

ENERGY CATALYST



**Global
Distributors
Collective**

Digital transformation to support last mile distribution: **overcoming barriers together**

5 areas of dialogue and action for digital service providers and other industry players to contribute to better digital solutions for last mile distributors

Digital transformation to support last mile distribution: overcoming barriers together

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Digital Service Providers that took part in our interviews and working session.

[Angaza](#)

[Connected Energy Technologies](#)

[Open Energy Labs](#)

[Maad](#)

[FieldPro by Optimetriks](#)

[Paygee](#)

[PaygOps by Solaris Offgrid](#)

[Sevi](#)

[TaroWorks](#)

[Upya Technologies](#)

[Mobile Power](#)

Global Distributors Collective (GDC) members that filled out our survey (their names remain confidential).

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Glossary

What are Last Mile Distributors (LMDs)?

Organisations that distribute beneficial household products to last mile consumers that are underserved by the mainstream private sector, because they are low income or live in remote areas, or both. LMDs are mostly for-profit companies and social enterprises, although some are set up as non-profit organisations.

What are Digital Service Providers (DSPs)?

Organisations that sell specialised software, mobile applications or web-based services to external customers, corresponding to LMDs in the scope of this report.

What is digital transformation?

The terms "digitisation", "digitalisation" and "digital transformation" are often used interchangeably and can cause confusion. This report uses the latter as it provides the broadest definition. Digital transformation describes how organisations leverage digital solutions to transform their business and strategy, as compared to digitisation which refers more narrowly to converting (analogue) information to become digital, and digitalisation which refers to business processes becoming digital.

Other abbreviations in the report:

API - Application Programming Interface

ARE - Alliance for Rural Electrification

CRM - Customer Relation Management

ECAP - Energy Catalyst Accelerator Programme

ERP - Enterprise Resource Planning

GDC - Global Distributors Collective

IVR - Interactive Voice Response

PAYGo - Pay-As-You-Go

SaaS - Software as a Service

Telcos - Telecommunications companies

"We're always looking for digital solutions to improve our efficiency"

- Last mile distributor

Background

"The impact of the pandemic has challenged the sector, but the demand for digital solutions continues to grow."

- Digital service provider

Background and authors of the report

ENERGY CATALYST

Energy Catalyst accelerates the innovation needed to end energy poverty.

Through financial and advisory support, and by building strategic partnerships and uncovering new insights, Energy Catalyst supports the development of technologies and business models that can improve lives in Africa and Asia.

Energy Catalyst is an Innovate UK programme with co-funding from the Foreign, Commonwealth and Development Office, Global Challenges Research Fund, the Department of Business, Energy and Industrial Strategy, and the Engineering and Physical Sciences Research Council.



The Global Distributors Collective (GDC) is a collective of last mile distributors around the world. The GDC is dedicated to supporting distributors to help them reach millions of underserved customers with beneficial products, and to developing the sector as a whole.

The GDC has 200+ members in over 50 countries, who have reached over 35 million people in last mile households with life-changing products such as solar lights, clean cookstoves and water filters. Its ambition is to make last mile distribution the first priority, so that life-changing products can be made affordable and available to all.

Scope of the publication:

Both Energy Catalyst and the GDC seek to support digital transformation of their respective company members. To do this, a conversation was launched between the two key stakeholder groups: the last mile distributors and those providing them with digital services. We conducted interviews and surveys with both groups and verified our intermediate findings with a small group during an online workshop. This publication presents our final findings, and we hope it will foster collaboration between the stakeholder groups and support the digitalisation of the last mile distribution sector as a whole.

The promise of digital solutions for the last mile distribution sector

Digital solutions have become an integral part of the last mile distribution sector.

They hold tremendous potential to increase efficiencies when operating at scale.

Needless to say, digital solutions helped many last mile distributors (LMDs) to rapidly respond to Covid-19 related challenges, including restrictions imposed on physical movements of agents and assets. Over the course of the pandemic, many LMDs accelerated their digital transformation processes, including the use of mobile money payments, remote sales agent or retailer training, and setting up online stores/e-catalogues.

In the longer-term, these solutions will help companies grow and prepare for a future in which more and more of their customers use the internet and mobile banking to find and purchase products and services, and to address the challenges associated with scaling up operations, entering new markets and diversifying product offerings.

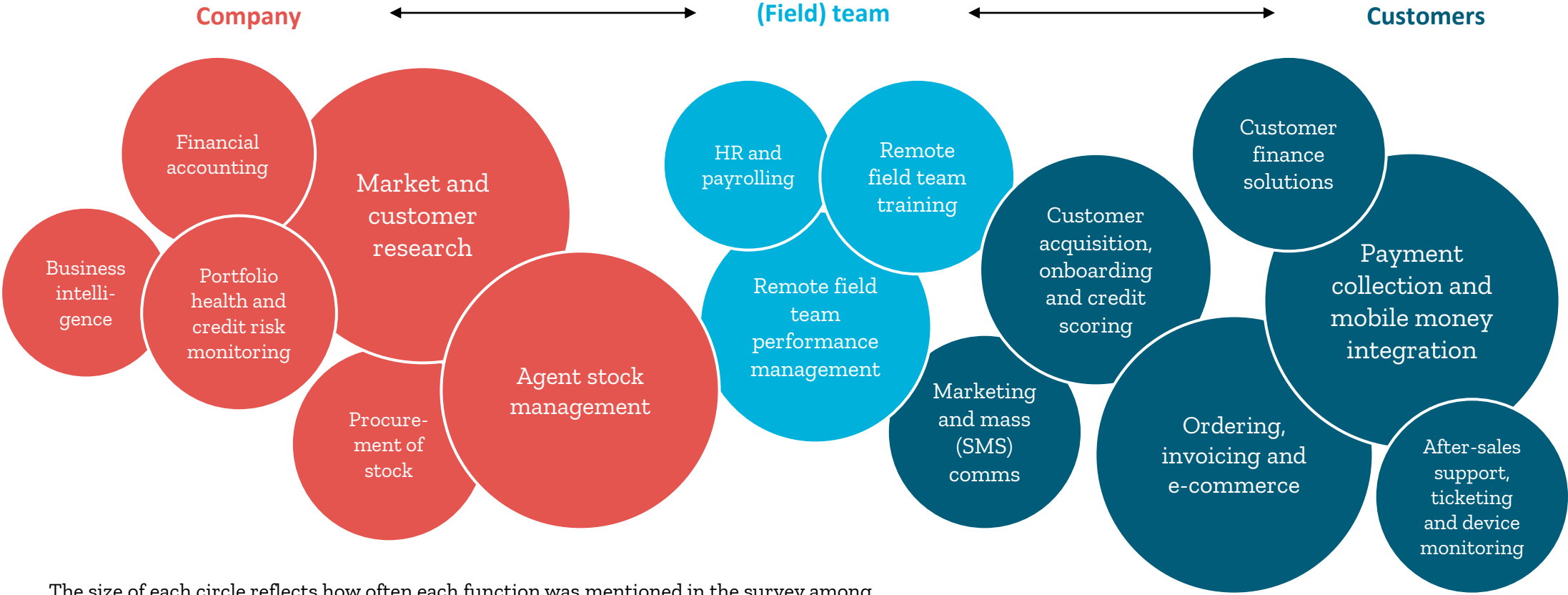
“Digital solutions have been crucial for us to mitigate the impact of the pandemic and will continue to be key in our future growth”

- Last mile distributor



Photo credit: upOwa

Digital solutions support virtually all business functions of last mile distributors



The size of each circle reflects how often each function was mentioned in the survey among last mile distributors when they were asked: **what do you use digital solutions for currently?**

Source: Survey with 28 GDC LMDs to evaluate their use of digital solutions

Pathways for digital transformation of last mile distribution

LMDs leverage digital solutions to transform their business operations in different ways.

This depends on, amongst other things, their appetite for digital technology as well as the opportunities and limitations presented by the sector or market in which they operate. Building on the framework borrowed from the [Argidius Foundation](#), three pathways for digital transformation can be identified. None is more desirable than the other, each has its own benefits.

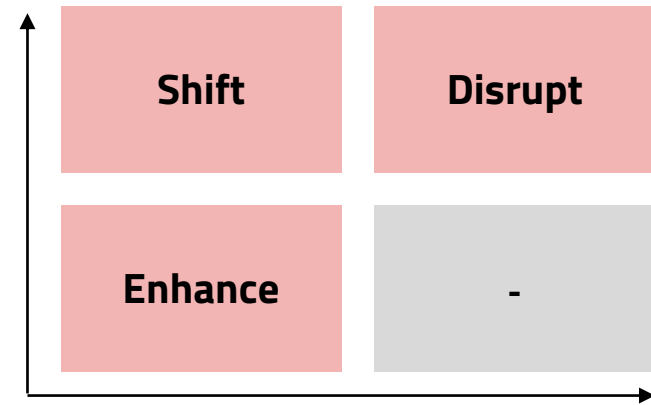
Many established LMDs hold on to their proven business model and leverage digital solutions to enhance their existing activities. Often these LMDs start by digitalising business activities that are most inefficient and tedious when done manually, such as payment tracking for products sold to customers on credit. While other business functionalities such as remote field team management can be big pain points, LMDs often cannot justify investment in digitalisation until they have reached a substantial scale. For example, only GDC survey respondents with at least 50 sales agents report using digital field team management solutions.

Other LMDs choose to (slowly) shift from offline to online business operations. [Econome](#) in Kenya is a relatively young player that started with traditional face-to-face sales to female customers but is planning to shift to online sales completely in the coming years (if they can address barriers such as smartphone use and digital trust among female customers). To realise this shift, they are collaborating with a DSP, [Sevi](#), that offers a digital group purchase solution optimised for Econome ([read more](#)).

Few LMDs disrupt traditional business models. [Frontier Markets](#), for example, moved from face-to-face selling to assisted e-commerce. The same can be said for [Essmart](#) which has build its own app for rural shopkeepers to choose from hundreds of products that Essmart will help source for them.

Strategic weight

How central is digitalisation to the organisation's strategy?



Level of digital innovation

How innovative is the organisation's use of digital tools and approaches?

Framework borrowed from the [Argidius Foundation](#)

"It is not easy for us to understand what digital solutions are available out there and which one adjust[s] best to our needs"

- Last mile distributor

Opportunities and challenges

"It's important to us that the last mile distribution sector does well. If our clients sell more products, we make more money as well."

- Digital service provider

Status of digital transformation of the sector

In the midst of a digital transformation of the last mile distribution sector, two competing realities are at play:



More third party specialised digital solutions becoming available

The past few years have seen a rise in the number of DSPs and the range of solutions they offer. Some DSPs have emerged due to the unbundling of vertically integrated companies that used to do everything themselves (e.g. Paygee, PaygOps by Solaris Offgrid). Others are DSPs serving other sectors that choose to diversify and add LMDs to their customer groups. Prior to the rise of these DSPs, many first wave companies in the PAYGo sector - particularly the larger ones or those with very unique business models - developed their own in-house solutions. Increasingly, however, LMDs are accessing digital services from established DSPs, allowing them to focus on their core business operations. A [recent study](#) among LMDs carried out by PaygOps and Enable Digital indicates that very few LMDs intend to develop their digital solutions primarily in-house, mainly resourcing to off-the-shelf solutions or combining both approaches. To demonstrate the size of the industry, 28 LMDs surveyed collectively listed more than 40 different solutions they have adopted in their operations. Some of these solutions are generic (e.g. Google Sheets/Forms, Salesforce, Whatsapp), but most are specialised solutions for the sector covering almost all business functionalities for LMDs. Given the diversity of LMD business models, there are bound to be challenges with provision of services to match the difference in needs. 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"*.



LMDs still see offline, in-person activities as key to their business model

For many LMDs, a large share of their budget still goes to offline activities such as below-the-line marketing and cash payment collection. Despite the benefits digital solutions can provide in areas such as customer acquisition, payment collection, or remote field force management, many LMDs operate in markets that are not ready for a full digital transformation. For example, not all agents have smartphones or are digitally literate, and not all customers are comfortable with or capable of paying for products with mobile money. Moreover, offline activities can be sometimes critical to build relationships and trust when selling to a highly risk averse customer base. Therefore, LMDs might hesitate to fully roll-out digital solutions across their agent or customer base.

DSPs are aware of these challenges and address them where possible, and try to combine the best of both the online and offline worlds. As indicated by one DSP: *"In the LMD sector, there are many opportunities for our product to solve problems. However, the LMD sector is different and less known/established than others. We face some unique problems in the LMD sector such as lack of mobile phones, tech savviness, and flexibility of how sales agents often going their own way."*

Needs of last mile distributors when comparing digital solutions

A GDC member survey undertaken in February 2021 aimed to understand LMDs' needs and use of digital solutions from third party providers. LMDs were asked to review the digital solutions they currently use, with main likes/dislikes listed in the table on the right. Interestingly, affordability was not the most important consideration: LMDs are willing to pay for the right solutions, with respondents spending on average USD 25,000 per year on their whole set of digital solutions (some spend up to USD 100,000 per year). So, what do LMDs want to see for their money? Their top 3 needs for digital solutions are:

1. **User-friendliness:** LMDs want solutions that are easy to understand, intuitive to use, designed for mobile-first, with good-looking user interfaces. In addition, mobile apps used in the field should be optimised for offline usage in areas with poor or no connectivity.
2. **Customisability:** LMDs want flexible solutions with workflows that can be easily configured to their ways of working.
3. **Interoperability:** LMDs appreciate solutions that are either versatile, or, given that the digital industry is rather fragmented, are at least interoperable.

Talking to various DSPs, all could relate to these needs and are striving to meet them. Some DSPs choose to differentiate from competitors by excelling in one particular aspect, such as great UX design. Also, some needs are trade-offs in terms of design execution (e.g. customisability compromises affordability). Despite efforts by DSPs, it appeared that not all LMDs' needs can be fulfilled and certain barriers are still to be overcome, which are the foundation of our areas of dialogue and action presented in the next section. This will require efforts from both sides, as well as from other stakeholders that can and should play a role.

How LMDs evaluate the digital solutions they use (ranked by the frequency of being mentioned)	
Likes	Dislikes
"It's easy to use" (13x mentioned)	"Not easy to understand and use without tech expertise" (5x)
"Easy to customise" (7x)	"Expensive" (5x)
"Optimised for offline usage" (6x)	"Ugly interface design" and "it has bugs" (5x)
"It's versatile as it provides many functionalities" (4x)	"Not integrated with other solutions that I use" (3x)
"It's affordable" or "free of charge" (4x)	"Not easy to configure, requires much development time" (2x)
"Reliability and data accuracy" (3x)	

Source: Survey with 28 GDC LMDs to evaluate their use of digital solutions

"We hope to migrate to a full enterprise software package [...] but will still need integration with our existing solutions such as Angaza and KIVA"

- Last mile distributor

5 areas of dialogue and action

"We can't always serve all the needs that LMDs express to us. Sometimes it just gets too complex and costly. We aim to strike a balance between a standardised and customised plans."

- Digital service provider

5 areas of action to overcome digitalisation barriers for last mile distribution



Industry visibility and digital jargon

How to help last mile distributors (LMDs) find and compare digital solutions, and digital service providers (DSPs) to showcase what they offer?



Digital readiness at the last mile

How to accelerate digital literacy of LMDs and reduce their onboarding times for DSPs?



Financing digital transformation

How to help (smaller) LMDs finance digital solutions offered by DSPs?



Interoperability of solutions

How to accelerate the integration of solutions that LMDs use from different DSPs?



Replicability across countries

How to streamline the connection with Mobile Operators and local regulators when DSPs enter new countries with LMDs?

Each of the five areas includes examples of concrete solutions that various players in the ecosystem can pick up



DSPs



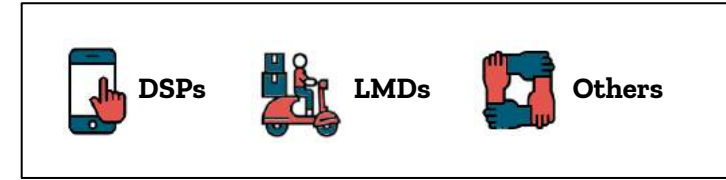
LMDs



Others



Industry visibility and digital jargon



Barrier to overcome

How to help last mile distributors (LMDs) find and compare digital solutions, and digital service providers (DSPs) to showcase what they offer?

About half of the LMDs interviewed mentioned they cannot easily find digital solutions that match their needs. While many LMDs are familiar with the larger and more established DSPs, there is little awareness of the breadth of options on the market. Similarly, smaller LMDs are less known by the DSPs. DSPs, in general, wish to gain better visibility in the market.

But even when LMDs and DSPs find each other, it is not a done deal. There appears to be a lot lost in translation, with the two sides not always speaking the same language. LMDs struggle to understand technical terminology used by DSPs, while DSPs might claim that LMDs struggle to define what they are really looking for. Both sides would benefit if the sector developed broadly applicable terms for DSP functionalities. If all DSPs use accessible and consistent language, this will make it easier for LMDs to compare solutions and make informed choices.

Solutions to explore



1. Marketplaces or repositories where LMDs can find an accurate, up-to-date overview of what digital solutions are available in the market. Some headway is being made here. Energy Catalyst previously released a report on the potential of digital solutions in the energy access sector. The GDC is currently developing an online catalogue with peer-reviewed digital solutions for LMDs. With this catalogue the GDC aims to describe and categorise DSP solutions based on the LMD business functions they support, and create a standardised terminology for the sector.



2. Specialised software brokers such as [Enable Digital](#). As an independent consultancy they support LMDs (and/or their investors who pay the consultancy bill) to assess and fulfil their digital technology needs through technology audits and software comparisons. Former clients include [Altech](#) and [Simusolar](#).



3. Matchmaking events, ideally run in conjunction with established events (e.g. trade expos), where LMDs and DSPs can meet and dialogue. This could follow other industry examples such as the [ARE-GET.Invest matchmaking](#) events in [energy access](#) or [clean cooking](#).

Industry visibility and digital jargon

Example: User-rated catalogue of digital solutions for LMDs

The GDC is developing a first-of-its-kind catalogue of peer-reviewed digital solutions for LMDs. This catalogue seeks to provide a comprehensive overview of digital solutions used by LMDs and the experience that LMDs have with those solutions. For each solution, the catalogue will include a concise info sheet with enough information for LMDs to compare solutions and choose which DSP to connect with for further information (sample on right). The digital solutions catalogue will be hosted on the GDC website. The success of this catalogue relies on active contributions from both industries. First of all, LMDs will be asked to add and review the digital solutions they use. And secondly, DSPs are invited to look at those reviews and suggest improvements they will make to their solution. DSPs might also be able to add their solution if not yet featured. So far, the GDC has received contributions from 28 members so far, including smaller and larger LMDs.

Refer to [Annex 1](#) for the language that GDC proposes to use for categorising the solutions of DSPs that will be featured in the catalogue. This is based on consultation with the DSPs involved in this research.

An existing example of an online catalogue is the one of [Kopernik](#), focusing on applications for data collection and SMS/IVR messaging. Outside the digital domain, the [Clean Cookstove Alliance](#) is hosting a global database of cookstoves and performance data.

[Name of DSP]	
Business functions:	Inventory management, Customer ordering & invoicing
Description (100 words):	This solution helps LMDs...
Website:	URL
Integration:	This solution can be integrated with [DSP name], [DSP name]
Star rating by GDC members:	*** (3 votes) (ie. likelihood of recommending it to others)
Likes of GDC members:	"Easy to use" "Can be customised"
Dislikes of GDC members:	"Crashes every now and then"
Reaction of DSP:	"We fixed the bugs with update 1.1"
Last updates:	DD/MM/YY (new GDC member review added) DD/MM/YY (new DSP reaction added)

Draft template for how each digital solution will be presented in the GDC catalogue

2

Digital readiness at the last mile

Barrier to overcome

How to accelerate digital literacy of LMDs and reduce their onboarding times for DSPs?

Running a LMD company requires a lot of different skills. From those skills, IT is often underdeveloped and LMD leadership struggles to keep up with all IT developments. They might not have a formalised IT strategy either. Consequently, onboarding a new LMD client can be a long process for DSPs. According to DSPs, it makes a huge difference whether an LMD has a C-level employee dedicated to IT, or at least with basic IT capabilities. A [study from PaygOps](#) found that LMDs who have invested in IT leadership are 4 to 5 times more likely to have a formalised strategy on how IT will help their strategic outcomes. With most digital solutions not being plug & play, it is important that LMDs and DSPs work together, build a realistic understanding of the digital transformation readiness of the LMD. This includes the required team capabilities and devices for sales agents, prior to data collection, paperwork, and budget arrangements. [Accion](#) provides an example of a [digital maturity tool](#) to assess the digital readiness of sales agents and small retailers. Of course, limitations around digital literacy apply equally - if not more so - to the customer base of LMDs. Barriers often mentioned include the limited smartphone penetration and mobile internet access, as well as lack of trust in digital solutions.

Solutions to explore



1. IT training for LMD leadership and staff. A recent [training programme](#) developed by the GDC and [AMI](#), for example, includes a training module that introduces LMD managers to case studies of LMDs that have leveraged DSP solutions to make their operations cost-efficient and scalable. For more in-depth training, LMDs can choose to work with external IT consultants such as [Enable Digital](#), who have helped LMDs such as Easy Solar to establish strong CTO positions.



2. Streamlining the onboarding process for LMDs, by for example nominating and training experienced "digital champions" at LMD management level who will receive (face-to-face) training from DSPs and subsequently train other managers and agents.



3. Leverage trusted relationships between agents and customers to introduce digital solutions such as mobile wallets among customers. This means sales agents may have to free up time to train and support their customers. Though an investment at first, it should pay itself back over time when customers become more comfortable online.



Digital readiness at the last mile

Example: Adoption of financial services among micro retailers

Bopinc and TRANSFORM (a Unilever UKAid initiative) developed the BIG IDEA tool to support adoption and use of digital financial services among sales agents and retailers at scale. It uses human centered design principles to help develop tech onboarding journeys with touchpoints that make the new behavior meaningful to the target group. The tool, which was already used to support Unilever Shakti sales agents in India, and can be accessed [here](#).

Step 1.1 What is the current **behaviour** of your users, how does it differ from the desired behavior and what holds them back?

Step 1.2 What is **important** for your user? What factors influence his decisions?

Step 1.3 How can you add value to the life of your user and make a **great proposition** that is as attractive as possible?

Step 2.1 Develop **ideas** for a campaign that creates awareness and excitement.

Step 2.2 **Design** the user interface and make it intuitive and fun to use.

Step 2.3 Guide the user through their first **experience** and give rewards.

Step 2.4 Leverage new users to **activate** wider adoption in their communities.

Example of a campaign developed to launch an ordering and payment app for merchants (Bopinc)

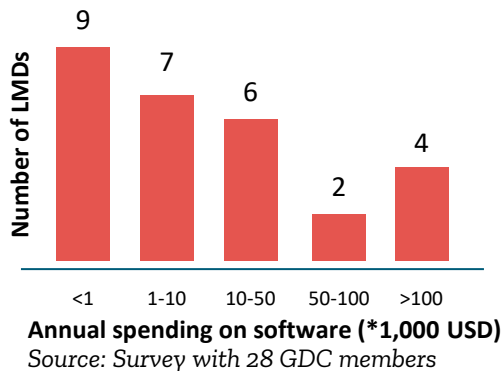
3

Financing digital transformation

Barriers to overcome

How to help LMDs finance digital solutions?

Digital transformation can be a significant expense for LMDs. On average, the LMDs surveyed spend 25,000 USD per year on third party digital solutions, with some exceeding 100,000 USD. As a rule of thumb, [Enable Digital](#) tells its clients to budget 7% of their total annual expenses for IT needs, including IT-related salaries, cloud services, SaaS, subscriptions, mobile money costs, and SMS costs. Of course, this percentage will be smaller for start-ups and larger enterprises as compared to medium-size companies that are growing and most likely investing in IT to support this growth. Based on a [PaygOps survey](#) carried out with 40 LMDs, 75% of respondents are underspending on IT. This trend is more evident among smaller companies (fewer than 20 employees), with 83% allocating less than 7% of their overall budget on IT.



To maximise the value of each IT investment, it is important that LMDs choose the solutions that are right for them and maximise the functionalities on offer. To address the affordability gap, it is important DSPs optimise their pricing models and cater for LMDs with different sizes and needs.

Solutions to explore



1. Improve affordability of digital solutions through fair pricing models and discounts, such as the following practiced by some DSPs already:

- Introduce a cheaper entry-level solution with fewer functionalities but that is sufficient for small or early-stage LMDs.
- Offer a free trial period or not charge upfront fees.
- Let clients only pay for what they use as they switch on/off the functionalities they need (in consultation with the DSP).
- Make pricing (e.g. PAYGo CRM) proportionate to LMD size and not sales volumes, so that those who grow do not face much greater costs.



2. Encourage investors and donors to support the development and tailoring of digital solutions for LMDs. They equally value access to digitally captured data on business performance and impact. Examples are the support provided by Energy Catalyst and the [GDC Innovation Challenges](#).



3. Increase LMD awareness of the realistic costs of digitalisation help them make accurate assessments about the return on investments. Also, DSPs should be transparent about budget requirements. Paygee and Upya, for example, include costs of SMS and mobile money transactions on their quotes. And PaygOps even has a [pricing simulator](#) on their website.



3

Financing digital transformation

Example: Donor supporting LMDs and DSPs to pilot and learn

Funded by an [Innovate UK Energy Catalyst grant](#), Digital Service Provider [Upya Technologies](#) partnered with a Kenyan Last Mile Distributor of Solar Home Systems (SHS) called [Givewatts](#). The purpose of this partnerships was to let Givewatts leverage Upya's application to better serve their low-income customers in rural areas along the coast of Kenya.

The grant provided by Energy Catalyst helped Givewatts finance a 12-month pilot of Upya's CRM software, improving their capacity to serve and monitor customers. Additionally, the technical support provided by the programme helped Upya to explore and validate additional functionalities for their product, such as credit risk scoring. The support also allowed Upya to better understand the needs of LMD players in Kenya including their challenges with access to finance.

Despite of the challenges posed by the Covid-19 pandemic, Givewatt's SHS sales [have been successful in the pilot communities](#), expecting to double their initial targets, with end-users tracked thanks to Upya's software.



Givewatts sales agent in action. Photo credit: Givewatts ([Medium](#)).

4

Interoperability of digital solutions

Barriers to overcome

How to accelerate the integration of solutions that LMDs use from different DSPs?

Ideally, LMDs would choose all-in-one solutions with automated workflows and data combined on dashboards that help managers make daily decisions. However, the reality is that LMDs use up to seven different, often non-connected digital solutions as the industry remains largely fragmented (GDC survey, [Shell Foundation & Enable Digital](#)). This creates data silos, duplication and inefficient processes.

To address this pain point of LMDs, some DSPs choose to expand their feature set and work towards full ERP systems such as Salesforce or SAP, with CRM PAYGo providers such as [Angaza](#) and [Upya](#) already covering up to 90% of what LMDs need to get started. In addition, they also offer larger and more complex customers to integrate their systems with theirs. Many DSPs, however, choose to specialise in just one or several functionalities and introduce application programming interfaces (APIs) so that other DSPs can connect with theirs. While interoperability through APIs provides opportunities, DSPs sometimes face challenges such as agreeing on the terms of integration, who will do and pay for what, and the resources required for maintenance of integrated solutions. The integration with mobile money providers in particular can be a lengthy process (more details about this in the 5th area of dialogue).

Solutions to explore



1. Make APIs and data integration endpoints available. Presenting app integrations to LMDs can give DSPs a competitive advantage. While existing solutions like [Zappier](#) let DSPs connect apps and automate workflows for their LMD clients, Zappier becomes expensive when used at scale. DSPs are therefore encouraged to develop APIs (based on standard protocols) and provide clear documentation that explains what data is made available and how others can access it.



2. Service bundling by DSPs that have complementary offerings, creating a win-win situation for cost-sharing marketing and customer onboarding. It can already be seen how different DSPs sometimes team up to meet a client need they cannot cater for on their own. Donor programmes can also play a brokering role to establish these collaborations.



3. Open-source solutions and content such as [WooCommerce](#), an e-commerce plugin for WordPress, which allows DSPs to easily improve their LMD offering. The [Agrifin](#) programme hopes to launch an Open Content Agriculture Platform (OCAP), providing free farmer training content for SMS/IVR or Whatsapp through APIs that DSPs can connect with.



4

Interoperability of digital solutions

Example: Integrating two solutions for a last mile distributor

Working closely with [BrightLife](#) in Uganda, [Solaris Offgrid](#) has implemented a tailored solution to improve the flow of data between BrightLife's operational processes (run through Solaris' PaygOps solution) and inventory management processes (run through [Unleashed](#)). Before this, it took BrightLife up to 7 staff-days every month to monitor the stocks of products available in their field warehouses. No real-time picture of their current stock was available, leading to difficulties in meeting evolving customer demand. Moreover, damaged products could not systematically be sent back to the manufacturer for warranty claims.

The integration between PaygOps and Unleashed takes advantage of the API of both solutions. Solaris Offgrid was able to establish an automated synchronisation, enabling real-time updates of the stock in any warehouse, at the level of each unique item (see visual on the right). The benefits of this solution for BrightLife are two-fold. First, the level of detail that this integration allows significantly reduces the risk of losing or wasting products. Second, the staffing requirements for capturing and reconciling stock movements is reduced from an average of 7 to 1.5 staff-days per month, as there's less need for manual audits to cover for mistakes and unexpected issues. Moreover, internal processes are simplified and can now be easily monitored by top and middle management. The company has regained control over operations and manual work is diminished, allowing it to spend time on other value-adding activities – like making its operations even more efficient, and reaching an even greater number of low-income consumers. Read more in their blog post on [Next Billion](#).

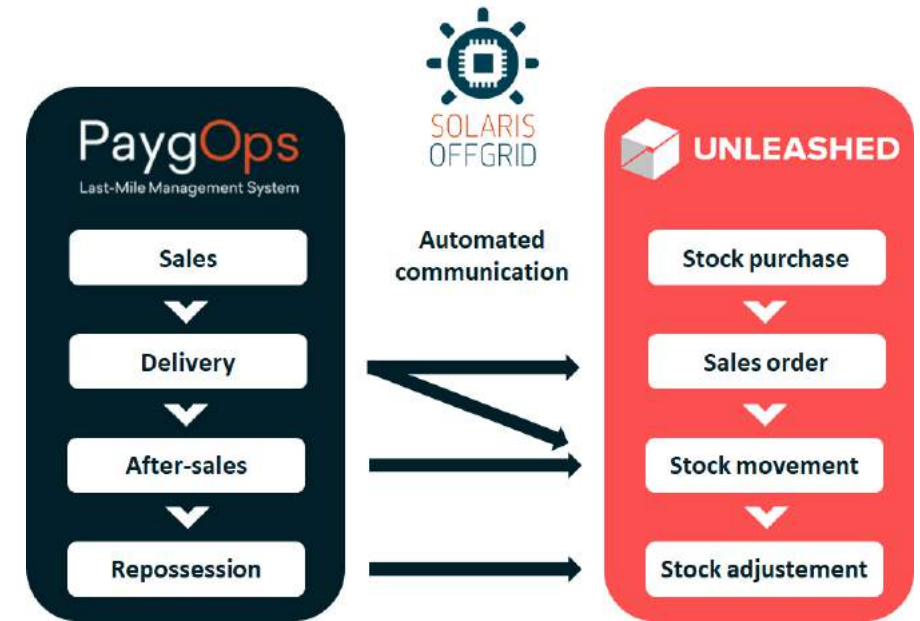


Photo credit: Solaris Offgrid



Replicability across countries

Barriers to overcome

How to streamline the connection with Mobile Operators and local regulators when DSPs enter new countries with LMDs?

Digital solutions are generally easy to replicate across countries, due to their cloud-based nature. DSPs also tend to develop solutions that apply to all product categories that LMDs sell. However, engaging with local telecommunications companies (Telcos) and mobile money providers continues to present a major barrier for DSPs aiming to expand their operations in new markets. This is due to the often long and bureaucratic processes required for the integration of their services, low responsiveness from Telcos and limited negotiating power of DSPs. As one DSP put it: *“Telcos are our only real geographic limitation, working with them is difficult, with tedious administrative procedures for us and LMDs”*.

National regulations can represent even larger challenges for replicability of digital solutions which involve hardware components that are subject to different import and export regulations. *“The import regulations and processes vary a lot between countries and often result into additional costs and delays in our supply chain”*, as mentioned by one DSP.

Solutions to explore



1. Working through aggregators who act as intermediaries in the integration process with Telcos, reducing the paperwork needed for integrations and providing DSPs with access to multiple mobile payment providers (e.g. [Africa's Talking](#), [Cellulant](#), [Beyonic](#)). However, this can be expensive for some DSPs and is therefore mostly a solution to get started rather than scale up. For instance, Sevi worked with an aggregator to connect to mobile money providers when expanding into Uganda, but the aggregator charged 3% on each transaction.



2. Facilitating dialogue between DSPs and the mobile industry. While there is some administrative inflexibility inherent to Telcos for integration processes, promoting dialogue through industry-wide organisations and joint programmes can build confidence and interest from the Telco industry on digital service providers and the last mile distribution sector (e.g. [GSMA](#)).



3. Increasing LMD awareness of Telco requirements. In [this article](#), the PaygOps team underlines that increasing LMDs knowledge of Telcos' requirements is crucial as they are often required to complete extensive and separate administrative processes in each country of operation, given that Telcos' operations and legal frameworks are mostly country-specific. LMDs who are already working with local Telcos can facilitate intros with new DSPs.

Replicability across countries

Example: Facilitating the integration with the mobile industry

The GSMA association represents the interests of mobile operators worldwide, uniting more than 750 operators with over 350 companies in the broader mobile ecosystem. Through its initiative, [GSMA Mobile for Development \(M4D\)](#), founded in 2010, it aims to stimulate innovation in digital technologies to empower underserved communities.

In 2016, M4D launched the [Instant Payment Notification \(IPN\) Hub](#) initiative, a platform enabling PAYG providers of solar, water and transport services to more easily integrate with mobile money providers. While contracts and payments need to be managed outside of the IPN Hub, it enables PAYG providers to integrate with multiple mobile operators through a single technical integration process. Additionally, it helps PAYG providers to more efficiently serve their customers by sending instant notifications of their payments using mobile money. As a result, PAYG providers can speed up their route-to-market, and access multiple markets with smoother integrations. After a successful pilot programme in Rwanda, the IPN Hub currently connects 14 companies to six mobile money providers in five countries in sub-Saharan Africa.

The power of GSMA to convene mobile operators and service providers has been key to the success of initiatives such as the IPN Hub. Through their [M4D Utilities programme](#), they have also set up an Innovation Fund to support digital utilities to build on mobile operator's technology, allocating over £9m to more than 50 companies. Their wider support to the digital ecosystem also includes advisory services to facilitate the cooperation between digital innovators and mobile operators across emerging markets.



Report on the impact of the IPN Hub. Source: GSMA

Other areas of further exploration and dialogue

Besides the 5 recommendations already mentioned, here are other areas that merit further exploration and dialogue:

- 1. How to give LMDs a chance to opt out from digital solutions when they choose to work with another DSP?** It is important that LMDs are not locked into one digital solution and can transfer operations or data to another when they want to. An inspiring example is how leading PAYGo CRM providers have become mutually compatible, bringing more interoperability and accessibility throughout the PAYGo industry ([more info](#)).
- 2. How to drive more transparency and willingness to leverage big data for public good?** Though competitors, DSPs have a lot of convening power. Capitalisation on huge amounts of data collected by players could help the whole LMD sector to develop, raise financing, etc. Encouraging the sector to look at the greater public good and impact by compiling and leveraging data from across portfolios (assuming data privacy is safeguarded) can unlock benefits for the whole sector.
- 3. How to strike a balance between plug & play and flexibility in order to help LMDs and DSPs co-create new solutions of the future together?** DSPs agree that customisation requests from LMDs often provide learning opportunities for enhancing or diversifying their offering for LMDs. However, DSPs face cash constraints to finance innovative ideas that are deemed risky. In light of this, GDC launched an [innovation challenge](#) to support co-creation of new digital solutions between LMDs and DSPs that applied in partnership. In addition, Energy Catalyst continues to provide critical support to develop more innovative solutions, as the [Upya and Givewatts](#) project in Kenya.
- 4. How to accelerate the closing of the digital divide?** Conversations about digital inclusion, championed by organisations such as the [Digital Impact Alliance](#), [GSMA](#), or [Principles for Digital Development](#) reflect important aspirations of the sector. DSPs have an important role to play in reducing inequalities and providing digital skill building trainings in collaboration with LMDs.
- 5. How to collectively support all actors that play a role in building the LMD sector?** Support initiatives that promote the direct collaboration between different players of the sector (LMDs, DSPs, network operators, investors, etc.) can benefit the whole last mile ecosystem, optimising and accelerating the sector's growth. Some examples include the GDC or GSMA innovation challenges, or the partnership between [Angaza and investor SIMA Funds](#).
- 6. How to support more local solutions from local DSPs?** There has been an increase in the inflow of funding for digital solutions as investors begin to pay more attention to the investment opportunities in the LMD sector. Exploring funding and capacity building models that can profitably support and increase the presence of local-led DSPs is necessary.

Further reading

- *How are digital technologies impacting energy access markets?* ECAP market intelligence report (to be published July 2021).
- *How is the last mile distribution sector adapting and innovating after Covid-19?* GDC and CDC report (Apr 2021). [Link](#) to report.
- *Digital Delivery: A digitalisation guidebook for enterprise support organisations.* Aspen/Argidus (March 2021). [Link](#) to report.
- *An Emerging Cornerstone of Last-Mile Distribution: The Power of Data and Process Digitalisation.* Next Billion (Sept 2020). [Link](#) to article.
- *Digitalisation solutions working for off-grid value chains.* AECF/Dahlberg webinar (1 Jul 2020). [Link](#) to presentation.
- *Micro, Small and Medium Enterprises (MSME) Digital Maturity Framework.* Accion (Oct 2020). [Link](#) to report.
- *How IT can work for you: Costs and benefits of technology across Last-Mile Distributors.* PaygOps (June 2021). [Link](#) to article.
- *Why are data lakes the new buzz for SMEs in emerging markets?* Enable Digital (Jan 2021). [Link](#) to article.
- *GSMA Interoperability Test Platform.* GSMA. [Link](#) to website.
- *Why TelCo integrations can take time: A story of paperwork and compliance.* PaygOps (Apr 2021). [Link](#) to article.
- *Upya notes from the last mile: Mid-project Energy Catalyst update.* Medium (Jan 2021). [Link](#) to article.
- *SIMA Angaza Distributor Finance Fund.* Angaza and SIMA Funds. [Link](#) to website.
- *The GSMA Instant Payment Notification Hub.* GSMA Mobile for Development (Apr 2020). [Link](#) to report.
- *Mobile for Development Utilities Innovation Fund.* GSMA Mobile for Development. [Link](#) to website.
- *BIG IDEA Framework - A tool for driving adoption and use of Digital Financial Services.* Bopinc and Transform. [Link](#) to tool.

Annex

Annex 1: Overview of digital solution categories for the GDC catalogue (1/3)

This is the proposed framework and terminology for the digital solutions catalogue that the GDC is building. For the purpose of this publication, only examples taken from the DSPs that interviewed are presented. Other examples that LMDs can choose from will be presented when the catalogue goes live, which is expected to be in September 2021.

LMD need	Digital solution category	Examples of solutions
I want to run rigorous business performance analytics and create dashboards or reports	Company: Business intelligence and data visualisation	Angaza, Upya, TaroWorks, PaygOps, FieldPro, Connected Energy
I want to combine and centralise all my data to generate aggregated insights		
I want to track my income and expenses, and generate financial reports	Company: Financial accounting	Angaza, Upya, PaygOps
I want to run consumer surveys from a phone	Company: Market and customer research	Angaza, Upya, PaygOps, FieldPro, Maad
I want to use secondary data (eg. satellite data) to analyse the markets I want to scale to next		
I want to track the goods I'm procuring as they are shipped from our supplier/factory to my warehouse	Company: Procurement of stock	Upya
I want to track which individual piece of stock is with which agent (for fraud detection)	Company: Agent stock management	Angaza, Upya, TaroWorks, PaygOps, FieldPro, Maad
I want to automate timely restocking for my agents or sales points		
I want to create barcodes/QR codes to register and track my products		
I want to conduct retail audits to ensure compliance of our pricing and merchandising		
I want to have real time insight in my total loan portfolio and outstanding credit disaggregated by loans overdue and defaulted	Company: Portfolio health and credit risk monitoring	Angaza, Upya, TaroWorks, PaygOps, Sevi
I want to track loan performance per sales supervisor or agent		
I want to work with MFIs that have loan tools		

Annex 1: Overview of digital solution categories for the GDC catalogue (2/3)

LMD need	Digital solution category	Examples of solutions
I want to train my field team remotely	Team: Remote field team training	Angaza, Open Energy Labs, Upya, PaygOps, FieldPro
I want to monitor and influence the daily performance of field agents and managers (incl. actual vs. target products sold)	Team: Remote field team performance management	Angaza, Upya, TaroWorks, PaygOps, Sevi, FieldPro, Maad
I want to track the daily whereabouts (GPS) and working hours of field agents		
I want my agents to optimise their sales routes and see households on a map		
I want to give automated task to my agents (e.g. repossession of PAYGO devices)		
I want to keep track of outstanding payments and financial incentives to be transferred to my agents	Team: HR and payrolling	Upya, PaygOps, Sevi
I want to automate payments of my team members		
I want to promote my products through social media	Customer: Marketing and mass (SMS) communication	Angaza, Upya, PaygOps
I want to send bulk SMS or IVR messages		
I want to set up a loyalty programme and send my customers reminders and rewards (eg. discounts)		
I want to track and manage the prospects my agents are generating	Customer: Acquisition, onboarding and credit scoring	Angaza, Upya, TaroWorks, PaygOps, Sevi, Maad
I want to run customer credit assessment questionnaires from the phones of my agents or through our call centre		
I want to automate customer ID verification and KYC data handling		
I want to improve the accuracy of customer credit scoring by using secondary data (eg. satellite data)		
I want to sell to customer groups and base my credit assessment on group performance		

Annex 1: Overview of digital solution categories for the GDC catalogue (3/3)

LMD need	Digital solution category	Examples of solutions
I want to capture and centralise customers orders and invoicing	Customer: Ordering, invoicing and e-commerce	Angaza, Upya, Sevi
I want to set up an e-commerce and let customers see my catalogue/place orders online		
I want to use PAYGo to allow my customers make mobile money repayments	Customer: Payment collection and mobile money integration	Angaza, Upya, PaygOps, Sevi, Connected Energy
I want to use alternative PAYGo repayment models such as Layaway		
I want to introduce money saving solutions for my customers		
I want to support customers to purchase my products in groups		
I want to use crowdfunding platforms to raise debt finance	Customer: Finance solutions incl. crowdlending	Angaza
I want to work with banks and MFIs to provide earmarked loans to my customers		
I want to manage maintenance and technical support for customers	Customer: After-sales support, ticketing and device monitoring	Angaza, Upya, PaygOps, Maad, Connected Energy,
I want to automate my customer ticketing for after-sales support		
I want to give automated tasks to my call center for outbound calls based on customer query priorities		
I want to use chatbots for after-sales support		
I want to invest in an ERP system that fulfils my needs in at least half of the solution categories presented in this catalogue (ie. 8 out of 15 at minimum, including Customer identification and onboarding, Customer payment collection, and Agent stock management)	Enterprise Resource Planning	Angaza, Upya, PaygOps

ENERGY
CATALYST

Global
Distributors
Collective

The logo for Global Distributors Collective features the text "Global Distributors Collective" stacked vertically in a bold, sans-serif font. Below the text is a graphic element consisting of a dense, textured pattern of small, dark, irregular shapes, resembling a stylized globe or a cluster of particles.