Last Mile Distribution

State of the sector update 2022

Global Distributors Collective

Contents

About the Global Distributors Collective

The Global Distributors Collective (GDC) is a collective of over 150 last mile distributors around the world. Members operate across more than 50 countries, selling beneficial products such as solar lights, improved cooking solutions and water filters. The GDC is dedicated to supporting and representing its members to help them reach underserved customers, and to developing the last mile distribution (LMD) sector as a whole. The GDC is hosted by Practical Action alongside strategic and implementing partners Hystra and Bopinc.

For more information about the GDC please visit www.globaldistributorscollective.org or email GDC@practicalaction.org.uk

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Executive summary

Last mile distributors (LMDs) play a crucial role in driving demand for and delivering beneficial products to the hardest-to-reach customers. In 2019, the Global Distributors Collective's Last Mile Distribution: State of the sector report provided the very first overview of the LMD sector, LMD's business models, impact and the challenges they face. Much has changed since then, not least due to the Covid-19 pandemic. At the same time, the GDC's understanding of the LMD sector has significantly deepened. The GDC's now more than 150 members have together reached more than 34 million people. They have consistently and openly shared their experience, data and wisdom since the GDC launched in 2018, giving rich insights into successes, challenges and innovations in the sector. This report would not be possible without them.

This update provides an overview of how the LMD sector has evolved since 2019, and what the future looks like for LMDs. Firstly, it reflects on the GDC membership profile, progress and impact of members, based on data from 132 members surveyed in 2022. It finds that overall the sector seems to be growing and achieving higher levels of impact, in spite of Covid-19 and despite LMDs facing largely the same challenges in 2022 as they did in 2019, in particular access to finance. There has been some churn among young, small companies, but less than expected and LMDs are demonstrating a clear interest in accelerating gender inclusivity.

Two broad LMD 'archetypes' are introduced to better characterise their paths to sustainability: 'Local livelihood' LMDs who train and support village-level entrepreneurs to become sales-points for a suite of beneficial products; and 'Dedicated Salesforce' LMDs who work with dedicated sales agents who sell a small product range to a large number of customers over a wider geographical area.

Secondly, it reveals four major trends in the LMD sector observed from data and insights drawn from the GDC membership and beyond:

Trend 1: Access to finance

Despite this remaining a key barrier for LMDs, more fit-for-purpose solutions are emerging. Almost two-thirds of members have raised at least one kind of funding since 2019. There is a growth in the number of funders – providing all types of capital - exploring how to support models of growth beyond geographic scale. Digitalisation has led to new opportunities to use data to reduce transaction costs, offer smaller ticket sizes, and invest in smaller LMDs. Crowdfunding is an increasingly important source of funding for LMDs and the most common form of debt for GDC members. There is also growth in the number of models that bundle equity with technical assistance, or build investment-readiness capacity. Yet carbon-finance, results-based financing and local finance remain under-exploited.

Recommendations:

Associations can convene funders to share market intelligence and collaborate. **Investors** and **donors** can make results-based financing more inclusive for LMDs and leverage data-driven approaches to investment, and **donors** can focus on de-risking crowdfunding platforms and supporting advisory services for LMDs.

Trend 2: Digitalisation

Digitalisation has been the most dramatic shift in the sector since 2019, accelerated by Covid-19. There has been an explosion of increasingly sophisticated digital solutions that LMDs are leveraging to digitalise business functions. Particular highlights include the rise of assisted e-commerce; digital marketing; online field staff training; and digital after-sales service. This is creating efficiencies and unlocking new opportunities to leverage data, although in-person activity remains key for LMDs.

Recommendations:

LMDs can actively explore digitalisation. **Digital Service Providers** can explore different pricing models to improve affordability; be transparent about costs; and improve interoperability. **Donors** and **investors** can support the development and tailoring of digital solutions for LMDs, and help increase the affordability of specialised software brokers.

Trend 3: Product diversification

LMDs seem to have found their ideal number of product categories, and are expected to continue to diversify within the categories they already sell, rather than moving into new categories. There has been high growth in the number of LMDs selling productive use technologies, although this has not been straightforward due to the complexity of these products. Across product categories, after-sales support and quality assurance are proving more important than ever, though challenges remain in sourcing affordable quality products.

Recommendations:

LMDs should exercise caution when expanding into new product categories. **Suppliers** and **donors** can help LMDs build their capabilities to sell complex products through technical assistance. **Associations** and **suppliers** can strive to make product testing data open and available, and support LMDs to conduct field-testing of new products with co-funding from **donors**.

Trend 4: Consumer financing

More LMDs are providing consumer financing, though often reluctantly, and this trend is expected to continue with increasing adoption of PAYGO software. However, this is the second biggest challenge identified by LMDs after access to finance, likely because it makes managing working capital, particularly receivables, significantly harder. LMDs are becoming more sophisticated in how they manage credit risk, but overall consumer financing in the LMD sector has a long way to go and more data is needed.

Recommendations:

LMDs can focus on embedding risk management and smart use of working capital into core business. **Donors and investors** can do more to help LMDs build their credit risk and working capital management capabilities, and explore new ways to finance working capital for accounts receivables. **Donors** can fund further research into best practices in consumer financing.

Conclusion

At the heart of the findings of this update is that the last mile distribution sector is impactful, resilient and increasingly professional. LMDs are growing in the face of challenges and a global pandemic; are efficient in how they use capital; and remain focused on serving low-income and remote customers with a greater variety of beneficial products and a stronger focus on quality and after-sales service. This is evidence of the vast potential impact at the last mile if LMDs can be supported to build on their successes and ride the wave of digitalisation. Key to unlocking this potential is access to the right kind of finance at the right time. It will also depend on the capacity of the sector as a whole to learn from LMDs' experiences and accelerate growth and impact.

Background and methodology

To meet the Sustainable Development Goals (SDGs), last mile populations need access to beneficial products and financing to afford them. Last mile distributors (LMDs) have a crucial role to play in driving demand for these products and delivering them to the hardest-to-reach consumers. The Global Distributors Collective's membership alone has reached more than 34 million people with products including solar lights and appliances, productive use technologies, improved cooking solutions, water filters and agri-inputs, as well as nutrition and health products.[1]

A wide range of organisations engage in last mile distribution, including retail outlets, multinational corporations (MNCs), microfinance institutions (MFIs) and manufacturers with proprietary distribution networks. At the Global Distributors Collective (GDC), we serve a subsector of this sector, focusing on companies whose **core business** is the distribution and sale of **beneficial** products to last mile households, i.e. households that are **poor and/or remote**. We focus on these specialised LMDs in this update.

The 2019 *Last Mile Distribution: State of the sector report*[2] provided the very first overview of the LMD sector and LMDs' business models, impact and the challenges they face. It was based on surveys with 72 GDC members as well as key informant interviews and a literature review. However, a great deal has happened since that report was published, not least the Covid-19 pandemic.

The objective of this update is to provide an overview of how the LMD sector has evolved and what the future looks like for LMDs. It includes two parts:

- An update of the GDC membership profile and reflections on overall progress and impact of members, based primarily on a survey conducted with 132 GDC members in 2022. This 2022 member survey provides a useful baseline and is intended to be repeated on a bi-annual basis.

- An overview of four major trends in the LMD sector, based on insights, data and case studies gathered since 2019, drawing on the GDC membership and beyond. This is accompanied by recommendations to LMDs, manufacturers, service providers, donors, investors and associations on how to further progress and support the LMD sector to reach more people at the last mile with beneficial products - accelerating progress towards the SDGs.

Note on data sets

The following GDC data sets[3] are used or referred to in this update:

- **Sign-up survey:** LMDs complete this when they sign up to become GDC members
- **2019 report survey:** interviews undertaken for the 2019 Last Mile Distribution: State of the sector report (72 LMDs, all GDC members)
- **2020 Covid-19 survey:** survey between March and April 2020 to understand the immediate impact of Covid-19 on the LMD sector (29 LMDs, all GDC members)
- **2021 growth research:** interviews to understand the growth and fundraising journeys of LMDs (21 LMDs, all GDC members)
- **2021 Covid-19 research:** interviews to assess how LMDs are innovating and adapting following Covid-19 (23 LMDs, not all GDC members)
- **2021 digitalisation research:** survey to evaluate how LMDs are using digital solutions (28 LMDs, all GDC members)
- **2022 member survey:** survey of members between November 2021 and February 2022 (132 LMDs, all GDC members)

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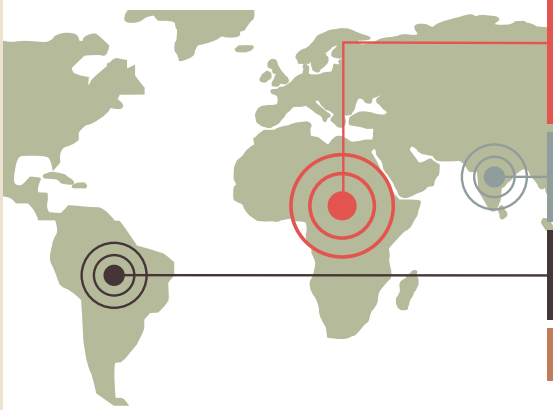
GDC membership overview

Survey conducted with 132 GDC members

Geography

Members operate across 58 countries



42% operate in East Africa, **20%** in West & Central Africa, **15%** in Southern Africa

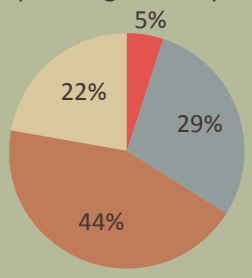
10% operate in Asia & Pacific

4% operate in Latin America & Caribbean

9% are multi-region

Years of operation

On average, members have been operating for 6.8 years



< 2 years
3-4 years
5-10 years
> 10 years

Impact

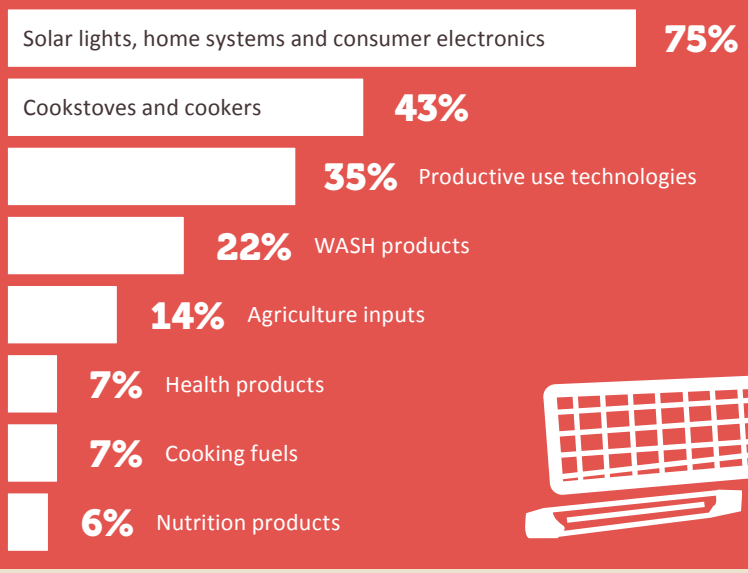
217,000

is the average number of people reached to date by GDC members

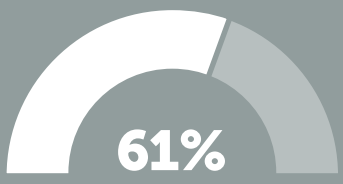
69% of customers earn **<US$3.20** per day and **80%** are rural

Products

68% of members sell more than one product category



Distribution Channels

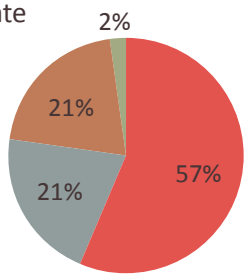


of members sell through more than one channel

- Direct to consumer and/or through sales agents – **93%**
- Retail – **44%**
- Community channels – **44%**

Ownership

78% of members are wholly or partially owned by citizens of the country(ies) in which they operate



National
International
Mixed
Other

After-sales and consumer financing

98%

offer after-sales services

78%

offer consumer financing

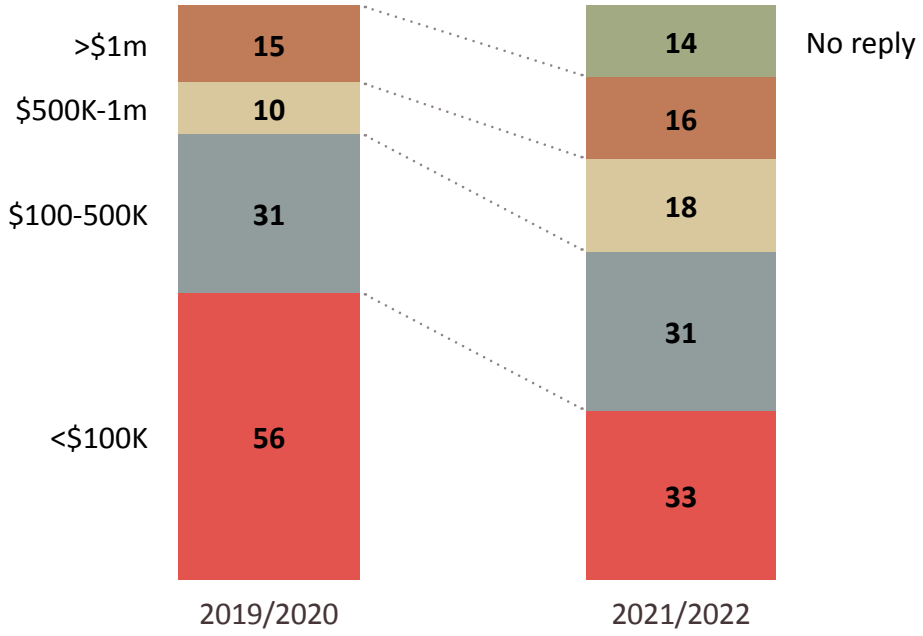
2022 member survey; data excludes no replies.

GDC membership progress, impact and paths to sustainability

Overall the sector seems to be growing and achieving higher levels of impact.

A heartening takeaway from the 2022 member survey is that many LMDs have managed to grow since 2019, in spite of Covid-19. Figure 1 shows the annual revenues of 112 LMDs who have been GDC members since 2019/2020. There is a 21% increase in those reporting annual revenues of more than US$100,000, and an 8% increase in LMDs reporting annual revenues of more than $500,000.

This is translating into increased impact at the last mile. The average number of people reached by GDC members has risen by 29% since 2019, from 167,643 to **217,000** in 2022.[4] Of those, 69% live below the poverty line, earning less than $3.20 per day (similar to the figure of 75% in 2019), and 80% are rural.[5]



* Reply at the time of sign up, i.e. either 2019 or 2020

Figure 1: Number of GDC members by annual revenue in 2019/20 and 2021/22 (sample: 112)

The sector has seen some churn among young, small companies, but not as much as expected.

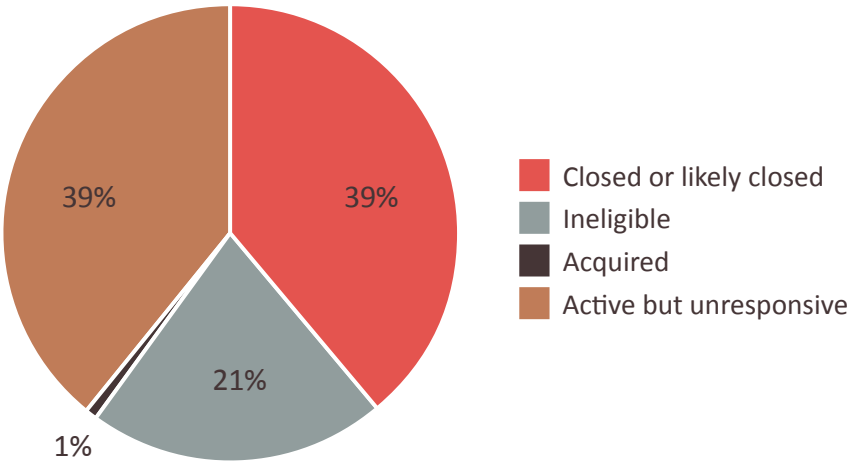


Figure 2: Status of the 67 LMDs that are no longer GDC members

There are 67 LMDs that were GDC members in 2019/20, but are no longer members in 2022 (the GDC has also welcomed 30 new members in that time). Figure 2 highlights the current status of those 67 LMDs.

- 26 (13% of 2019/20 membership) are either **confirmed as closed or are very likely to have closed**, given online activity has ceased. A small number of these LMDs were relatively large companies that had raised substantial investment, most notably Inyenyeri[6] and NewLight Africa[7]. For these larger players, the primary reason for closure was lack of funding. But a sizable majority of LMDs who closed were small, with 69% having annual turnovers of less than $100,000. Little is known about why most of these companies closed. It is assumed some closed due to disruption from Covid-19, and indeed a higher rate of closures for this reason was expected, but there are other closures unrelated to the pandemic. Veritas Vision, for example, a LMD who distributed health and energy products in Nigeria to 5,000 last mile customers during its three years' of operations, cites its main reasons for closing as burn out, lack of funding and the challenges of raising funding as a Nigerian enterprise.[8]

- Of the remaining 41 LMDs that are no longer GDC members in 2022:

  - 14 are **ineligible** as members. Some of these companies have moved out of the LMD sector completely or prioritised different business lines, so LMD is no longer their core business. The GDC's eligibility criteria have been applied more rigorously as understanding of the sector has grown.

  - 1 has been **acquired** (by another GDC member).

  - 26 are **still active** in the sector but either the primary contact has left or they have been unresponsive to outreach.

There is clear interest from LMDs in accelerating gender inclusivity.

There is some evidence that in certain contexts, women can be more effective than men at achieving sales at the last mile.[9] Women sales agents' performance can be further improved by LMDs taking deliberate action to address the challenges that women face, particularly around mobility and digital inclusion.[10] In the last few years we have seen GDC members taking steps to do just this. For example, with the support of Value for Women (VfW), WANA Energy Solutions in Uganda piloted giving women agents access to motorbikes to help them visit potential customers in new areas, and saw their sales increase by 41% in a month. Yellow in Malawi were able to recruit eight times more women sales agents in six months than they were in the previous 12 months, after delivering digital skills training and providing smartphones to potential women candidates.[11]

There has been significant member interest in the GDC's gender-focused activities. The opportunity for members to receive technical assistance (TA) from VfW is the most oversubscribed TA opportunity offered to date[12] with 33 members, 20% of the membership at the time, applying to receive support. A webinar in late 2021 to disseminate learnings from these TA projects attracted more interest than any other GDC webinar to date, with multiple individuals from 53 LMDs - as well as from 123 other organisations - signing up to attend. This suggests that LMDs are interested in, and increasingly committed to, driving gender inclusivity.

Key challenges faced by members in 2022 remain largely unchanged since 2019.

As shown in Figure 3, access to finance is still the main challenge faced by GDC members, with 70% citing it as their top challenge (cf. 75% in 2019). This is the case for members of all sizes, but unsurprisingly is experienced most acutely by smaller members. More detail around the access to finance challenge and emerging solutions is explored in later, in Trend 1. A higher proportion of larger members struggle with refining their processes, particularly around sales and marketing and managing agents and retailers, as well as team capacity.[13]

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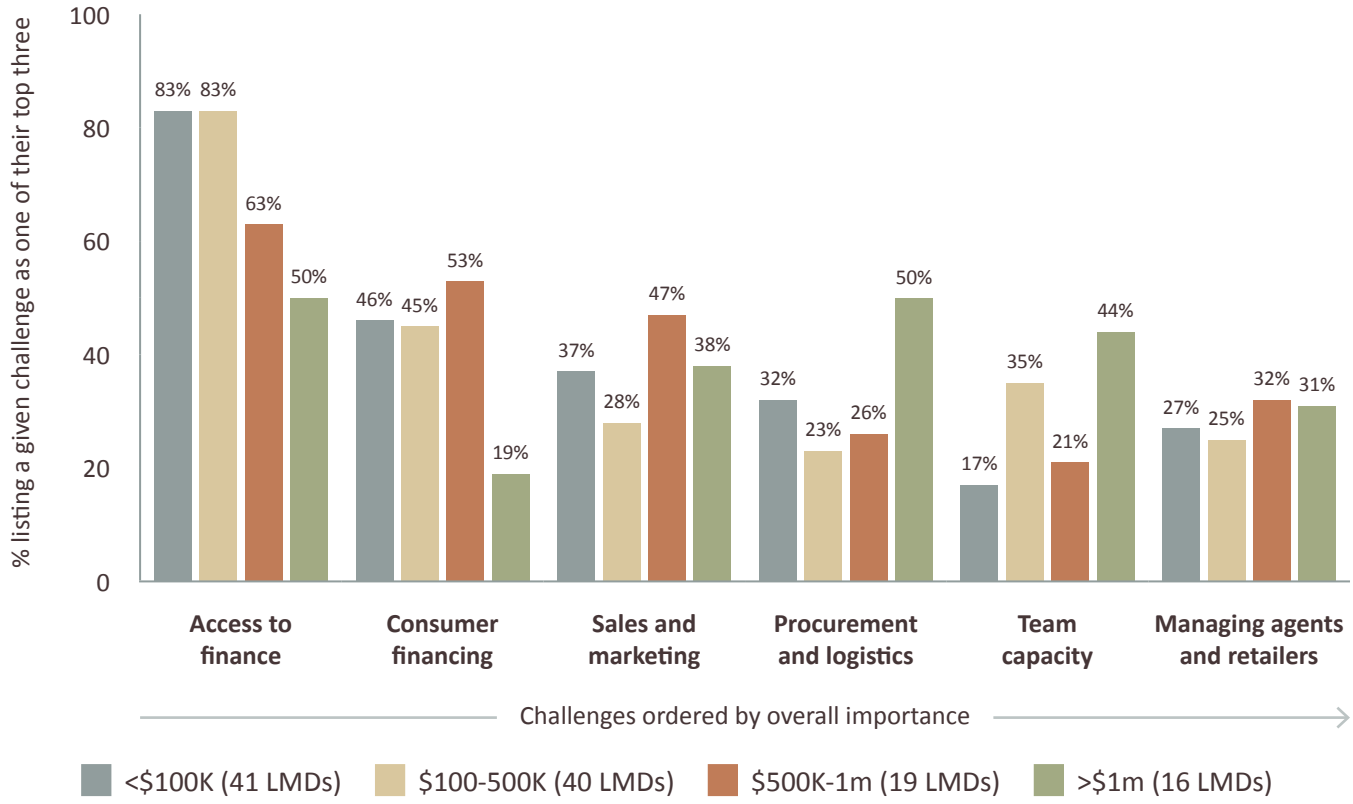

Figure 3: Percentage of GDC members listing a given challenge as one of their top three, by revenue group

LMDs are diverse, but can be segmented into two broad 'archetypes' to better understand their paths to sustainability.

Many factors can explain different LMDs' growth trajectories, including their risk appetite for growth capital and the poverty level of the customers they serve. We have found it helpful to segment LMDs by looking at their different impact and business philosophies, which lead to different operating models, growth trajectories and sustainability mechanisms. From GDC member data and research since 2019, we have seen two archetypes emerge.[14] Rather than two distinct segments, these archetypes sit at the ends of a continuum of models.

'Local Livelihood'

LMDs who train and support village-level entrepreneurs to become sales points for a suite of beneficial products. The entrepreneurs may already own a shop or set one up after some time.

'Dedicated Salesforce'

LMDs who work with dedicated sales agents who sell a small product range to a large number of customers over wider geographical areas.

LMDs closer to the **Local Livelihood** archetype (such as Solar Sister in Nigeria and Tanzania or Dharma Life in India) can have a transformational impact on the communities they work in, by supporting local entrepreneurship and providing a suite of products and services over time to many local customers. The reach of their sales forces is, by design, geographically limited. Agents are mostly part-time, as the number of sales they can make is limited. They therefore tend to see relatively low sales per agent, at most $500-1,000 per month on a full-time equivalent basis. Given low sales volumes, Local Livelihood LMDs tend to rely heavily on grants as well as other revenue sources, eg. selling business-to-business (B2B) through institutional channels such as schools, testing products for manufacturers and partnering with NGOs to run awareness campaigns. Some LMDs such as Frontier Markets in India are demonstrating that, through assisted e-commerce, this archetype can achieve fast growth and profitability. But, for now, such examples remain the exception rather than the rule.

Dedicated Salesforce LMDs (such as Zonful Energy in Zimbabwe, Ecofiltro in Guatemala and Mwezi in Kenya) tend to have close to full-time agents covering a large geographic area who sell significantly more per year than their Local Livelihood counterparts (they can achieve over $2,000 per month). With such productivity, these sales agents and LMDs themselves do not need to pursue side income opportunities beyond sales; thus, Dedicated Salesforce LMDs tend to have less diverse income sources than their Local Livelihood counterparts. For these LMDs, a typical evolution is to move from selling directly to consumers to selling to retailers, when markets mature and the direct marketing piece of their model becomes unnecessary.

It will be interesting to assess the extent to which these archetypes hold true over the coming years, as the sector continues to evolve.

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Major trends in the last mile distribution sector since 2019

This update does not focus on the short-term impact of or immediate response to Covid-19 in the LMD sector, since the GDC has previously shared a range of resources on this subject.[15] But it goes without saying that the pandemic has had a profound influence on LMDs, has been the driving force behind many of the key trends we have observed, and will continue to shape the LMD sector for many years.

The impact of Covid-19 on the LMD sector

When Covid-19 emerged in early 2020, LMDs were hit hard. Immediate challenges included supply chain disruption, shifts in consumer demand, increased credit risk and reduced ability to engage in-person with customers, agents, retailers and staff. A handful of LMDs experienced increased demand for their products, but for the most part LMDs were negatively affected due to decreased customer incomes and/or reduced access to communities. 69% of GDC members in the 2020 Covid survey reported experiencing reduced sales, and 17% said they had paused operations.[18] The challenges faced by LMDs were similar across countries and regions, although the timing, duration and predictability of measures such as lockdowns, social distancing and curfews varied. Many LMDs directly contributed to the pandemic response by distributing emergency supplies, extending repayment holidays to customers and providing relief funding for staff and their families.

As 2020 continued, the impact of the pandemic was mixed. Overall, an initial lockdown-driven drop in revenue was compensated for in the second half of the year by a) increased demand and b) some LMDs obtaining licence to operate as 'essential service providers'. Most LMDs were in recovery mode by the end of 2020, but, by then, Covid-19 had changed their way of doing business for good. Some companies were forced to close, but many became leaner, more agile and more resilient, particularly through digitalisation, as is explored in Trend 2, below.


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Trend 1. Access to finance:

More fit-for-purpose solutions are emerging, despite this still being the most cited barrier for LMDs, particularly local LMDs

LMDs have been successful in raising funding, even during Covid-19.

According to the 2022 member survey, 62% of GDC members have raised at least one kind of funding since 2019; with 46% having raised grants, 33% having raised debt and 21% having raised equity.

As shown in Figure 4, international LMDs are more likely to have raised grant and debt funding than local LMDs.[16] Although local LMDs are more likely to have raised equity, previous GDC research found that this primarily comes from friends, family and angel investors (the main source of equity for 66% of members in the 2019 report survey).[17] Some members have raised substantial volumes of funding in the last few years: Sistema.bio is one of the few to have raised a Series B investment round, joining peers such as Oolu in West Africa and upOwa in Central Africa.

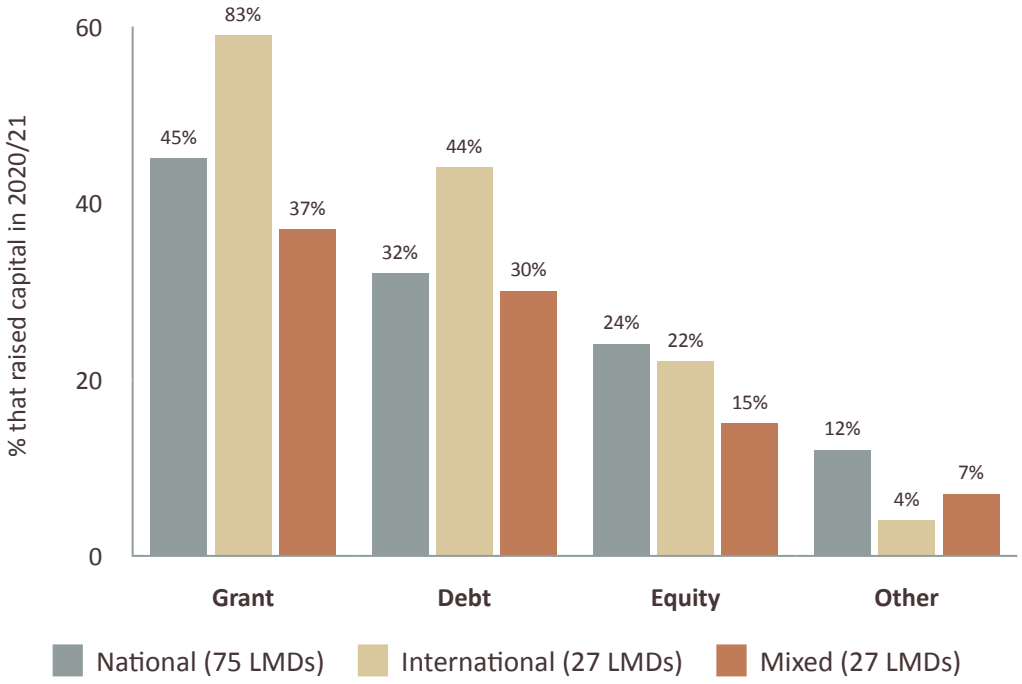

Figure 4: Percentage of GDC members that raised capital in 2020 or 2021, by funding type and ownership

Nonetheless, access to finance continues to be the most cited barrier for LMDs, particularly for local LMDs.

Previous GDC research has found that LMDs face similar fundraising challenges in their early stages, with a dearth of start-up capital and smaller working capital loans.[19] As LMDs grow they struggle to raise working capital for a range of reasons including the debt-to-equity ratios that lenders require. This has forced some to take on equity to cover working capital needs, or purely to be able to raise debt.

Other challenges vary depending on growth strategy. For LMDs focusing on **geographic expansion**, who require capital (often equity) to fund fixed costs in new geographies, it is increasingly difficult to find equity investors with realistic growth and return expectations. As one GDC member told us

> *Equity investors have already placed their bets on some of the first players in this space (especially pay-as-you-go), often with unrealistic growth expectations. As they have not seen profitability with scale, they are either unable to exit or reluctant to support others with large amounts".*

On the other hand, LMDs focusing on **achieving profitability first** have either chosen not to raise equity, due to the costs and complexity of the process and the desire to retain business ownership, or have tried and been unable to do so.

Fundraising continues to be a more significant challenge for local LMDs. In the 2022 member survey, 80% of local LMDs (of whom 83% have annual revenues of less than $500,000) cite access to finance as a top challenge. This compares to 56% of LMDs with international or mixed ownership (of whom 46% have annual revenues of less than $500,000).

Funders are increasingly exploring how to support models of growth beyond geographic scale.

We are seeing an increasing number of funders - of all types of capital - exploring ways to invest further downstream and support smaller companies as well as local companies. The most recent investment data on the off-grid solar sector, for example, shows a large decrease in concentration of investment in the top ten companies over the past five years (from 96% to 68%).[20] Funders are increasingly recognising that profitability is not always linked to scale: there are different growth and profitability models, requiring different investment instruments.[21] According to Acumen, for example,

> *We and other investors are re-thinking the way we deploy capital, as we look at ways to replicate many smaller companies sustainably serving last mile customers, as well as the few that can sustainably expand into multiple markets.*

The idea that small companies can also represent a sustainable path to last mile consumers' access to affordable products is supported by previous GDC research, which found that smaller (typically local) LMDs tend to operate lighter structures and focus on profitability first. As a result, many have achieved more sales per dollar of capital raised (all types of capital) than their larger international counterparts. The sample of 21 high-performing LMDs in the 2021 growth research, showed that international LMDs have collectively sold 1.4 times more than local LMDs, but have raised 4 times more capital to do so.[22]

As a result, more fit-for-purpose solutions are emerging.

Leveraging data

Growing digitalisation (see Trend 2) has led to new opportunities to use data to streamline due diligence processes and reduce transaction costs, making it possible to offer smaller ticket sizes and potentially invest in smaller LMDs. For example, the SIMA Angaza Distributor Finance Fund launched in 2019 leverages the Angaza platform to assess eligibility for funding, reduce the duration and complexity of due diligence, and monitor and report on loans. To date, the fund has supported seven LMDs.

More recently, PaygOps and First Growth Ventures have launched the TRUE Receivables Finance Platform that allows investors to invest directly in pools of receivables. LMDs can create customised portfolios, debt investors can decide in which of those portfolios to invest, and customer repayments go directly to investors. This enables LMDs to access working capital instantly and reduces their overall credit risk. The platform is still in pilot phase, being tested with GDC member Pawame in Kenya, but could be a game changer for the sector given how critical working capital is for LMD growth.

Crowdfunding

Crowdfunding is an increasingly important source of funding for LMDs, for all types of capital. It is the most common source of debt for GDC members[23] due to the relatively light touch due diligence required and fast turnaround provided, and was a lifeline for many companies during the peak of the Covid-19 pandemic. For GDC member Bidhaa Sasa in Kenya, for example:

> *Without the [Kiva] loan, I doubt we would have been able to recover after the first Covid-19 lockdown. We really appreciate how quickly Kiva was able to act. It took just three months from application to disbursement. This is remarkable!* [24]

Although historically Kiva has been the only crowdfunding platform doing transactions of less than $500,000, new players such as Charm Impact (debt) and Wajenzi (equity) have now entered this space, opening up alternative funding avenues for LMDs, particularly local LMDs.

Equity plus technical assistance

Finally, we are seeing a growth in the number of models that bundle equity with technical assistance, or prepare LMDs for equity by building their investment-readiness capabilities. For example, VentureBuilder, a specialised intermediary investor launched in 2019, has supported ten locally-owned and managed LMDs to date with enterprise development services and has entered into commercial partnerships with three of these. Another example is the GET.invest Finance Readiness Support facility, which targets local energy companies with in-depth business development advisory and coaching along the fundraising journey.

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Yet, several sources of finance remain under-exploited.

Carbon finance

A handful of LMDs are having success with carbon finance, including for example Ecofiltro in Guatamala, Simoshi Limited in Uganda, Namene Solar across Africa and SOSAI Renewable Energies Company in Nigeria. However, LMDs typically do not have the scale required to generate interest in the emissions savings generated; accreditation and verification processes are highly complex and require a large upfront investment that can only be justified by high volumes later; the price of credits is volatile; and finding carbon investors is difficult. Some of these challenges can be overcome by working through intermediaries such as Solstroem, which simplifies the process for smaller companies and has already partnered with GDC member Ilumexico in Mexico. Technological advancements, such as the smart data features of modern energy cooking appliances, may also simplify calculations of emission reductions and therefore make carbon finance more accessible to LMDs.[25]

Other results-based financing (RBF)

RBF, through which incentive payments are paid to companies that meet predetermined targets, has become a popular funding tool over the last decade, particularly in the energy access sector. A number of LMDs have been able to access RBF, through programmes such as Energising Development (EnDev), the Kenya Off-Grid Solar Access Project (KOSAP), SDG7 Results and the Beyond the Grid Fund. Overall, LMDs' feedback on RBF as a funding mechanism is positive. As GDC member LivelyHoods in Kenya reports,

> *RBF is our preferred funding mechanism because it's reliable, long-term, and above all it's objective - it's not about whether a funder likes you or your model: either you've sold a product or you haven't. It means we can just focus on selling.*

However, LMDs report significant challenges around how RBF programmes are managed, in particular with the slow speed of disbursement creating cash flow problems. Other areas to improve include the complexity of monitoring, reporting and verification and the limited upfront payments and lack of affordable bridging financing until agreed milestones are met.[26]

Local finance

Local funders are still sparse in the space, with only 1% of capital raised by the 21 GDC members interviewed in the 2021 growth research being from local institutions.[27] Opportunities for unlocking local finance are emerging with the launch of new financing facilities designed to increase the risk appetite of local banks. For example, Aceli Africa incentivises lenders to take on smaller ticket loans for agricultural SMEs through social impact incentives and first-loss cover, while Green4Access provides first loss protection to support upscaling of lending in the off-grid space.

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Recommendations

- **Associations** including the GDC can convene funders to share market intelligence/pipeline; collaborate to bring down transaction costs; develop new ways to deploy capital, reduce ticket sizes and support earlier-stage companies. Associations can also produce data and insights about the LMD sector and develop benchmarking tools to assess and improve LMD performance.[28]
- **Investors** and **donors** can make finance more inclusive for LMDs, particularly small local LMDs, to help foster choice and competition in the market and penetrate further into the last mile. In the case of RBF, for example, funders could streamline monitoring, reporting and verification processes; provide TA for smaller companies to navigate these processes; and offer affordable bridging finance and/or larger upfront payments to enable cash-constrained LMDs to participate. Aggregation could also be used in the case of carbon finance, creating pooling facilities to give LMDs the scale required to sell carbon credits on international markets.[29]
- **Donors** can also:
  - Provide concessional capital to crowdfunding platforms seeking to work with LMDs, eg. through co-funding campaigns, or improving investment and loan products.
  - Support financial intermediaries that are leveraging data-driven approaches to investment or bundling investment with advisory services, such as those highlighted in this section.
  - Work with specialist fund managers to catalyse local investment, and build the appetite and capacity of local financial institutions through de-risking mechanisms.

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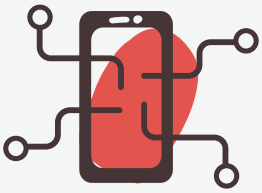
Trend 2. Digitalisation:

Increasingly sophisticated solutions are creating efficiencies across LMDs'value chains



The most dramatic shift in the LMD sector since 2019 has been the rise in digitalisation. This, of course, was massively accelerated by Covid-19, given the prolonged restrictions imposed on the physical movement of agents and assets.

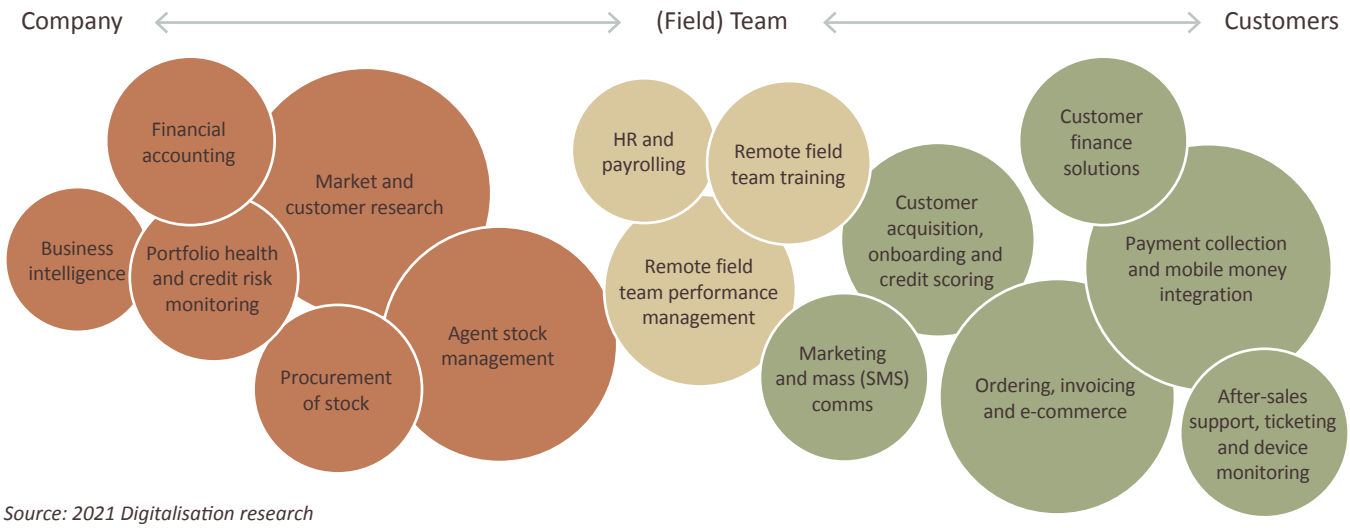
The sector is seeing an explosion of increasingly sophisticated digital solutions.

While it was evident from the 2019 report survey that many LMDs had been forced to build their own in-house solutions,[30] LMDs are increasingly accessing digital services from established Digital Service Providers (DSPs). To demonstrate the size of the industry, the GDC recently launched a Digital Service Catalogue[31] that now has over 70 solutions, some of which are generic (such as Salesforce and Quickbooks), but most of which are specialised. According to Enable Digital,

> *a few years ago we helped LMDs **build** software solutions, now the focus has shifted to helping them **buy and configure** software solutions.*[32]

LMDs are digitalising an array of business functions.

Digitalisation is happening at the company, field team and customer levels, as shown in Figure 5.[33] There are four key areas in particular in which digitalisation has accelerated.



Source: 2021 Digitalisation research

Figure 5: How LMDs currently use digital solutions (size of circle reflects frequency of mention)

Assisted e-commerce

The first and perhaps most innovative trend is the rise of assisted e-commerce. Copia Global has proven it is possible to use an e-commerce model to sustainably serve last mile consumers, by leveraging offline capabilities including local agents and payment in cash, with a focus on fast moving consumer goods (FMCGs).[34] LMDs are now demonstrating that this is also possible when selling beneficial products. In India, Frontier Markets and Essmart have built their own in-house e-commerce platforms to support their rural sales networks: 'Saheli' sales agents in the case of Frontier Markets, and small shops in the case of Essmart. Econome, a younger player in Kenya, has partnered with DSP Sevi to adopt an assisted e-commerce model with women's groups, supported by the GDC's Innovation Challenge.[35] Moving forward, it is possible that LMDs will partner with mainstream e-commerce platforms that are increasingly moving into harder-to-reach markets.[36] This could involve LMDs providing fulfilment services for e-commerce platforms or creating demand for beneficial products offered through their marketplaces.

Digital marketing

The second key trend has been the rise of digital marketing. This is being embraced, particularly by those LMDs with strong customer data, as companies can target specific demographic groups or customers in a given geographical location with key messages. Mwezi, for example, leverages the Angaza platform to target their most creditworthy customers; sending them SMS messages with product information, benefits for referrals, and discounts. Mwezi is also pioneering the use of geo-location data to send SMS messages when a customer is in close proximity to a particular product or service.[37] Other LMDs are using social media: Proximity Designs in Myanmar, for example, uses targeted Facebook adverts to create awareness and generate leads that are followed up by an internal call centre. This has proven significantly more cost effective than classic lead generation via sales agents. Proximity Designs also uses a Facebook Messenger Chatbot to help farmers easily calculate which and how many drip irrigation kits they need. As well as digital marketing being increasingly utilised at the company level, it is growing at the agent level, with agents sending WhatsApp or other messages to share new products or promotions with their networks.

Online field staff training

The third key trend is online field staff training. During Covid-19 lockdowns in 2020, many LMDs switched to undertaking some or all field staff training online, initially as a way to make the most of downtime while field staff were unable to work. Sistema.bio, for example, went digital with the 'Sistema Academy'. The sales team received weekly training over an eight week period, through Google Meet. The benefits of online training quickly became clear: it is much more cost-effective than face-to-face gatherings, and also lends itself to experience-sharing and peer learning across regional teams.[38] Many LMDs are continuing to leverage online training, although blended with offline components which are still seen as essential for sales agent models in particular. Some LMDs are developing in-house training solutions, while others are leveraging third-party platforms that provide low-cost customisable options, such as Edume.

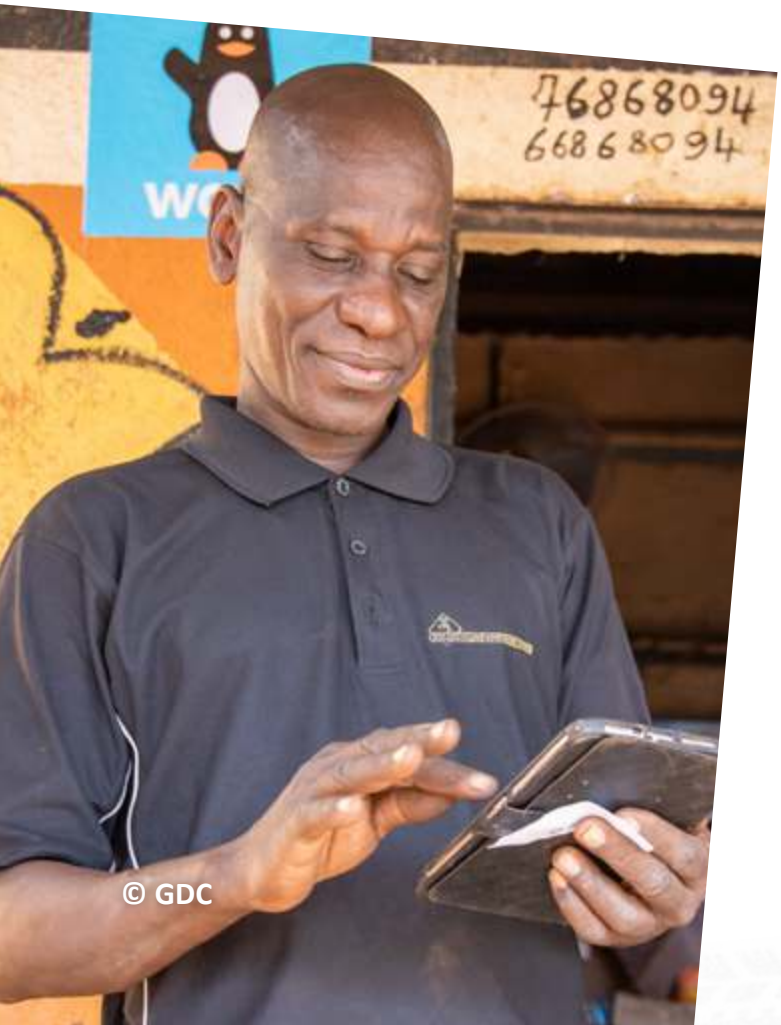
After-sales service

Finally, digitalisation of after-sales service has accelerated. Zonful Energy in Zimbabwe, for example, has set up an in-house 'Uber-like' application for solar home system technicians. If a customer has a problem with their product, Zonful uses the app to issue a request to over 6,000 freelance technicians and direct the first available and nearby technician to the customer's house.[39] Sistema.Bio has similarly embraced digital when it comes to maintenance: *"Before Covid, we used to do three in-person service and training visits on each biodigester sold; we've been able to transform the second visit into a phone call or digital follow-up in 80% of cases. To reduce the need for in person maintenance visits, we've developed troubleshooting videos that we can send to clients via WhatsApp."*

This is creating efficiencies and unlocking new opportunities to leverage data.

High adoption rates of digital solutions suggest that digitalisation offers LMDs clear financial benefits. PaygOps reports that its inventory management solution reduced operational costs and risks for LMD BrightLife by 85%, from $68,000 per year to $10,500 per year, including the inherent investment required for such automation to take place.[40]

Digitalisation is also enabling LMDs to collect more and better quality data and LMDs are capitalising on the opportunities this presents. In particular, for the first time we are seeing LMDs truly monetise data and insights at the last mile, as Frontier Markets is doing through its agent network for customers including manufacturers and MNCs. LMDs are also leveraging their data to bring down due diligence costs and access finance by working through intermediaries such as Angaza and PaygOps (see Trend 1).



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LMDs are likely to continue to ride the digital wave, especially as more and more customers come online and use the internet and mobile banking to find and purchase products and services. According to GSMA, there will be nearly half a billion new mobile subscribers by 2025, most of whom will come from Asia and Sub-Saharan Africa.[41] This is expected to have a substantial impact on the efficiency of LMD business models, making it easier for them to scale-up operations, enter new markets and diversify product offerings, while possibly also increasing market competition.

Nonetheless, challenges remain and in-person activity is still key for LMDs.

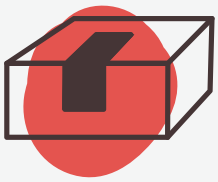
There are important caveats to the rise of digitalisation in the LMD sector. Firstly, offline activities remain critical for LMDs: to build trust and brand recognition when selling to a highly risk averse customer base; to provide agent and customer education particularly for new and more complex products; and to provide after-sales service. Secondly, many LMDs operate in markets that are not ready for a full digital transformation. Not all agents and retailers have smartphones or are digitally literate, and not all customers are comfortable with or capable of paying for products with mobile money; and there is an evident gendered component to both.[42]

And finally, those LMDs that are ready to digitalise often struggle to find solutions that match their specific needs. Most DSPs don't provide the full suite of functionalities required by their LMD customers, so LMDs tend to use multiple, often unconnected, solutions. Affordability is a barrier, particularly for smaller LMDs, and many LMDs lack basic IT skills both at the management and agent/retailer level.[43]

Recommendations

- **LMDs** can actively explore digitalisation of certain processes using a robust analysis to define challenges and assess how these can be addressed by digital solutions; and then source the best solution, either in-house or off-the-shelf.[44]
- **Digital service providers** can:
  - Register their service on the GDC's Digital Service Catalogue[45] and invite LMD users to rate them.
  - Explore different pricing models and discounts to improve affordability of solutions, eg. cheaper entry-level solutions with basic functionalities and free trials.
  - Be transparent about the costs of digitalisation to help LMDs make accurate assessments about the return on investments. For example, PaygOps has a pricing simulator on its website.
  - Improve interoperability by making application programming interfaces (APIs) and data integration endpoints more available; bundling services with other DSPs with complementary offerings; and open-sourcing solutions and content where possible.
- **Donors** can support the development and tailoring of digital solutions for LMDs, as done through the work of Energy Catalyst and GDC Innovation Challenges; support match-making between LMDs and DSPs; and fund work to improve interoperability.
- **Donors** and **investors** can help increase the affordability of specialised software brokers such as Enable Digital or GDC implementing partner Bopinc, who support LMDs to assess and fulfil their digital technology needs through technology audits and software comparisons.

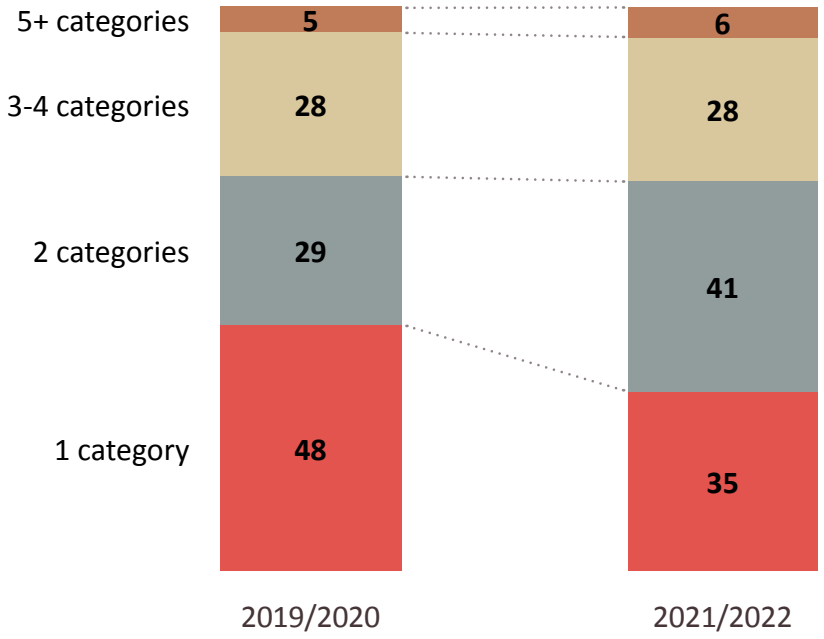
Trend 3. Product diversification:



LMDs seem to have found an ideal number of product categories, are selling more productive use technologies, and are doubling down on after-sales support and quality

LMDs seem to have found the 'sweet spot' of product categories.

The percentage of GDC members selling more than one product category has increased. As Figure 6 shows, of 110 LMDs surveyed who have been GDC members since 2019/2020, an additional 12% are selling more than one product category.



* Reply at the time of sign up, i.e. either 2019 or 2020

Figure 6: Number of GDC members selling different product categories (sample: 110)

This data masks the true breadth of LMD product baskets since the vast majority of LMDs (at least within GDC membership) sell more than one product within each product category. For example, those selling products in the health category are likely to sell a combination of medicinal products, sanitary products, contraceptives and so on; while those selling products in the off-grid solar category are likely to sell solar lights, home systems and consumer electronics (fans, TVs, radios, etc). This diversification within individual product categories increased due to Covid-19, as many LMDs sought to mitigate supply chain disruptions by sourcing new suppliers and new kinds of products.[46]

However, it is interesting to note that only one LMD that was already selling two or more product categories has added additional categories since 2019. Moreover, if we look at all the data, including from new members and LMDs who are no longer members, the average number of product categories sold by GDC members remains unchanged between 2019/20 and 2022 at 2.1. This is likely due to the increased complexity of managing multiple product categories, not just in terms of supply chain management but also agent/retailer training, marketing and financing.

GDC members have reported that introducing too many products, particularly early on when brand recognition and trust is still being developed, can also create confusion at the customer level, as it detracts from a single clear value proposition.[47]

As such, LMDs are expected to focus more on diversifying within the categories they already sell, rather than moving into new product categories. This will provide more opportunities for revenue generation and offer customers greater choice, while maintaining a coherent offer that ensures efficiency with LMDs' existing processes. LMDs can do this alone or in partnership, as GDC member Essmart has done by absorbing the operations of One Acre Fund in India earlier this year. Essmart's target customers are small-scale farmers, and 70% of the products sold by Essmart are in the agricultural sector. Absorbing One Acre Fund's India operations has allowed Essmart to deepen this focus and add agri-inputs to their product catalogue, alongside training and service provision.[48]

LMDs are exploring new product categories, in particular productive use technologies.

A handful of LMDs are testing the water with nascent technologies such as e-cooking technologies and e-mobility technologies (e-bikes, batteries, conversion kits). But the most dramatic trend in evolving product baskets since 2019 has been the growth in the number of LMDs selling productive use technologies. Within the GDC membership, 35% of LMDs are currently selling these products, up from just 6% in 2019.[49]

Productive use technologies cover a broad spectrum of products, with some used at the household level to enable cost savings, while others are used commercially to generate additional income. Those sold by LMDs include solar water pumps (sold by 26% of GDC members), refrigerators (14%), solar hair clippers (11%), solar drip irrigation (9%), egg incubators (8%), solar mills (5%) and solar sewing machines (5%).

The productive use technology category also holds the greatest interest to members, with 21% stating they are interested in selling such products in the future. This is closely followed by agri inputs and cookstoves/cookers (both 20%, as demonstrated in Figure 7).

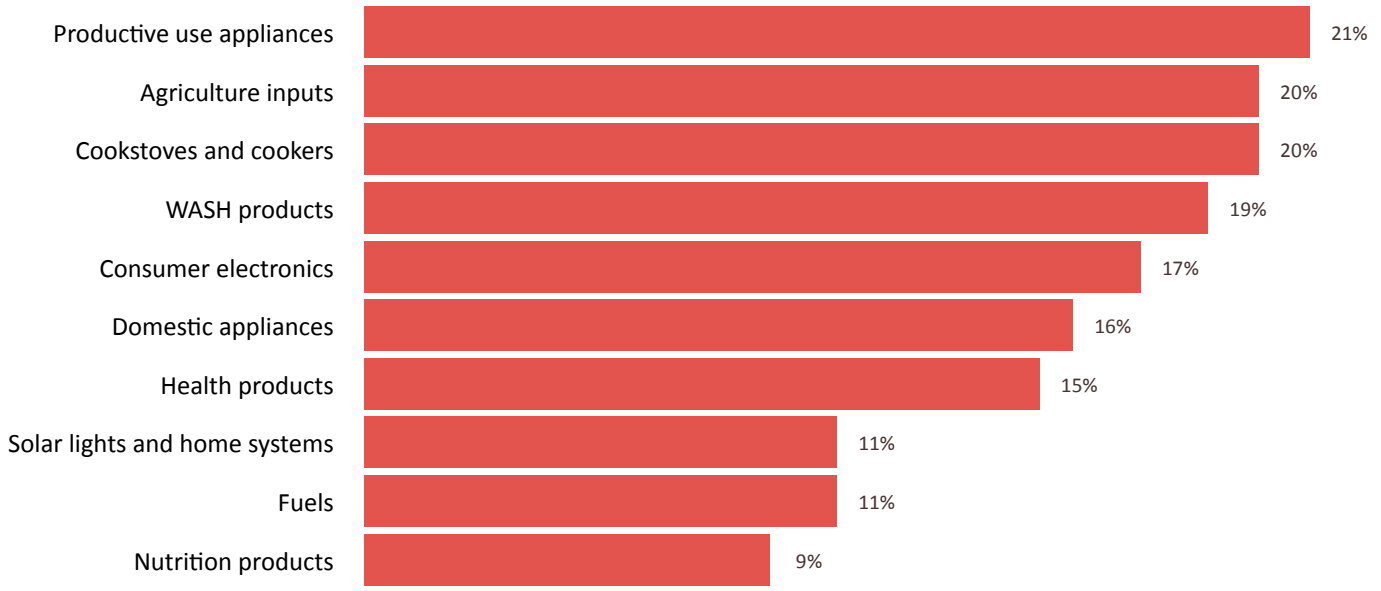


Figure 7: Percentage of GDC members interested in selling product categories in the future (% of 132 LMDs surveyed)

The swell of interest in productive use technologies has been driven by a combination of factors. These include: consumer demand and high impact potential; increasing affordability thanks to technological innovation and the growth of PAYGO; the drive from funders, enterprises and ecosystem enablers such as Efficiency for Access to translate energy access into opportunities for income generation; and the need for companies to sell higher margin products and upsell existing customers to ensure sustainable business models.[50]

However, many productive use technologies are much more complex than products traditionally sold by LMDs. They are often highly technical, requiring extensive tailoring in their design, specific marketing and sales approaches, access to production inputs and markets, and specialised expertise for installation. They must also be accompanied by long-term financing and strong after-sales support. As GDC member Solar Sister attests:

> *We looked at selling a number of productive use products in response to customer demand, including egg incubators, solar water pumps and solar-powered fishing lights. But, on top of the distribution, we had to figure out the supply chain, consumer financing and after-sales from scratch. We struggled to actually get our hands on the right products, and taking on credit risk when we don't have a solid supply is a huge gamble.*

After-sales support and quality assurance are more important than ever.

Almost all (98%) of GDC members offer some kind of after-sales service. This includes warranties but also safety checks and other monitoring, maintenance and replacements; support with selecting spare parts; and ongoing customer training. The proportion of members offering warranties has increased from 65% in 2019 to 90% in 2022 as most new GDC members offer them. In off-grid solar, the emphasis on after-sales is even more pronounced: of the 97 members selling off-grid solar products, only one (a LMD using a B2B model) does not offer warranties.

In the energy access sector more widely, despite a large 'grey market' of non quality-verified products, LMDs are proving that quality sells. Among GDC members selling solar lights and home systems, 92% sell products that meet Verasol Quality Standards; while 70% of members selling cookstoves and/or cookers sell products that meet ISO voluntary performance targets. However, while LMDs are focused on quality, they face significant challenges in sourcing affordable quality products. In the off-grid solar sector in particular, quality-verified products are often supplied by vertically integrated organisations that have their own proprietary distribution networks; meaning LMDs find themselves competing directly with their suppliers. Finding alternative, competitively-priced quality products requires time and effort that LMDs cannot always afford.[51] This is likely to continue to be an obstacle for LMDs. Some efforts to overcome these challenges - such as new wholesale models or direct aggregation models - are being tried but are yet to be proven.[52]

Recommendations

- **LMDs** should exercise caution when expanding into new product categories and introduce one new product at a time, especially with more complex products.
- **Associations** and **suppliers** can strive to make product testing data open and available, and support LMDs to conduct field-testing. Associations can also provide data on supplier terms and reliability, and support match-making between LMDs and suppliers for products in demand.
- **Suppliers** and **donors** can do more to help LMDs build their capabilities to sell complex products, such as productive use technologies, through technical assistance.
- **Donors** can also co-fund field testing efforts of new products by LMDs. This would help to lower the risk of new product introductions for both manufacturers, who would get direct feedback on their products, and LMDs, who would not have to bear the full investment in identifying, sourcing and trying out new products alone.

Trend 4. Consumer financing:

More LMDs are providing consumer financing, and are becoming more sophisticated in how they manage their receivables and credit risk.

More LMDs are providing consumer financing, albeit reluctantly.

Today, 78% of GDC members offer consumer financing, a growth of 9% since 2019/20. This trend is expected to continue with increasing adoption of PAYGO software both within and across product categories. Yet, as shown in Figure 3, consumer financing represents the second biggest challenge for LMDs after access to finance. Managing consumer financing was never harder than at the peak of the pandemic, when customer ability to repay was severely hampered: 44% of LMDs interviewed for the GDC's 2021 Covid research mentioned consumer and retailer credit risk as a major challenge.[53] It is also becoming more difficult as LMDs start to sell higher value products offering longer term loans.

Whilst most LMDs would prefer not to manage consumer financing in-house, they do not always have a choice. Some LMDs have been successful in partnering with microfinance institutions (MFIs),[54] more commonly in South Asia. However, this is often not possible due to the relatively small transaction sizes, the high risk nature and remoteness of LMD customers, and the fact that MFI procedures and skillsets are often ill-suited to financing physical assets.[55]

Managing working capital, particularly receivables, has long been a challenge for LMDs

Managing working capital is difficult for any LMD business (including those selling products on cash only), but is exacerbated for companies providing consumer financing, since this directly increases their working capital needs.[56] LMDs have particularly struggled to manage receivables and the accompanying credit risk, often lacking dedicated expertise in this area. This has created a difficult cycle for LMDs, since they cannot extend consumer financing without working capital. They can only access working capital, such as receivables financing, if they can effectively demonstrate a clearly articulated credit risk management strategy and its execution through consistent collections.

Little is known about how LMDs are managing their working capital and how this has changed over time. We are not aware of many LMDs collecting data or setting KPIs around working capital, such as working capital ratios (the number of days from order to sale) or time to cash (the number of days from order to cash collection).[57] More research is needed to understand what LMDs are doing, and what further levers they can pull, to improve their management of working capital.

LMDs are becoming more sophisticated in how they manage credit risk.

Historically LMDs have tended to decentralise credit risk management to agents or retailers, who rely on their judgement to assess customer creditworthiness and chase repayments via phone calls. They have also tended to tie sales agent/ retailer incentive structures primarily, if not exclusively, to sales, meaning agents/retailers are not incentivised to assess creditworthiness or encourage ongoing payment over time.

Increasingly, however, and spurred on by Covid-19, LMDs are appreciating the importance of good credit risk management, both to achieve financial sustainability and to maintain affordability for customers.LMDs are adopting different strategies to manage credit risk depending on their size, stage of growth and the products they sell. But generally, according to Holger Siek of the Frankfurt School for Finance and Management, who has worked with nearly 20 LMDs over the last five years,

> *LMDs are increasingly investing in data capture and building a 'second line of defence', ensuring that credit decisions are made (or verified) not by agents or others directly involved in (and incentivized on) selling, but by someone independent who understands credit risk.*

This second line of defence can start with something as simple as a follow-on phone call to a potential customer to collect additional data points; although a small but growing number of LMDs are using automated credit scoring. For example in Cameroon, GDC member upOwa employs a tiered approach to customer assessment, whereby more sophisticated processes are used for higher value products.[58] A handful of LMDs have been able to leverage external data points to simplify credit assessments, as GDC member Kambasco Technologies Ltd is doing with savings groups in Uganda - but this is rare.[59]

LMDs are also adopting increasingly sophisticated approaches to monitoring and motivating repayment. Mwezi, for example, segments customers by risk to target 'good' borrowers with special offers incentivising early repayment.[60] UpOwa uses risk segmentation to prioritise collection activities, with more and less risky customers handled differently by different staff (call centre agents, sales agents or collections agents).[61] LMDs are also moving away from incentivising agents and retailers solely on sales, instead focusing also on collections.

But the sector has a long way to go, and more data is needed.

The immaturity of consumer financing in the LMD sector was demonstrated by one of the pilots in the recent GDC Innovation Challenge, which focused on digital solutions for LMDs. Nithio, an AI-enabled energy financing platform, worked with GDC member Vitalite Zambia to explore ways to use historical customer data and geospatial household characteristics to underwrite loans.[62] While the underlying data models showed promise, implementing them as a digital point of sale solution was challenged by significant process change, competing operational constraints, and software support in remote areas without connectivity. Ultimately, Nithio concluded that the current (2022) level of customisation required to meet LMDs' varied technological, operational, and financial bandwidth - in an already tight-margin sector - made it difficult to commercially scale this service for LMDs.

Nonetheless, LMDs are expected to become more sophisticated in how they manage consumer financing, especially as they continue to digitalise their operations, which will enable more data-based decision making. Over the long term, this will increase their efficiency, help them to attract more working capital, and enable them to serve more customers.

There is a danger that improved risk management structures will result in LMDs moving upstream to serve less-risky customers, as has arguably happened in the microfinance sector. LMDs will need to balance their commitment to improving last mile access to affordable products with their need to ensure portfolio quality, over the long term and at scale.[63] This is key to ensure LMDs avoid high default rates, as well as over-indebtedness of their consumers; particularly as they move to sell higher value products.

Additional research is needed to understand just how effectively LMDs are managing consumer financing. In 2019, the reported default rate averaged 8%, and ranged from 0 to 35%, but much more data - ideally around write-offs - is needed to draw any kind of conclusions and to meaningfully assess progress.[64]

Recommendations

- **LMDs** can focus on embedding risk management and smart use of working capital into core business - particularly in terms of culture, strategy and people – and finding the balance between complicated schemes and easy wins.[65]
- **Donors** and **investors** can:
  - Do more to help LMDs invest in building credit risk management and working capital management capabilities, including through the provision of TA.[66]
  - Explore new ways to finance working capital for accounts receivables, like the platform currently being tested by PaygOps and First Growth Ventures (see Trend 1).
- **Donors** can also fund further research to understand how effectively LMDs are managing credit risk and working capital, what best practices look like in the sector, and how they could be transferred to more LMDs to improve efficiency and impact.

Conclusion

The key takeaway from GDC member data and wider research is that the last mile distribution sector is not only impactful, but resilient and increasingly professional.

LMDs continue to face challenges, but overall they are growing, achieving impressive levels of impact, and they are efficient in how they use capital. Despite initial fears about the potential ramifications of Covid-19, the sector has well and truly weathered the storm, with only a relatively small number of closures, primarily among very small companies. LMDs are still concentrating on serving low-income and remote customers with a greater variety of beneficial products and a stronger focus on quality and after-sales. In addition, LMDs are becoming more sophisticated in operations, particularly in terms of how they collect and use data; how they approach sales, after-sales and marketing; and how they manage credit risk.

If LMDs continue to build on these successes and ride the wave of digitalisation, the outlook for the sector looks bright. However, this will heavily depend on whether LMDs can access the finance they desperately need, of the right kind and at the right stage of growth. It will also depend on the capacity of the sector as a whole to learn from LMDs' experiences and accelerate growth and impact. While funder mindsets are shifting in a direction that benefits LMDs, it is taking time for this to translate into concrete investment. The financing mechanisms that have emerged to support LMDs in recent years have promising potential, but are either in pilot stage or only accessible to a very small proportion of LMDs. Additional donor support is urgently needed to de-risk the sector, both via direct investment and support for initiatives that help build the sector's overall performance. This will be critical in enabling LMDs to reach their full impact potential at the last mile.

Endnotes

1 Calculation: average number of people reached by GDC members (217,000) multiplied by number of GDC members (156) as at February 2022.

2 Last Mile Distribution: State of the sector report 2019 | GDC (2019)

3 For datasets referenced, see:

- Last Mile Distribution: State of the sector report | GDC (2019)
- The growth and fundraising journeys of last mile distributors | GDC (2021)
- How is the last mile distribution sector adapting and innovating following Covid-19? | GDC and CDC Group (2021)
- Digital transformation to support last mile distribution: overcoming barriers together | GDC and Energy Catalyst (2021)

4 Self-reported number of people reached by GDC members to date (if only the number of products sold was provided, this was multiplied by five for an average household).

5 Self-reported data; data on rural/urban reach was not gathered in 2019.

6 Inyenyeri and Today's Biomass Pellet Pioneers | Clean Cooking Alliance (2022)

7 News on NewLight Africa Default | Trine (2019)

8 Reflections from a former last mile distributor: In conversation with Veritas Vision | GDC (2022)

9 With Solar Sister, forward we go | ICRW (2016)

10 Women Sales Force: An impactful channel for health-related products? | Hystra (2022)

11 See Gender in Business: Lessons Learned for Last Mile Distributors | GDC and Value for Women (2022)

12 Ahead of TA opportunities including those focused on credit risk management and grant-writing.

13 Other challenges listed by members (in order of overall importance): finding the right products or suppliers; after-sales service; access to information; and finding the right service provider.

14 For more detail see Creating Sustainable Last-Mile Distribution for Beneficial Products: Two Network Archetypes (and How They Can Scale Up) | GDC (2021)

15 Including GDC webinars and:

- Coping with shock: Last-mile distributors and Covid-19 | GDC (2020)
- How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021)
- How Will Last-Mile Distributors Adapt to and Survive the COVID-19 Crisis? | GDC (2020)
- The Big Impact of Small Improvements: How Last-Mile Distributors Have Responded to COVID-19 with 'Incremental Innovation' | GDC (2021)

16 The 2022 member survey defined local LMDs as those wholly owned by citizens of the country(ies) in which the LMD operates, and international LMDs as those wholly owned by those outside the country(ies) in which the LMD operates.

17 Last Mile Distribution: State of the sector report 2019 | GDC (2019)

18 Coping with shock: Last-mile distributors and Covid-19 | GDC (2020)

19 Digital transformation to support last mile distribution: overcoming barriers together | GDC and Energy Catalyst (2021)

20 See slide 4, Investment Data | GOGLA (2020)

21 See for example Learnings from a Decade of Investing in Energy Access in Africa | Persistent (2021), and The growth and fundraising journeys of last mile distributors | GDC (2021)

22 Of the 21 LMDs interviewed in Growth and fundraising journeys of last mile distributors | GDC (2021):

- 11 international LMDs had a total revenue of $91m (total sales revenue over the life of the company) and had raised a total of $63m in all forms of capital, excluding funds raised just within the last year → a ratio of 1.5.
- 10 local LMDs had a total revenue of $63m and had raised a total of $16m → a ratio of 3.9.

23 In the 2019 report survey, 20% of GDC members who had raised debt had done so from crowdfunding platforms; this number was 47% in the 2021 growth research.

24 The impact of Covid-19 on crowdfunding for energy access | Energy 4 Impact (2021)

25 Clean Cooking: Results-based Financing as a potential scale-up tool for the sector | MECS & Energy 4 Impact (2021)

26 Clean Cooking: Results-based Financing as a potential scale-up tool for the sector | MECS & Energy 4 Impact (2021)

27 Growth and fundraising journeys of last mile distributors | GDC (2021)

28 These were the top requests for support made by funders during the GDC's Last Mile Distribution Investor Forum in April 2021, and are core to the GDC's 2022-25 strategy

29 Energizing Finance: Taking the Pulse 2019 | Sustainable Energy for All and Dalberg Advisors

30 At the time of the survey, 20% of LMDs using PAYGO had built proprietary in-house software to do so.

31 Digital Service Catalogue | GDC

32 Digital transformation to support last mile distribution: overcoming barriers together | GDC and Energy Catalyst (2021)

33 Digital transformation to support last mile distribution: overcoming barriers together | GDC and Energy Catalyst (2021)

34 Copia Global also raised $50m in January 2022 to expand into African markets beyond Kenya.

35 Innovation Challenge | GDC

36 Jumia for example is moving to second tier cities across Africa and opening up its logistics marketplace to third parties to further penetrate rural areas.

37 How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021)

38 How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021)

39 Pricing quality: cost drivers and value add in the off-grid solar sector | GOGLA and Hystra (2020)

40 An Emerging Cornerstone of Last-Mile Distribution: The Power of Data and Process Digitalization | Solaris Offgrid (2020)

41 The Mobile Economy 2021 | GSMA

42 See eg. The Mobile Gender Gap Report 2021 | GSMA

43 Digital transformation to support last mile distribution: overcoming barriers together | GDC and Energy Catalyst (2021)

44 See framework for LMDs on p.9-10, in How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021)

45 Digital Service Catalogue | GDC

46 How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021)

47 Reflections from a former last mile distributor: In conversation with Veritas Vision | GDC (2022)

48 One Acre Fund partners with Indian LMD company Essmart to bolster services | Food Business Africa (2022)

49 Only four of 72 GDC members in our 2019 report survey stated they were selling PUE products (namely solar water pumps, solar crop dryers, solar mills, irrigation pumps, fishing lights and/or refrigerators).

50 Productive Use of Energy: Moving to scalable business cases | Endev (2020)

51 Finding the sweet spot: identifying affordable quality solar products for the last mile | GDC (2020)

52 Wholesalers for beneficial products: the missing link for impact at the last mile | GDC (2022)

53 How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021)

54 Examples: Dharma Life, Hybrid Social Solutions, Mivo Energie, Mukuru Clean Stoves and Aqua Clara Kenya.

55 A Guide to Managing Credit Risk | CGAP (2021)

56 Repayment periods vary significantly depending on product, but typically members selling on credit provide a 2-24 month repayment period.

57 Over 40% of LMDs who attended the GDC's 2021 webinar on working capital management did not know the time to cash for their top three products. Over 70% didn't have any working capital ratios as part of their top 10 KPIs.

58 A Guide to Managing Credit Risk | CGAP (2021)

59 Innovation Challenge | GDC

60 How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021)

61 A Guide to Managing Credit Risk | CGAP (2021)

62 Innovation Challenge | GDC

63 Last-Mile Consumer Finance: Embracing Opportunity, Managing Risk | CGAP (2021)

64 Last Mile Distribution: State of the sector report | GDC (2019)

65 A Guide to Managing Credit Risk | CGAP (2021), and section 1 of How is the last mile distribution sector adapting and innovating following COVID-19? | GDC and CDC Group (2021) are excellent starting points.

66 An example is the TA funded by CGAP and provided by Frankfurt School of Finance & Management to GDC members in 2020-21, in the form of 1:1 TA to six GDC members as well as group workshops.