika technical teams, will make a substantial difference.

Intervention design:

Interventions have tended to start with partners, rather than analysis, so they are typically designed to address constraints for individual companies and firms, rather than to address systemic constraints. This has negative consequences for both scale and sustainability. To genuinely address constraints at the system level requires a different approach to intervention design. Instead of solving a partner’s problem, the objective of a partnership is to pilot a solution for the whole system.

¹⁴ For example, see the BEAM Evidence Review 2021, available at: <https://beamexchange.org/community/events-training/details/1015/>

Partners (and interventions) are frequently identified through a challenge fund mechanism which, whilst rigorously implemented by Musika, has several inherent limitations for a systems approach. Integrating intervention and partner identification into the MSA process is more likely to deliver appropriate partners with the incentives to change behaviour as needed.

Intervention management - facilitating change:

The technical teams are skilled at building constructive relationships with partners and Musika has developed and follows comprehensive internal grant allocation and management procedures. However, the facilitation process is formally focused on allocating grants or assets to partners to incentivise or support them to change their behaviour. As a result:

- There is a risk that some partners change their behaviour because they are incentivised by the grant or asset; this kind of change typically does not last, and, as importantly, will not benefit other players in the system who have not received grants.
- Interventions are primarily designed around financial/business incentives and capacity constraints, as these can be addressed by grants, but systems are often constrained by other incentives, such as social, political, cultural or ideological incentives and by other capacity issues, such as lack of access to information.
- Other forms of support, including informal support, provided by Musika to partners is essentially direct delivery and will only benefit the recipient partner – while the constraint being addressed for that one partner remains for the wider system (and often remains for that partner once Musika support ends).

In short, Musika's current facilitation process, whilst rigorous, transparent, and credible as a grant-making process, is at odds with a system change lens.

Monitoring and results measurement:

Musika has recognised that substantial reform of its MRM processes is needed to both accurately assess and attribute impact at the farmer level, and also to monitor progress of interventions (including system changes).

Currently, although the MRM team has made commendable efforts to shift to intervention-based measurement, most MRM is centred on 'groups of partnerships' (organised by practice area) rather than interventions – in part because of the changes needed in intervention design and facilitation. It would be much easier to generate results chains, and to aggregate and make sense of results if activities were grouped by intervention. This would also allow intervention results chains to become the hub that connects all the available information, building on the efforts that have been made to integrate MRM more closely with research and technical work, which have been very positive.

Closer, more timely monitoring against such intervention results chains, with indicators that capture signs of sustainability, scale and the impact of new ways of working will be important going forward. In particular, it is important to test assumptions about how an intervention is expected to benefit farmers, by monitoring impact on an intervention-by-intervention basis. This will provide essential information to enable effective and adaptive management of interventions.

Thus far MRM has focused mainly on Musika's partners, and the farmers connected to them, and so has not captured scaled change (for example through replication of a business model by a non-

partner), how the wider system's performance has changed, or the sustainability or resilience of change in the system. Since the interim report, the MRM team have made efforts to address this by incorporating the AAER framework into MRM and reporting and starting to monitor non-partners. This is highly positive and another indication of Musika's commitment to the change process; it provides a good foundation to build on.

Addressing cross-cutting issues:

Musika has demonstrated genuine commitment to all of its cross-cutting areas. It has made efforts to both target environmental and gender issues in its work directly, and to integrate an awareness of these issues in all aspects of its ongoing work. Some, but not all, of these efforts have been successful.

Tighter monitoring of whether and how interventions impact women and environment issues would help to understand what is and is not working, and why. As with other technical areas, Musika's impact seems to be limited in both gender and environment by a partner-focused perspective; a more systems-focused approach which seeks to analyse and address the wider systemic constraints in these respective areas, and is cognisant of both incentives and capacities for change, would likely yield greater impact.

Area of reform	Specific changes/reforms
Adoption of a systems approach	This is a major shift and is one which Musika has started, but for which there is much still to do. Now that the decision to make this change has been made, the key recommendation is to develop a change management strategy which outlines the process, resources needed, and timeframe – and to use this to monitor progress, adapt the implementation plan, and inform key stakeholders of what is happening.
Market system analysis	Key changes recommended for Musika’s market analysis process relate to: • The <i>timing</i> of the analysis – it is critical that future MSAs happen before intervention design or partner selection. • The <i>depth and breadth</i> of market system analysis – future analyses need to go beyond identifying the immediate constraints affecting smallholder farmers and the players they interact with (such as private sector firms, associations, government bodies and traditional leaders), to also assessing why these constraints exist in the system. • <i>Who does</i> the research – learning from Musika and elsewhere suggests that market research and analysis is most effective when technical teams are substantially involved in the research process.
Intervention design and approval	Key changes recommended for Musika’s market intervention design and approval process are: • Build intervention design on improved market system analyses (see above). • As part of the intervention design process, develop a vision for how the system and its supporting functions could work, sustainably, in the future. • Develop pilots to test innovations that aim to address system-wide constraints – and that could lead to replication and expansion across the system, if successful. • Use the MSA to identify and assess the appropriateness of potential partners, considering both their incentives and capacity to change and, crucially, what has stopped them from making these changes before. • Use the AAER framework to help guide intervention design as well as for monitoring and results measurement. • Use results chains to demonstrate how the vision is expected to come about through the intervention (or range of interventions). • Realigning intervention approval processes to focus on the proposal’s relevance to the identified constraints and on the feasibility of achieving the vision sustainably and at scale. Existing partners that fit well into intervention designs that lead to systems change can be managed to support this process. Partnerships that do not fit well into a new set of interventions targeting system change can gradually be phased out, as their contracts come to a close. This will inevitably take several years.
Intervention management	Key changes recommended for Musika’s market intervention management process are:

	• Ensure that both within Musika and externally, it is understood that working with Musika does not automatically mean that grants and/or assets will be forthcoming. • Only use grants or assets as a support mechanism when it is clear what innovation is being piloted, why a grant or asset is needed to pilot that, and how that innovation is expected to lead to sustainable and scalable changes to how functions and market systems work. • Whatever form of support is being provided – whether information, linkages, grants, assets or something else – consider how that resource will be provided to players long-term before incorporating it in intervention design. • Only pilot changes that have a credible potential pathway to scale and sustainability. • Be wary of the risk of buying a change – including in relation to environment or gender practices. • Make use of timely and focused monitoring information to guide adjustments and adaptations to intervention plans.
MRM	A wide range of changes are suggested for Musika’s MRM function and it will likely be important to develop a clear reform strategy, incorporating priorities, resources and so forth. Specific steps as part of this process, include: • Develop measurement systems that are tied to the results chains for each intervention (or in some cases a group of connected interventions). • Establish a more joined up/integrated approach between MRM, research team and the intervention management teams, and tie all monitoring to intervention results chains. • Monitor impact on farmers on an intervention-by-intervention basis. • Continue with the process of integrating the AAER framework into both measurement and reporting processes (and intervention management) – to monitor sustainability and scale and to enable action to maximise both. • Monitor changes to function and system performance over time • Account for wider system changes in assessments of Musika’s impact • Monitor outcomes and impacts that relate to Musika’s cross-cutting themes
Environment	Key changes recommended for Musika’s management of environment and climate resilience across its portfolio are: • Revise/update the environment strategy to take account of changes in the context – the challenges faced by farmers, the different institutions in Zambia, and the growing awareness of climate resilience as a priority. The revised strategy should: ○ reflect Musika’s adoption of a systems approach – and incorporate incentives and capacities into its approaches. ○ build improved monitoring into its approach – to understand what is and isn’t working (and why/how) ○ incorporate an approach to building climate resilience – based on the proposed climate vulnerability assessment

	• Review resourcing for this crosscutting area
Gender	Key changes recommended for Musika's management of gender across its portfolio are: • Continue with ongoing plans to conduct an internal audit of activities and capacities with regard gender and use this to inform the development of a new gender strategy • Ensure the new strategy (and its implementation) reflects Musika's shift to a systems approach, especially by incorporating consideration of incentives and capacity within the systems that Musika works in, to change behaviours in ways that benefit women and address the specific constraints they face. • Build gender analysis into the new and improved markets systems analyses that are planned (see above) • Take steps, through this research and intervention design, to move beyond strategies that only aim to include more women in systems, but also aim to ensure that they genuinely benefit women – in terms of income and agency.
Organisational capacity	• As an integral part of the change management process, review where capacity may need strengthening – two areas for immediate consideration are the Environment team and the MRM team. Capacity might be strengthened through commissioning external technical support; additional training and support for staff; and/or recruiting additional staff to fill ongoing gaps. • Consider bringing on board external MSD support to advise on specific areas of reform and to support/backstop Musika as it manages the ongoing change process.

Table 2: Areas for Reform

ANNEX 1: INTERVENTION AREA FINDINGS FRAMED BY AAER

The MSD System Change framework, commonly called AAER (Adopt, Adapt Expand, Respond) facilitates an exploration of the sustainability and scale of key behaviour changes in a market systems. As a management tool it can help teams understand what has been achieved with an intervention, and crucially what is needed next to improve sustainability and scale. This framework has recently been adopted by Musika's MRM team for reporting. Further embedding AAER across Musika's intervention design, management and monitoring processes would be valuable. To assist with this process, the review has assessed the findings for each of the focused intervention areas through the AAER lens, and this analysis is outlined below.

In addition, we have included a supplementary section for each intervention area, which attempts to assess performance changes at the function level (which is not part of the AAER framework), as far as the available information allows. Going forward, as Musika adopts a systems approach and starts to identify and work to address constraints in system functions, it will be important for Musika to strengthen its monitoring by assessing both behaviour and performance changes.

A: Tree growing: behaviour and performance changes from Musika's work with nurseries

Adopt (initial pilot)

- All of the partners report making behaviour changes to reach the smallholder market with fruit trees. The degree to which these were completely new behaviours is not clear but they all, to varying degrees, have addressed the smallholder market opportunity with promotional activity, provision of additional extension and training services, and outreach and transportation. In interviews, partners mentioned that bundling technical advice and inputs with tree sales was a new initiative.
- Most partners used Musika's support to substantially expand their production and sales – in terms of scale and in terms of being able to produce throughout the year – at a faster rate than they would otherwise have been able to do.
- Several partners also report expanding their fruit tree sales to large commercial farms (and one to a government programme).

Adapt (signs of sustainability with partners)

- There are encouraging signs of sustainability with at least four of the partners having invested in expansions to their extension activities. Havilla reports visiting most of the farms it sells to in order to provide customised technical support. It has also developed its own demonstration farm, and expanded its training programme to work with traditional leaders as champions of change and good practice.
- Havilla has constructed more than 20 nursery boxes at a cost of c \$400 each; Radical Farmer has diversified into the lemongrass market and plans to pay farmers with fruit trees as a market expansion technique; and Kondwani has built its own greenhouses, using available materials at a lower cost.
- Lutawo, Khondwani and Havilla have invested their own funds to expand to new regions and report that they also have invested in maintaining the new equipment (provided by Musika) and in several cases buying new equipment to support the expansion. Kondwani, Havilla and Radical farmer have developed and invested in their own irrigation systems.

Expand (signs of scale)

- Most partners have expanded their outreach and some, such as Lutawo, Havilla and Khondwani have moved into to new areas. Kondwani has replicated its business model in new nursery branches in Lusaka, Solwezi and Kitwe. There has been an increase in sales this season, and demand is clearly growing – but it is not absolutely clear to what degree this increase is from sales to smallholders.
- Musika has noticed an increase in the number of small private nurseries being established and partners report that six non-partner nurseries are starting to replicate the approach and practices of partner nurseries, including addressing the smallholder market, promoting improved seedlings and offering extension. Havilla reports providing training and advice to one or two of these competitors. Musika has taken no action to facilitate replication of these practices by non-partners, and is not systematically capturing this data (or verifying it by triangulating at the non-partner and farmer level), but fully recognises the need to do so.

Respond (signs of resilience)

- Government policies continue to highlight the need for climate resilience and reforestation, and this along with the increasing impact of climate change, has helped stimulate demand (and build support) for tree growing from some traditional leaders. This is potentially impactful, with one traditional leader suggesting during the field research for this review that *'I want to become the tree growing champion for Zambia.'*
- There has been a general increase in discussion and awareness of climate change impacts and the value and importance of trees in Zambia – Musika believes that this is more coincidental rather than caused by changes in the system.
- Other market players, such as the Avocado Association, have become active in promoting avocado production, providing training to farmers, and starting to create aggregation and buying opportunities for smallholders in rural areas.

Performance changes in key functions in the Tree growing system

- Promotional activities by seven partner nurseries target smallholders with *information* about the potential benefits from growing fruit trees. The number of promotional events has increased from two in the first year, to thirty-five in the last year (these include radio events, stands and agriculture events and so forth).
- Improved production processes in all partner nurseries enabling *improved seeds* to be grown, throughout the year.
- Increased *extension and training* primarily as an embedded service by nurseries. The number of training events has increased to thirty-five in the last year, from only one in the first year and two in the second (but some partners, such as Havilla provide extension to individual customers, including farm visits).
- There has been no change in the provision of *technical advice* to nurseries (often provided by Musika).
- There has been very little change in the *technical equipment* function as in the main, this has been provided by Musika, but Kondwani and Havilla have started to commission the fabrication of equipment for themselves.
- There has been no change in the provision of *finance* to nurseries or farmers.

B: Dairy: behaviour and performance changes from Musika's work with processors

Adopt (initial pilot)

Musika partnered with Varun in Central Province, Zammilk in Western Province and Parmalat (now Lactalis) in Southern Province, all three of which invested in sourcing milk from smallholder farmers and working with MCCs. None of these partnerships are still live; the partnership with Parmalat/Lactalis closed in 2019 and the partnership with Varun closed at the end of 2020.

Lactalis fully adopted the change, extending their operations to reach more farmers by equipping five new MCCs with Musika's support. Whilst Lactalis acknowledge that they may have expanded their operations even without partnering with Musika, their view is that it would have been slower than it was.

Zammilk found that the information originally obtained on milk supply and stability in Western Province did not prove accurate and the low levels of productivity among Western Province farmers meant the operation was ultimately not commercially viable. After three years and after multiple attempts to address the obstacles, Zammilk withdrew from operations in the province.

Varun continue to source from smallholder farmers during the dry season (they have found the road network too poor to source from rural areas during the rainy season), but they have shifted to other areas because the farmers initially targeted through the Musika partnership were not able to sustain the levels of productivity required.

Adapt (signs of sustainability with partners)

There are encouraging signs of sustainability in Southern Province, where Lactalis have been investing. Lactalis reports that over the last year, productivity has improved among rural farmers thanks to awareness programmes and investment in rural MCCs. These MCCs now provide a series of embedded services themselves, including technical advice and information, equipment maintenance where needed, linkages to feed companies, and veterinary advice and artificial insemination. They have continued to invest and expand, for example by switching the cooling tanks Musika provided for larger ones. In fact, all but one of the collection tanks Musika bought have been upgraded. They are also starting to pay suppliers through digital platforms. Lactalis' has a genuine incentive to continue with this investment, as offtake volumes have increased substantially, from 319,785 litres of milk collected from MCCs in 2014 to 708,960 litres of milk from the MCCs in 2020 (this is partly through sourcing from more farmers, and partly from per animal and per household increases – see below). Signs of ownership and sustainability are strong.

Expand (signs of scale)

Two processors that Musika has not partnered with have begun sourcing milk from smallholder farmers. One of these – Finta - is a company that has been in the market for a long time but did not previously engage much with MCCs or smallholder farmers. The other is a new player in dairy – Dairy Gold. The Musika team are confident, based on their knowledge of the market, that these companies have started engaging with smallholders (or, perhaps, expanding to engage more with smallholders) as a result of the proof-of-concept Musika partners have demonstrated, but Musika has not collected information about this yet, nor intervened to facilitate scale-up. As the MCC model of aggregation was running prior to Musika's interventions in the dairy sector, and as this has not been monitored, it is not possible to draw conclusions on attribution. Nonetheless, these signs of (possible) crowding in

are very encouraging. Farmers interviewed for the review reported feeling more confident to invest in dairy as they see increased competition between processors. The competition has also pushed prices up, and given farmers more opportunity to negotiate for favourable contracts.

Lactalis has also expanded, opening a further three MCCs in the region. It intends to continue expanding further, including into parts of Western Province.

Respond (signs of resilience)

The fact that Lactalis has started replacing and upgrading cooling tanks for the MCCs they work with is encouraging, as is the fact that other processors have started sourcing from smallholder farmers, though currently most of the results come from one firm – Lactalis. To date, there are not yet many other changes in the wider system to point to that support this change and indicate likely resilience, though the Dairy Association of Zambia has invested in the sector, including in equipment for MCCs.

Performance changes in key functions

- *aggregation*: prior to Musika's partnership with Parmalat/Lactalis there were no MCCs in Namwala; farmers sold milk to informal markets and processors were not sourcing from the region (MCCs were operating and selling milk to processors in other regions). According to Musika's tracking, an estimated six to eight MCCs are now aggregating milk to sell to formal markets in Namwala, supported with storage and transport by Lactalis.
- *storage equipment*: of the six MCCs visited during fieldwork – three of whom were linked to Musika partners and three of whom were not – all had suitable equipment. However, nearly all the MCCs explained that their equipment was initially bought for them with donor funds (including through Musika). This suggests that the performance of the function has not yet sustainably improved, despite Lactalis' investment in equipment. (Note that there are two models for sourcing equipment – some MCCs buy their own equipment and then look for a buyer for their milk; others find a buyer who then sources equipment for them. Musika supports the latter model, which has much greater prospects for long-term sustainability.)
- *equipment maintenance*: five of the six MCCs interviewed reported being able to maintain their equipment, usually through a technician from the processor (Lactalis maintains the equipment at the MCCs it sources from). Kalomo Dairy (which is not linked to a Musika partner) explained that they were facing problems maintaining equipment, as they had to source a technician from Lusaka which is approximately 4 hours away.
- *transport*: in the 2020 AHS, 92% of farmers reported that being linked to one of the Lactalis-linked MCCs reduced the distance they needed to cover in their operations. Nonetheless farmers interviewed for this review did point out that some farmers still have to travel over 10km to get to the MCC. Some farmers had solar-powered fridges, which allowed them to drop milk off at the MCC every two or three days, instead of daily.
- *technical advice*: according to the AHS 2020 all 38 of the dairy farmers linked to Lactalis and surveyed for the AHS reported receiving technical information from the firm
- *breeds*: farmers who supply milk to formal markets, have better access to artificial insemination services. According to interviews done for this review Lactalis offers artificial insemination to its farmers as an embedded service, Zimba Dairy extends veterinary services inclusive of artificial insemination on credit to the farmers that supply milk to its collection

- centre, and Kalomo Dairy offers veterinary services including artificial insemination to its farmers, financed by contributions from farmers to the cooperative.
- *vet services*: some processors, like Lactalis, also offer vet services for free as long as the farmer supplies milk to them. Farmers report that this is a good service.
- *finance*: in the 2020 AHS 53% of farmers reported that they received payment through a bank account rather than in cash (compared to 25% in the control group).

C: Dairy: behaviour and performance changes from Musika's work with private veterinary companies

Adopt (initial pilot)

Musika partnered with fifteen vet companies to pilot the expansion of private veterinary services into rural areas through agents, thirteen of whom have adopted the model and expanded their offerings into rural areas. Of these, six partnerships are currently live.

Adapt (signs of sustainability)

Signs of sustainability vary among partners. Some partners have made their own investments, showing signs of ownership of the new model. For example, Musika supported Silverlands with seven spray stations, and they now have thirty-four. Similarly, Musika supported Munzuma with spray stations, and a local fabricator in the area, who can make similar equipment at a cheaper price, has started supplying these directly to smallholder farmers. Another positive example is Bimeda, who has continued to provide dipping services since the partnership with Musika closed. However, others have not been able to continue operations. For example, Leife withdrew its services from Northern region after Zambeef withdrew as, without a commercial market for meat, farmers were not inclined to invest in vet services.

Expand (signs of scale)

Musika has recorded two examples of unsupported veterinary companies expanding their operations to reach rural farmers. Commercial farmers in Mazabuka set up a franchise of Livestock Services in Mazabuka in order to reach rural farmers. According to conversations between Musika and Livestock Services, this was inspired by observing Griffins (a company offering agricultural inputs through a digital platform) and Silverlands. Twapona Agrovets has also expanded to offering inputs to rural farmers, but the reason for this change is not known.

Respond (signs of resilience)

To date, there has been little monitoring of wider system responses and how they may support or undermine the resilience of the changes Musika has supported. From their general knowledge of the market, the Musika team point to the importance of policy development and enforcement for the dairy sector. This is a work in progress and Musika hopes to work with the Dairy Association of Zambia to promote the development and enforcement of supportive policies. Monitoring and inspection from the Zambia Medicines Regulatory Authority is expected to promote growth in the veterinary services sector, as it will restrict unlicensed and unknowledgeable individuals from selling cheap medicines without technical advice to farmers. Overall, the market is still relatively nascent.

Performance changes in key functions

Performance changes in key functions have not been closely monitored. However, the presence of improved vet services – both embedded in MCCs and offered independently – imply greater access to technical advice, artificial insemination services, veterinary services like dipping and spraying, and veterinary drugs. This is supported by evidence from both veterinary services providers who confirm that they offer these services to rural farmers and report growing demand, and by evidence from farmers interviewed for the field research who confirm that they increasingly use these services. Farmers also reported that the veterinary services available from private sector providers was better quality than those available from public sector providers. However, Musika is not able to quantify improvements to the quantity, quality, price or timing of these functions.

D: Digital finance: behaviour and performance changes from Musika's work with e-commerce platforms

Adopt (initial pilot)

All three of Musika's partners – Emsika, Griffins and Ag1 Global – are expanding their services into more rural areas, with Musika's support.

Adapt (signs of sustainability with partners)

There are strong signs of ownership, given that this is relatively new intervention area. Emsika for example, has developed an e-learning portal on their website, of their own initiative and in response to farmer requests. It is broadening its supplier base, and network of agents and is expanding into other parts of the country. Emsika has also invested in transportation, delivery and promotion, buying its own delivery truck, taking on the salary of the personnel initially supported by Musika and hiring an additional member of staff.

Griffins has also shown strong signs of ownership. It has continued investing in promotional activities and training for the agents it has engaged, it has adapted the model from the one initially trialled with Musika to make it more cost-efficient for agribusinesses to stock their products and reducing the time lag from order to delivery, and expanding into new areas.

Expand (signs of scale)

So far Musika has not noted signs of other e-commerce agricultural input suppliers expanding their services to rural areas. The only signs of expansion come from partners (as noted above).

Respond (signs of resilience)

A real risk to resilience is that the resources Musika provided to partners are not readily available in the system, but increasing digitisation in both the financial services sector and in agricultural is happening quickly. Although not in response to the changes supported by Musika, there are changes in the system that will further enable the changes that have been supported by Musika. For example, there is a newly formed association – the Digital Practitioners' Association – which it is hoped can play a role in linking service providers to rural agribusinesses who can act as agents. The Bank of Zambia has enhanced regulations to be more enabling to digital platforms, spurred on by COVID19, while institutions such as the Payments Association of Zambia are supporting the e-commerce agenda. Mobile network coverage and access to phones are also growing in rural areas, and the FISP e-voucher scheme also played a key role in enhancing small holder farmers' access to digital platforms.

Performance changes in key functions

So far there are not many performance changes to the supporting functions of the e-commerce inputs market, as Musika has supported partners to overcome these obstacles directly, rather than changing how the functions worked. One supporting function that has been monitored and has improved is the network of access points, which has increased in quantity. However, this may not be sustainable, as currently e-commerce providers rely heavily on AAI, a time-bound, donor-funded training programme, to access reliable rural agribusinesses who could act as agents for them. According to Musika's monitoring, e-commerce platforms are also investing in doing more frequently promotional activities, suggesting that the performance of the 'information and promotion' function has improved, though how effective the promotion is, is not yet monitored.

As a result of the important changes made by Emsika, Griffins and Ag1 Global, it is likely (and reported by partners) that better quality inputs, and more affordable inputs, are now available to farmers. Unfortunately, this is not yet monitored by Musika. Partners, however, report growing interest in their platforms among rural customers.

E: Digital finance: behaviour and performance changes from Musika's work relating to digital financial transaction services and banking services

Adopt (initial pilot)

Zanaco AgriPay, Zoono and UBA do not all provide users with the same innovation. AgriPay is largely used to enable offtakers to pay farmers securely. It has been integrated into Zambia Breweries' traceability system, and is being used by other buyers too. It also provides the option for a savings account but this does not yet pay interest. Zoono has adapted its operations in response to competition, and is now a distributor of other service providers' products. It is attempting to improve interoperability between platforms, which has previously been a challenge in Zambia. Thus far, UBA is one of several secure platforms for women to receive GEWEL cash transfers, and it provides the option for a savings account, but as with Zanaco's account, this does not yet pay interest.

Adapt (signs of sustainability with partners)

Signs of ownership and sustainability vary between providers. Zanaco has found that many of its users only use their account once, or use it very infrequently. For now, accounts that are not used regularly become dormant – something that farmers in the field research reported as a frustration. Zanaco did not expect AgriPay to be immediately profitable, and thus far the costs of development and rollout have been heavily subsidised by donors; nonetheless, it is still investing in improving the platform. Zambia Breweries have also continued to adapt its online payment platform (which integrates AgriPay) to respond to challenges. These investments are indicators of ownership, but given the high level of donor funding and involvement to date, it is not yet possible to assert that the innovations introduced are sustainable.

Zoono has recently changed its strategy and business model, as it had not previously been able to compete with mobile network providers who entered the market. Musika supported this process, and Zoono also did several branding pilots that were not supported by Musika. According to Zoono reports (made available to Musika) initial results from the branding pilots showed a +12.5% growth in transactional value of the rebranded outlets compared to non-branded outlets, with a variance of +7% to +30.3% depending on the branding design and location. Zoono's conclusion is that it needs to re-

brand its entire network, and promote the diversity of products it makes available from just one location to both existing and potential customers. Zoono express a strong commitment to continuing to reach the rural market, as this is core to their success as a business.

Expand (signs of scale)

There are numerous providers entering the digital financial services market, and many of these are focusing on the peri-urban and rural markets as competition increases in urban markets. These include mobile networks (like Airtel, MTN and Zamtel), and financial institutions, who are increasingly digitising. This expansion cannot, however, be attributed to Musika's work, although the presence of Zanaco and Zoono may have been 'proof of concept' models for some new entrants.

Respond (signs of resilience)

As with e-commerce providers, increasing digitisation provides an enabling environment for the changes Musika is supporting.

Performance changes in key functions

This is not currently being monitored by Musika, and is difficult to comment on in aggregate given the variation in services being offered.

ANNEX 2: COMPARATOR MODEL REVIEW

An earlier version of this report was originally included as an annex to the Inception Report for this review in August 2019.

Introduction

The market system development (MSD) approach to development has, over the course of the last two decades, been applied in a variety of sectors and countries by a diverse set of organisations. To date, most of the organisations that have applied the approach have been implementors contracted by donors to run time-limited programmes with a specific poverty-alleviation objective. However, in recent years a number of examples of organisations that use different institutional arrangements to apply the MSD approach have also emerged. In some cases, a donor-funded programme has been transitioned to a trust, charity or company. In others, organisations have been set up specifically to deliver MSD ‘facilitation.’

To our knowledge, so far there is no widely accepted label for, or definition of, such ‘alternative’ institutional vehicles for implementation in the field. For this brief ‘comparator model review,’ which looks at the advantages and risks of such institutional arrangements we will refer to these organisations as ‘special purpose vehicles’ (SPV) for MSD implementation. Musika is an example of such an SPV.

Musika’s institutional arrangements

Musika is a Zambian non-profit company, registered as a private company limited by guarantee and owned by six Zambian institutions that are connected to the agriculture sector. Musika was formed as a follow on from the \$22.4 million USAID private sector development programme Production, Finance and Improved Technologies (PROFIT) which ran from 2005 to 2010.¹⁵ At the close of the PROFIT programme some results were only just beginning to materialise in the markets they had been working in, and the team saw potential for long-term, locally-owned facilitation work which built on these results.

The company was registered in July 2010 and started work in November 2011, initially funded by Sida and (from 2012) DFID. To date, it is run in large part by the same staff as the PROFIT programme and remains predominately funded by Sida which supports core costs, though it also now receives funding from a number of other donors for specific activities. Musika has a vision for permanence and an ambition for growth; the organisation has recently invested in examining options for organisational sustainability.

Musika sees the approach it takes as strongly driven by MSD principles, particularly with respect to their commitment to work through private sector partners and to avoid distorting market systems by engaging in direct delivery activities. Strategic decisions are made primarily by Musika’s management team, who report to a Board of Directors. Sida has a representative on the Board, as an observer.

¹⁵ The programme was implemented by a consortium of the Cooperative League of the USA (CLUSA), the Emerging Markets Group (now, Cardno), and International Development Enterprises. Its mandate was to improve agricultural productivity, especially among smallholder farmers. For more details, see Dougherty and Akcin (2012).

What this review will cover

This comparator model review forms part of the inception phase of an external review of Musika. Its objective is to enable Musika and its funders to learn from other SPVs in the MSD field. It starts by outlining what organisational characteristics have, over the years, been shown to be conducive to good MSD facilitation. It then examines what makes SPVs different from typical programmes and outlines the potential advantages and risks of these differences. It concludes with lessons and explains how these will shape the external review in the consultative phase.

Sources

This review is based on:

- the Springfield team's extensive experience of supporting a diverse array of market system development implementation 'vehicles' and the lessons captured over the years in the process, particularly with regards to transitioning MSD practice away from donor-dependent programmes towards more independent organisations;
- (remote) interviews with individuals who have been and/or are involved in the thinking and development of MSD frameworks, and in MSD implementation through SPVs in a variety of sectors and regions, including in Kenya, South Africa and Zambia;¹⁶
- learning about different implementation models that has been captured elsewhere, particularly from *FSD Kenya: Ten years of a market systems approach in the Kenyan finance market*.¹⁷
- consultations with Musika personnel which shaped the review's understanding of the relevance of these lessons to Musika itself.¹⁸

What makes an MSD organisation successful?

The starting point for this comparator review is to ask "What makes an MSD implementing organisation successful?"¹⁹ Examining what an organisation is trying to do – i.e. what the appropriate functions of an MSD implementor are, according to MSD's definition of success – provides a basis for exploring what organisational form will best support those functions.

MSD was developed to achieve long-term, large-scale poverty alleviation through facilitating changes in market systems to enable people to increase their incomes through market mechanisms (instead of through the direct delivery of support to people experiencing poverty). The objective of MSD interventions is to catalyse changes in systems that will last without further development facilitation or investment (sustainability), and that will benefit large numbers of people (scale).

¹⁶ For this review we interviewed Vlada Petrovic, Peter Roggekamp, David Ferrand, Brendan Pearce, and Joanna Ledgerwood.

¹⁷ Gibson, A (2016), available at: <https://s3-eu-central-1.amazonaws.com/fsd-circle/wp-content/uploads/2016/09/30092553/FSD-Impact-Study.pdf>

¹⁸ Thanks in particular to Reuben Banda who was interviewed for this comparator model review.

¹⁹ Thanks to Peter Roggekamp for this insight on shaping the comparator model review by asking the right question.

In MSD implementors play a number of different roles which are, collectively, referred to as facilitation (see Box 1). The specific forms of support an MSD implementor provides to partners to facilitate change vary, but all are focused on using the implementors' resources (such as information, technical skills, relationships, reputation and finances) to overcome a short-term obstacle to a market players' investment in long-term change.

Facilitation involves playing a variety of roles, including:

- research and analysis to identify relevant systems, understand why they are not working well for certain groups of people, and detect opportunities for sustainable change;
- envisioning realistic and sustainable ways for the system to work more inclusively and beneficially;
- relationship and partnership building, brokering, negotiating and sometimes convening a wide variety of system actors;
- negotiating and delivering *short-term* forms of support that will enable system actors to behave differently in the *long-term*;
- monitoring and measuring to test what happens as a result of the changes made and adapting accordingly.

Box 1: An MSD implementor plays many roles

Implications of the facilitation role for MSD organisations

Being a facilitator is fundamentally different from being a direct delivery development agency. The roles a facilitator plays (see Box 1) have implications for how quickly change will happen, what kind of skills are needed among personnel, how much and how quickly strategy will change, how resources will be allocated, what kind of results can be reported and when, and many more aspects of operations. Experience has shown that to do facilitation successfully, in MSD terms, therefore requires certain organisational traits.²⁰ These include:

- *A high-capacity team*: facilitation requires an unusual combination of skills and traits, many of which are not easily taught. It also requires technical and contextual knowledge.²¹
- *Impact-orientation and a disciplined commitment to catalysing system change*: facilitation focuses on outcomes and impacts rather than on activities, outputs, and deliverables. This requires a commitment to working indirectly through existing market players, disciplined focus on the goal of system change and near constant testing, monitoring, and learning.
- *Credibility, depth of understanding, and independence*: credibility is built on sound analysis and research, a deep knowledge of the market and a proven reputation for impartiality, neutrality and independence. This requires building strong relationships with market players, without becoming overly driven by their interests, or by funders' agendas.
- *An ability to be flexible and responsive*: markets are largely unpredictable, and an MSD implementer's strategy will necessarily change as it learns more, and as new opportunities arise. It's therefore important to be able to adapt strategy, resource allocation and priorities as new evidence emerges.

²⁰ These are drawn from experience, from the interviews conducted and from publications on MSD.

²¹ For more on this, see for example Gibson (2016) *FSD Kenya*, p. 40 "Facilitation is a people-intensive task...Facilitation requires a range of attributes – such as technical knowledge, market awareness, empathy and enterprise – which don't have to be vested in one individual (and usually aren't) but to be available to the facilitating organisation."

- *An appropriate risk appetite and acceptance of failure:* MSD implementors work through permanent market players and do not have full control over the outcomes; they need to be willing to try things that may fail. Being overly risk-averse can lead programmes to fall into the trap of focusing on a large number of interventions that seem more likely to yield results than the potentially riskier but more important interventions addressing the root constraints preventing larger system changes.
- *An ability to think long-term:* system change rarely happens quickly, so a system change ambition necessitates long-term engagements, especially true when working in markets that are new and undeveloped, or that have particularly stubborn constraints.

What makes an SPV different from a programme?

Programmes, projects, trusts, charities and companies – and the contexts they work in – are so heterogeneous that it is difficult to generalise about differences between them. Nonetheless, there are several characteristics of SPVs that tend to distinguish them from more typical programmes or projects among MSD professionals. These include:

- *Longevity:* whereas a programme is funded for a defined period, after which it is either extended for a finite period, or closes down, an SPV rarely has a defined date for closure and it is often ambiguous whether it is ever expected to close.
- *Strategic independence:* an SPV usually has its own business plan and strategy, which donors fund (and to varying degrees, shape). The distinction here is not absolute, but SPVs are usually, to some extent, independent entities that make their own strategic decisions.
- *Localisation:* SPVs are often local organisations, while programmes are often run by international or global organisations.
- *Funding:* SPVs have scope to diversify their funding streams, pooling funds from multiple donor sources towards one set of strategic aims. Whilst programmes may also be multi-funded this is usually driven by the donors themselves, rather than the programmes. Donors often expect SPVs to diversify their funding streams; programmes are usually restricted from doing so. Some SPVs, unlike programmes, have self-generated revenue streams.
- *Legal constitution:* SPVs use a variety of legal structures ranging from trusts to companies limited by guarantee. Sometimes SPVs are set up to replace a programme precisely because the regulatory environment is more permissive, less bureaucratic or less politicised for certain kinds of organisational entities than others.²²

Rationale and Risks

The following section outlines the advantages and corresponding risks that these characteristics of SPVs' organisational structures tend to lead to.

²² Programmes may be implemented by companies, trusts and charities too. There is a difference between being funded to implement an organisation's own strategy and being funded to implement a programme, but again, the distinction is not absolute.

Longevity:

Key advantages: Greater longevity allows time for SPVs to develop *valuable institutional memory* and *a deeper understanding of markets and players* than programmes usually can. It can also allow them to *pursue a system change agenda* without being distracted by the need to get reportable results within a tight timeframe. Longevity can also enable SPVs to build long-term partnerships and *gain the trust of system players*, especially the public sector.

Longevity can enable SPVs to *attract, invest in and retain quality staff*. One interviewee noted that longevity can allow SPVs to build a strong reputation as an employer. Ideally this leads to a team of motivated staff who are well-versed in MSD and, between them, offer the skills, traits and knowledge that enable good facilitation.

Key risks: The biggest risk to SPVs of their potential longevity is that as it is nearly always ambiguous how long they are meant to last. As SPVs have strong incentives to keep their organisations going, there's a danger that SPVs *continue intervening in markets for longer than is helpful*. This can have a distortive effect, undermining the sustainability of system changes. There is an inherent tension between being a permanent organisation and playing a temporary role, which can be exacerbated by market players who perceive SPVs to be permanent market players themselves.

Although there are benefits, there are also risks inherent in retaining staff. Long-term team members can inadvertently become *less innovative, disruptive, open-minded and critical* than staff members who are new to the job, or even to working in development. One interviewee noted that over many years, recruiting 'fresh' team members had proven critical to developing the kind of internal critique and debate needed to build credibility and test assumptions.

Strategic independence

Key advantages: In theory at least, SPVs are facilitators that set their own strategic agendas. They are usually not-for-profit entities, so their *internal incentives are aligned with the impact-orientation required to do good facilitation*, rather than with making a profit as contractors. SPVs' structure can allow them to use their understanding of the market to push back on donors' issues and interests which are not relevant. SPVs that have multiple funders are also *less vulnerable to any one donor's requirements and constraints*, and those that have some self-generated funds have even greater independence. *In some cases, SPVs' strategic independence allows them to be more flexible and adaptive than programmes can be, though this depends on who their funders are and on governance structures.*

Key risks: SPVs that have one dominant funder can be just as susceptible as programmes to aligning their strategy with what (they think) the donor wants, whether or not their market analysis suggests this will achieve impact, and whether or not it lines up with their mission. An additional temptation for SPVs is to *do whatever they are asked by donors willing to fund them*, in order to 'stay in business.' *To balance their strategic independence, it is therefore especially important for SPVs to ensure they have sufficiently robust debate and internal challenge on the team and make evidence-based decisions.*

SPVs can also become *overly reliant on donors*, confident that funding will continue regardless of impact. This can lead to a lax attitude towards achieving and measuring impact. *Too much flexibility can lead to strategic drift*, and if it is accompanied by generous funding, to *doing too much*.

Localisation

Key advantages: Localisation can give SPVs the advantage of a *close, deep understanding of the market*, which is critical to effective facilitation. Being a locally grounded organisation can also help SPVs *position themselves as credible and trustworthy facilitators*, which can make it easier for them to build strong partnerships with market players. Sometimes SPVs are set up precisely to shake the perception that programmes are little more than representatives of international donors and therefore temporary sources of large sums of cash.

Key risks: One of the risks of localisation is that SPVs can *fail to invest sufficiently in analysis* because they rely instead on local knowledge. This is perilous, as analysis can highlight counter-intuitive and hidden realities that can be missed by organisations that rely too heavily on an intuitive understanding of the market. Being too close to the market, without the counterbalance of rigorous research and analysis, can also lead SPVs to be *overly driven by partners*. Strong relationships are essential to good facilitation, but so too is a degree of independence. SPVs that are too close to their partners may rely on biased information or be inclined to keep investing in partners even when a partnership is not working well, or when the partner no longer needs additional support.

Alternative funding models

Key advantages: SPVs that are funded entirely by one donor for 3-5 years differ little from programmes in their funding model. SPVs that are entirely donor-funded, but that manage to pool resources from multiple donors to fund their business plan and/or secure funding for longer time periods have the advantages of greater longevity and, to some extent, strategic independence. SPVs that have their own income streams have the additional advantage of *stability* over a longer time period than programmes and of even more strategic independence, as they are able to fund work that doesn't align with donor interests, and to plug gaps when they arise.

Key risks: The biggest funding-related risk for SPVs is *the expectation that they should be financially self-sustaining* because they are long-term, independent organisations. Facilitation, by definition, is not commercial, as if there were permanent market players who – collectively or independently – had both the incentives and capacity to 'buy' facilitation, then, by definition, they would have the incentives and capacity to instigate the desired changes and therefore wouldn't need facilitation. Of course, some players – such as government, or industry bodies – do buy skills, expertise, networks, and other resources to instigate system change, but this involves recruiting consultants, trainers and other experts, not facilitators.

Consequently, SPVs that are pressured to become self-sustaining have a limited number of funding models available to them. One is to become consultants, selling models developed with donor funding. For example, Veeda PSD LLC in Serbia is not currently donor funded, but it was funded almost entirely by donors for the last decade (until February of this year), and it intends to source donor-funding in the future. Currently, it is staying afloat by working as a consulting company selling the models that have already been proved successful, and that were developed and piloted with donor funding. However, they will need further donor funding to be able to return to facilitation work.

Another option is to set up a consulting arm of the SPV which offers consultancy services separately to its facilitation services. An example is FMT, which does primarily donor-funded facilitation work but also has a branch that sells data products commercially, building on and expanding FinScope – a survey product that was developed and piloted with donor funding. This bit of FMT operates like a private

consulting firm. The advantage of this approach is that self-generated funding can give FMT's facilitation work independence and stability. The risk is that it can compromise the facilitation work. Trying to play two roles simultaneously – one of a temporary market catalyst (facilitator) and the other of a permanent private sector player (consultant/service provider) can create conflicting incentives internally and confusing signals to market players externally. One interviewee also noted that the drive to build income generating activities can be a major distraction from facilitation work.

A third approach is for SPVs to find alternative mechanisms for funding their facilitation work themselves. For example, FMT has some income from dividends, as it has invested its reserves, though it was only able to build up these reserves through the commercial data consultancy work it does. Another approach would be to fundraise for facilitation work, though this would only diversify the SPV's sources of donor funding, not move them away from donor funding altogether. The need to constantly fundraise can also be a distraction from facilitation work.

Conclusion: lessons and implications

The opportunities and risks associated with MSD implementation through a SPV are relevant to Musika, and raise important questions for it, and its funders, to consider. As such, the external review of Musika will incorporate an assessment of the extent to which Musika is managing to leverage the potential strengths of its organisational model and mitigate the common risks.

This comparator model review suggests two key lessons which shape the questions the external review will apply to Musika in its consultative phase.

Lesson 1: Organisational sustainability can disincentivise good facilitation

Findings from this review suggests that pursuing organisational sustainability can create incentives that run counter to those that enable good facilitation, because it pushes an implementor towards a twin focus on its own *permanence* and on finding ways to provide *commercial* services, while facilitation is an inherently *temporary* and necessarily *uncommercial* role.

There is a tension in MSD between the advantages of longevity, and facilitation's inherently temporary nature. SPVs, understandably, have strong incentives for perpetuating their own existence, but this can be at odds with the finite, catalytic role of MSD facilitation. To manage this tension, an implementing organisation has to be remarkably disciplined about exiting markets and entering new ones – and this is far more challenging for a highly localised organisation than for a global implementing organisation.

To apply this to Musika, the external review will pay attention to the ways in which Musika manages the tension between longevity and the temporary nature of facilitation, and to the implications of potential future funding models for the organisation's facilitative role.

Lesson 2: "Form matters – but is not a panacea."²³

The differences between programmes and SPVs are tendencies, not absolutes, and the way donor(s) and implementor jointly manage operations is as important as whether an implementor is a programme or an SPV. For example, one of the most frequently cited advantages of an SPV over a programme is its longevity but SPVs can fail to leverage the potential advantages of this if they have unstable funding. According to interviewees, if SPVs' funding patterns mirror those of typical

²³ Gibson (2016) *FSD Kenya*, p. 40

programmes, they are likely to operate like typical programmes, and perhaps even see themselves as such. On the other hand, interviewees also reported that overly flexible, long-term funding can lead to complacency, or strategic drift. Whilst no structure will automatically lead to effectiveness, there are unique incentives and capacities associated with different organisational forms, and it's critical for both SPVs and donors to be attentive to the ways these affect facilitation.

Given this, questions that are relevant to Musika are:

- *A high-capacity team:* Has Musika been able to effectively build human resource capacity, attracting, investing in and retaining staff with the skills, knowledge and orientation required to do facilitation work? Has retaining staff been associated with losing the disruptive, innovative or critical voices that can come with new staff? Is there sufficient internal critique and debate?
- *Impact-orientation and a disciplined commitment to catalysing system change:* Are Musika's incentives aligned with an impact-oriented focus on pursuing a system change agenda? Does Musika sometimes continue intervening in markets for longer than is helpful? Is there a risk of becoming overly driven by partners' agendas, or by donors' agendas? Does the team do too much? Is Musika disciplined about making strategic decisions on the basis of evidence and analysis?
- *Credibility, depth of understanding, and independence:* How does Musika build and leverage its institutional memory? Does it have a deep understanding of the markets it works in, based on both local knowledge and research? Is it seen as a credible and trustworthy facilitator? Does it invest sufficiently in market analysis?
- *An ability to be flexible and responsive:* Do Musika's governance and decision-making structures enable it to be flexible and responsive? Is this balanced with accountability? Does Musika adapt? Is it agile?
- *An appropriate risk appetite and acceptance of failure:* Do internal incentives allow for failure? How do team members understand 'success' and 'failure'? Is the portfolio of interventions appropriately risk-balanced?
- *An ability to think long-term:* Do Musika's funding arrangements allow it to use its longevity to strategic advantage in pursuing system changes? Does Musika's strategy reflect long-term thinking? How well is this balanced with the need to be play a temporary role in markets?

ANNEX 3: CONSULTATIONS

The following stakeholders were consulted as part of the review process in this final phase of the review:

A: The Musika team

- Tree growing Lead
- Dairy team
- Digital Finance team
- MRM team
- Research Lead
- Gender Lead
- Environmental Markets Lead (same as Tree growing Lead)
- The Head of Knowledge Management
- The Operations Director
- The Managing Director

B: External Stakeholders

Tree Growing:

- Partners: Havilla, Rainlands, Kondwani (the latter remotely)
- A non-partner nursery in Solwezi: Elizabeth Jibinga
- Farmers: 6 tree growers
- Other stakeholders: Chief Mumema, Solwezi

Digital Finance:

- Partners: Griffins, Zanaco, Zoon and Emsika
- SMEs: 6 agents/SMEs using Griffins, Emsika, Zanaco, ZPOS
- Farmers: 12

Dairy:

- Processors: Lactalis, Zammilk (the latter remotely)
- MCCs linked to partners: Chitongo MCC, Mungaila Dairy, Nico MCC
- MCCs not linked to partners: Zimba Dairy, Kalomo Dairy and Choma Dairy
- Vet service providers (partners): Silverlands Ranching VET-24, LVSCC
- Non- partners in the veterinary sector: vet in Mkushi, Livestock services
- Farmers: > 25 farmers
- Other stakeholders: Dairy Association of Zambia