Landscaping Innovations in Health Product Distribution in Sub-Saharan Africa

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IMPACT FOR HEALTH

Acknowledgements

The project was led by Cynthia Eldridge and Mara Hansen Staples, Partners at Impact for Health. Primary data collection was undertaken by Tracey Brett (Independent), Nkata Chuku, Funke Falade, Uba Otuonye, Collins Jaguga, Richmond Guamah (Health Systems Consult Ltd). Samantha Horrocks oversaw operations for the work.

Thank you to…

The Bill & Melinda Gates Foundation's Supply Chain team, who supported this work and offered invaluable guidance and thought partnership.

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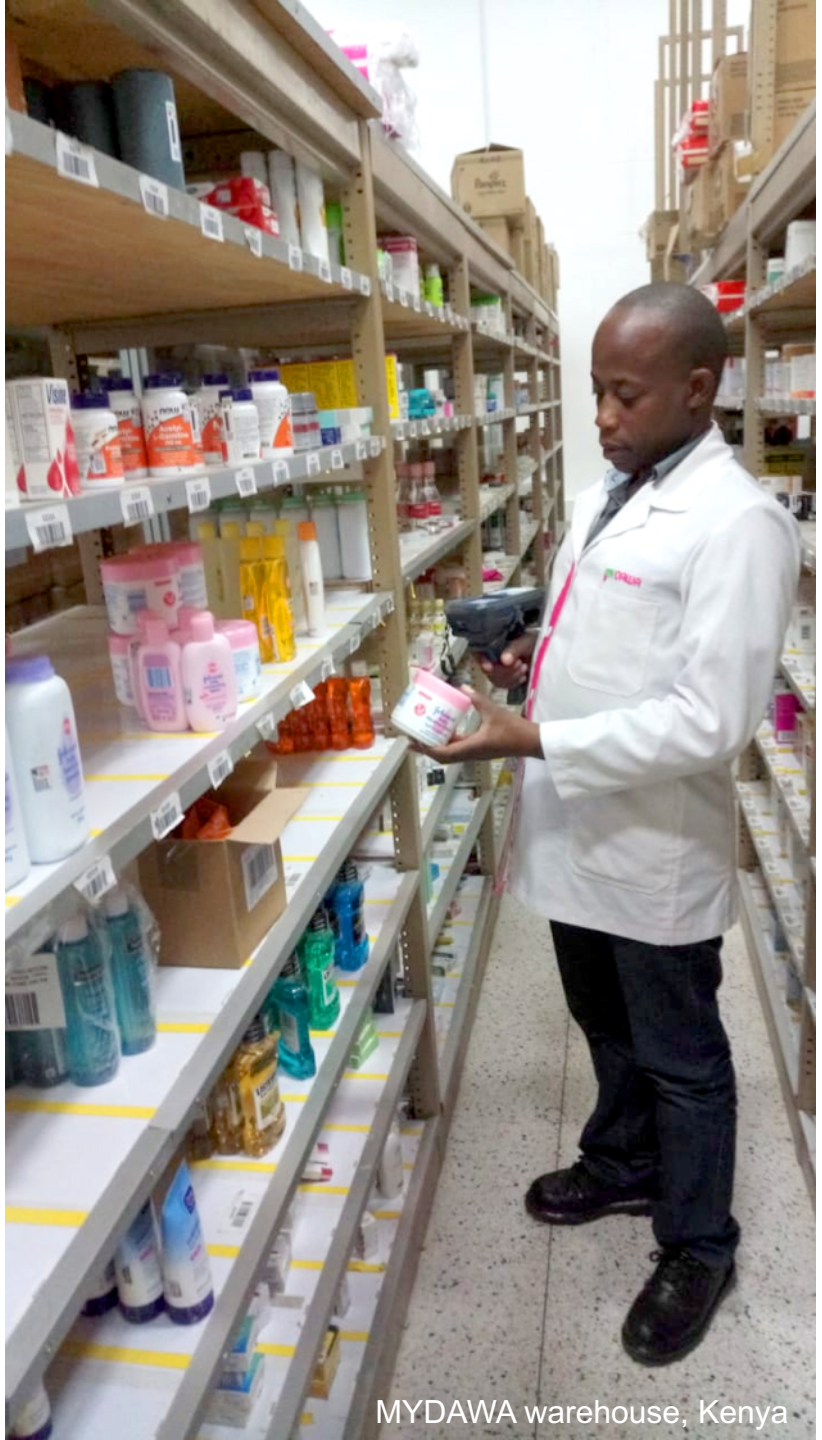
IMPACT FOR HEALTH



MYDAWA warehouse, Kenya

The goal of this project is to outline key trends emerging among innovators in health product distribution and analyze their potential application to efforts to increase coverage of priority products

The project goal is to address two questions:

- ✓ **What are the key trends emerging in health product distribution in sub-Saharan Africa?**
- ✓ **What is their potential impact on coverage of priority health products in sub-Saharan Africa?**

The landscape is largely focused on identifying ***innovative companies*** working to improve the movement of health products from the port to the consumer. Thus, the work focuses ***above the retailer*** and does not provide specific insights on franchises, chains, drug shops, etc.

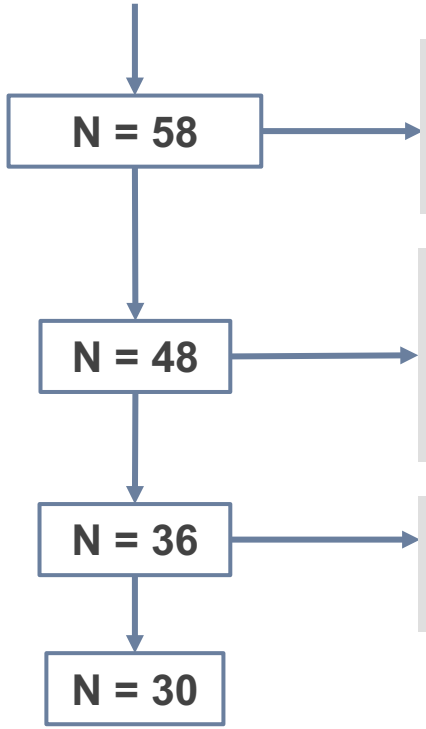
Why now? Across the industry, stakeholders are unsure what innovations are emerging, how to think about the promise of these companies, and how to engage (if at all).

UPSTREAM *out of scope*	Health system governance, product financing, logistics management & information systems, procurement, talent base, product registration, politics, policies, more
FOCUS OF PROJECT IS ON INNOVATIONS HERE	Health product distribution (excluding cold chain innovations and medical devices)
DOWNSTREAM *out of scope*	Consumer demand, pharmacovigilance, retail chains, social marketing, social franchises, more

As a part of a broader effort to strengthen supply chains, this work supports the Gates Foundation Supply Chain team's strategic pillars on 1) Strengthening the Supply Chain Market, with a focus on Retail Supply Chains and 2) Cultivating Disruptive Transformation.

Landscaping surfaced 30 relevant companies focused largely in Kenya, Nigeria, Ghana and South Africa

Internet search and snowballing surfaced companies in Kenya, Nigeria, Ghana and S Africa (limited scope) working on innovations in health product distribution. *Specific additions were made outside the geographic scope constraints, and to look in a limited fashion at innovations in device and transport*.



10 companies excluded on the basis of alignment to scope:
- Primarily incumbent distributors, not innovators
- Using some innovating methods but core business is service delivery (BIMA, Jinlet Pharmacy, Halton's Pharmacy, Dovey Pharmacy, Med World Pharmacy, BookADoc)

12 companies excluded due to:
- Lack of response to request for interview (Doctor4Africa, Counter Fighters, mDaktari, AddPharma, PharmacyDirect Kenya, Siha Digital Health, AddPharma, Infotech Dot Net Systems Ltd)
- Refusal to participate (ePharmacy)
- Business had recently shut down (Pharmnet, SwiftMedicals, eMedrep)

6 companies excluded due to lack of alignment with scope after interview was completed
- Using new methods as a very small part of business model (Uthabiti, Talamus Health, Rx 3.0, Mobimed)
- Innovation is focused on simple product delivery (Malibu Pharmacy, The Medical Concierge Group)

Leadership of 30 innovator companies interviewed in-person and via phone to understand business model, scale and scope, growth strategy, challenges, investors and more

Findings are shaped by nearly 50 key informants including innovators, INGOs, industry leaders, investors and thought-leaders

Companies			
Chibuzo Opera - **Drugstoc**	Michael Moreland - **Shelflife**	Elvin Blankson - **GoPharma**	Joost vanEngen – **Healthy Entrepreneurs**
Abdulraheem Malik -**Findmydrugs**	Noah Perrin - **VIA Global Health**	Samier Muravvej - **Livia Health**	Angus Nasir - **Dawapap**
Ralph Olaniyi - **GenRx**	Ikpeme Neto **- Wellahealth**	Tony Wood - **MyDawa**	Abraham Okore - **Dawaplus**
Vivian Nwakah - **Medsaf**	Ashifi Gogo - **Sproxil**	Jessica Vernon - **MaishaMeds**	Fanie Henxriksz - **Right ePharmacy**
Abimbola Adebakin **- Mymedicines.com**	Bright Simons - **mPedigree**	Joanna Bischel - **Kasha**	Farouk Meralli - **mClinica**
Sophia Baah - **mPharma**	Nakul Pasricha - **PharmaSecure**	Thomas Onyango - **Living Goods**	Anup Akkihal - **Tusker**
Pius Alabi - **RxAll**	Hayford Brako - **MedRx**	Peter Kamunyo - **MedSource**	Agree Ahmed, Harrison Teyler - **NUMI**
Felix Akuamoah **- Medbay**	George Franklin – **AfyaPap**		
Industry stakeholders			
Julie Jenson - **Pfizer**	Harald Nusser - **Novartis**	Jane Rasmussen – **Novonordisk**	Jeff Jacobs, Mindy Neiman - **Merck for Mothers**
Jo Tierans, Jill Lavitsky - **J&J**	Kedar Madhekar – **Mylan**	Iain Barton - **Imperial Health**	
Relevant INGOs			
Neel Lakhani - **CHAI**	Calum McGregor - **WFP**	Frederiek Chatfield - **MSI**	Chris Purdy - **DKT**
Carolyn Hart - **JSI**	Renee Berger - **GHSC**	Paul Stannard - **PSI**	Saumya RamaRao - **Population Council**
Investors, academics, thought leaders, other			
Andreas Seiter - **World Bank**	Frank Wafula - **Hecta**	Mike Harvey - **Independent**	Richard Pibernik - **Uni Werzberg**
Biju Mohandas - **IFC**			

Process

Key findings

Selected company summaries

THE PROBLEM | Health product distribution is complex and suffers from many challenges that affect visibility, price, availability and quality

Supply chains vary considerably from one country to another; *this is a simplified depiction*.

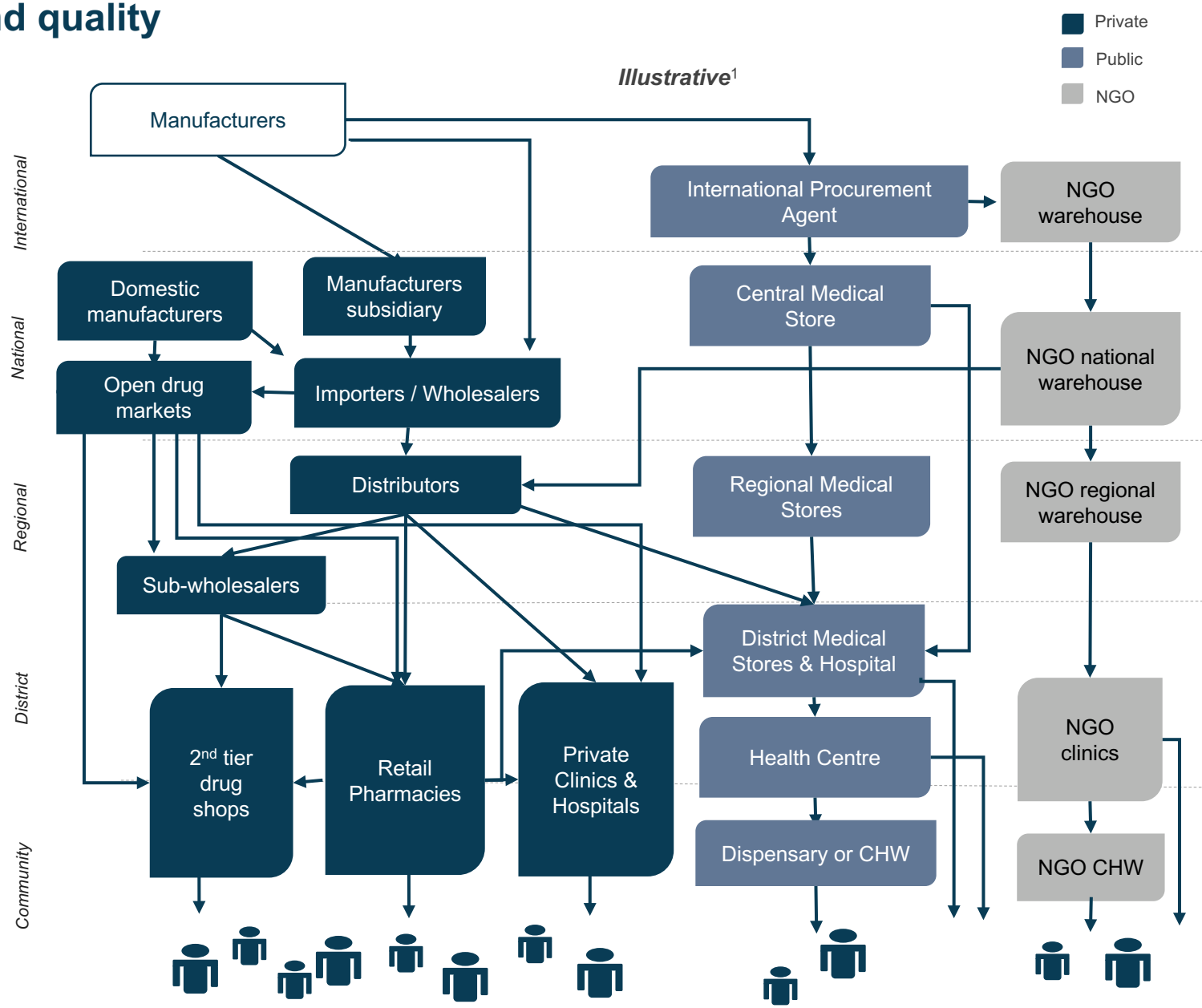
In some contexts, the faith-based sector also play a large role in product distribution which adds another channel. Not all countries have open markets.

In many contexts, availability and quality in the public sector is limited and consumers turn to private sector providers. Private providers (and thus private supply chains) can be dominant sources of care.

Public, private and NGO **channels are inextricably linked at multiple points where products pass between them**.

In the private sector mark-ups at every level exist, often times in spite of regulation that attempts to control for it. The costs to the end consumer can be exorbitantly high.

The flow of information in an end-to-end fashion is very limited. In some major urban areas sales by wholesalers are aggregated by IQVIA, but understanding flow into rural areas or down to the retail level is extremely limited.



1. Framework is the authors adaptation based on Yadav P (2015) Health Product Supply Chains in Developing Countries: Diagnosis of the Root Causes of Underperformance and an Agenda for Reform, Health Systems & Reform, 1:2, 142-154, DOI: 10.4161/23288604.2014.968005

THE PROBLEM | As an example, distribution of emergency contraception in the private sector is convoluted; opportunities for markups are rampant and visibility is limited

Pure private channel

EC (Levonorgestrel 1.5 mg) might move from manufacturers to manufacturers subsidiaries or importers/wholesalers. The product is then sold to distributors, who may sell onward to sub-wholesalers, or sell to private and NGO retailers directly. **Markups along the chain vary widely, but can result in retail prices that are 10X the 1st line buyers cost and 50X the ex-manufacturers cost. There is no end-to-end visibility on the product movement.**

Social marketing channel

A social marketer (SMO) often offers a complementary distribution channel for subsidized EC. Through this channel, the SMO procures the product, imports to their national warehouses, moves product to regional warehouses and onward to local private sector distributors. **Markups can occur at several points between these distributors and the end consumer.**

SMOs also distribute subsidized product to local NGOs and private retail clinics who sell to their customers. **Markups may occur between these providers and the end consumer.**

Regardless of the channel, the SMO will have regular data on the volume of products they sell to distributors or retailers. **However, we do not have regular visibility into the movement of product onward to other providers, or to consumers.**

Approximate mark-ups

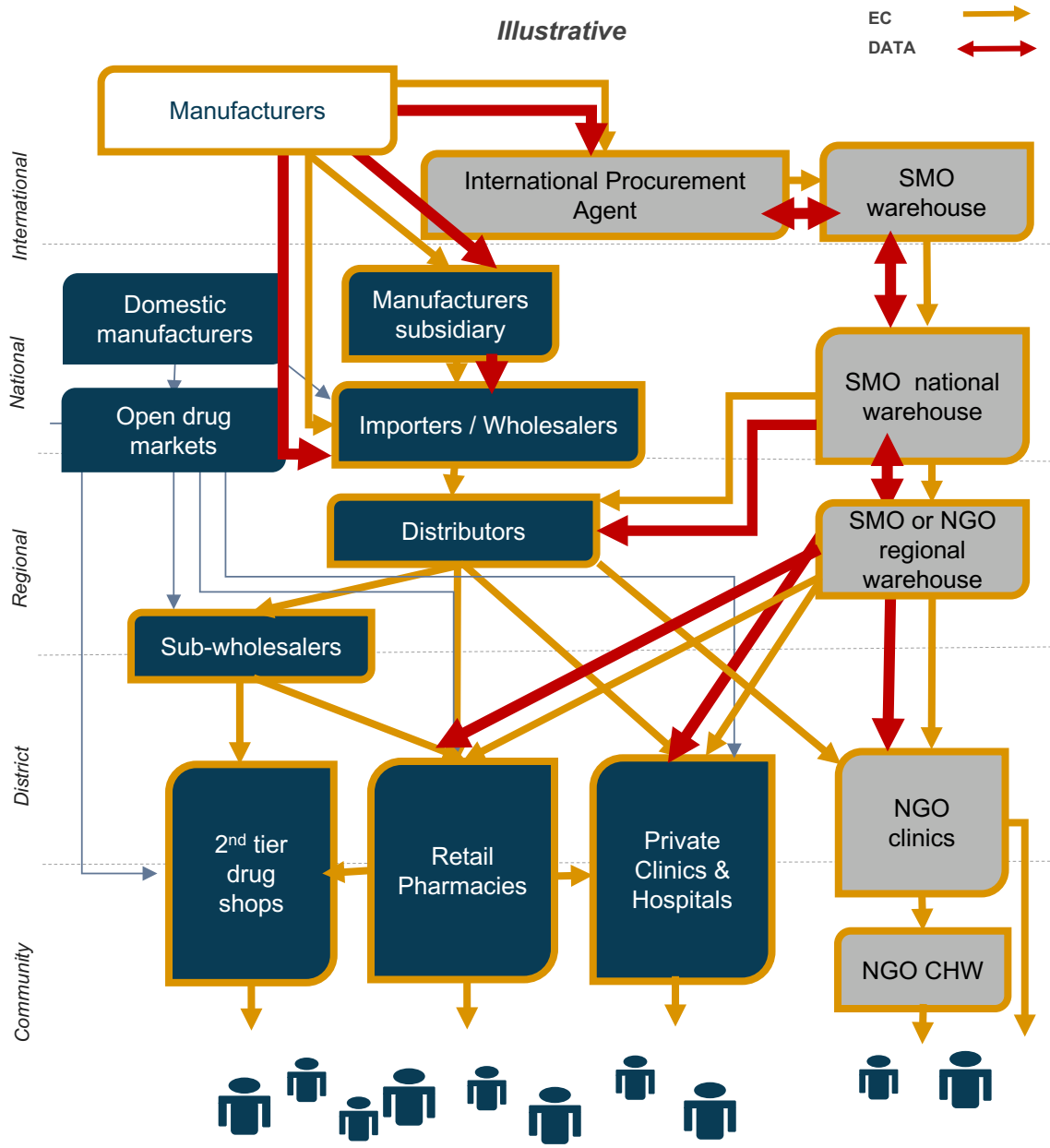
Pure private sector 1st line buyer price

$

Private sector retail price

10X

Illustrative



THE OPPORTUNITY | Is it possible that companies innovating in product distribution offer asset-light opportunities to drive consolidated improvements across the markets for basic care?

Put another way, can we improve quality, cost, geographic reach and availability in new ways, moving beyond downstream investments in chains, social marketing, etc.?

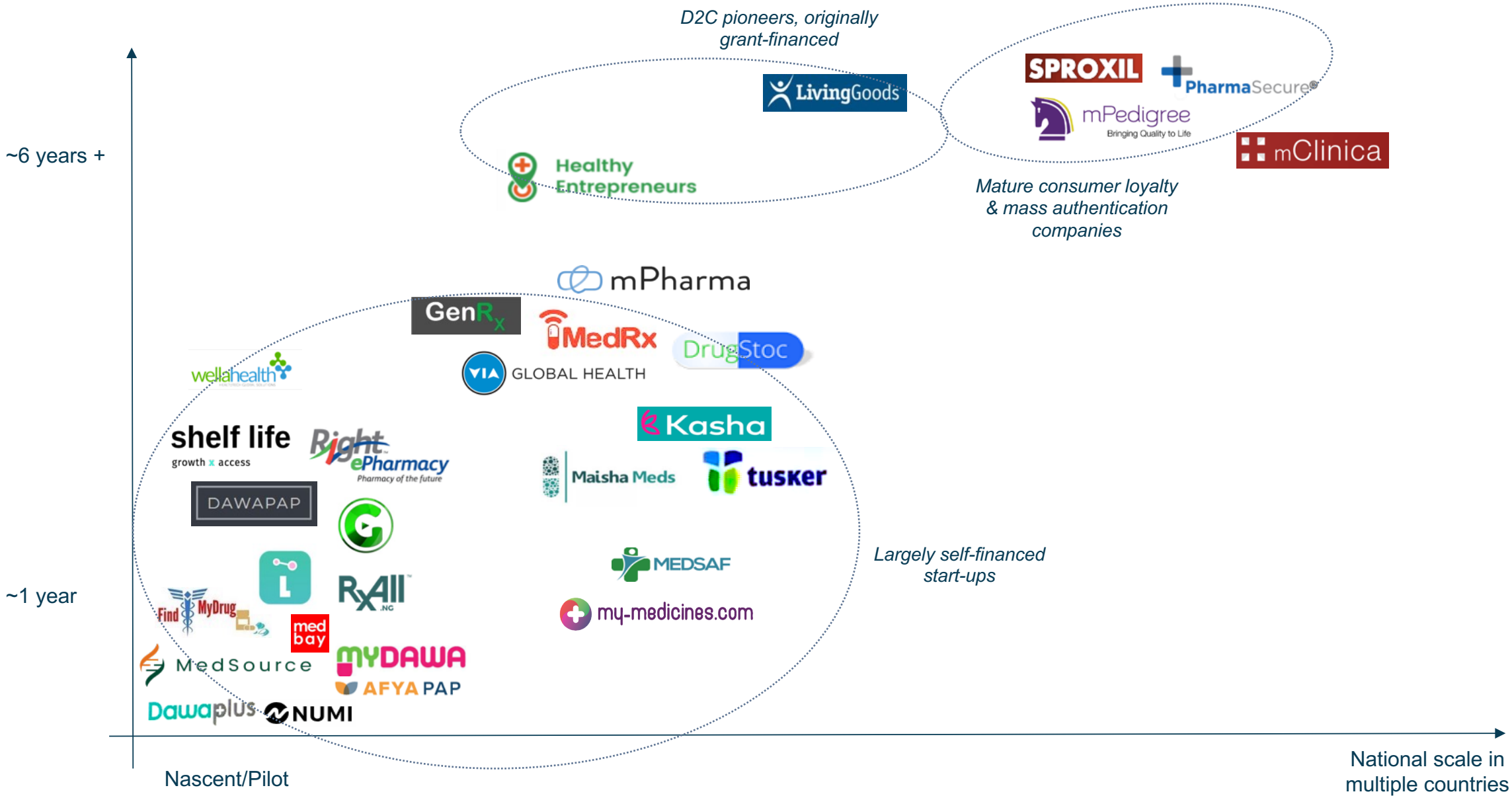
The answer is not yet clear. However, we did uncover some surprises about the way companies are evolving that may point to future opportunities.

IN-GOING HYPOTHESES	*FINDING*
Companies are decreasing mark-ups along the supply chain	**TRUE**. Most companies are attempting to disrupt current supply mechanisms through disintermediation to offer their customers lower prices.
Companies are generating new opportunities for supply chain visibility	**TRUE. IN ADDITION,** companies are also generating novel relationships with consumers to understand directly their use of products & influence their behavior.
Companies are primarily serving high-end private sector providers	**FALSE.** The breadth of providers served by these companies is greater than anticipated; they are serving hospitals, clinics, retail pharmacies and 2nd tier drug shops with new supplier models.
Companies are primarily serving wealthier consumers	**TRUE. IN ADDITION,** insurers who stand to benefit from cost-savings are increasingly engaging with companies.
Companies are primarily operating in urban areas	**TRUE. IN ADDITION,** a few companies are serving rural pharmacies and 2nd tier drug shops. Direct-to-consumer offerings are evolving to bring rural consumers high-cost chronic medications.

KEY FINDING | Innovations in product distribution are emerging across many SSA geographies

NIGERIA	GHANA	KENYA	S. AFRICA	OTHER
DrugStoc	MedRx	DAWAPAP	Right ePharmacy	mClinica
Find MyDrug	mPharma	Healthy Entrepreneurs	GLOBAL HEALTH	tusker
GenRx	GLOBAL HEALTH	Kasha		PharmaSecure®
MEDSAF	SPROXIL	LivingGoods		Dawaplus
my-medicines.com	mPedigree	Maisha Meds		
mPharma		MedSource		
RxAll	med bay	MYDAWA		
shelf life	RxAll	SPROXIL		
GLOBAL HEALTH		GLOBAL HEALTH		
wellahealth		AFYA PAP		
SPROXIL		NUMI shelf life		
mPedigree		mPedigree		
PharmaSecure®				

KEY FINDING | As expected, most companies are new and *very small*



KEY FINDING | Companies see high-markups along private supply chains as an opportunity for disruption

- **Disintermediation and data-driven business practices** are fueling innovators who believe they can deliver **high-volume, low-margin services**
- Most companies **promise direct cost savings** *and* **reductions in transaction costs** to their customers, whether their customers are payers, providers or consumers
- In addition to direct cost savings, **companies are reducing the variability in the costs of health products** for their customers
- **Companies' ability to scale may depend on the magnitude of cost savings they can sustainably deliver to their customers.** Expanding into rural areas may dilute cost-savings due to transport, logistics
- In addition to consumers who pay out-of-pocket for health products, **insurers may be highly incentivized to engage these companies to benefit from the cost savings**

"Your margin ….. is my opportunity"

Illustrative examples of how companies are disrupting distribution with lower prices

MedSource

Aggregating orders and offering providers **8-30% off market prices** plus affordable credit and quality assurance.

NUMI

Offering providers products at cost (**≥30% off market prices**) paired with superior customer-service.

MYDAWA

Generics manufacturer goes direct-to-consumer, offering consumers **~15-20% off market prices** including delivery.

Reverse-price auction offers consumers **~30% off market prices** with the option for delivery.

tusker

A marketplace for affordable, same day delivery from district to rural areas through aggregated order and route optimization.

KEY FINDING | Across the board companies are offering unprecedented visibility into movement of products to facilities & pharmacies. In some cases the visibility extends to consumers as well.

- **All companies are establishing novel digital relationships** with their customers to facilitate services and improve their offering
- **Relationships with providers offer new visibility into the movement of health products, often down to the level of the fragmented, disconnected, poorly regulated retail pharmacies or 2nd tier drug shops**
- **Relationships with consumers provide information on their demographics, location, purchasing behavior, product use and more**. These data and relationships can be used to nudge consumers, solicit input, push discounts, and more

- **If history serves a guide, provider and consumer-level data are likely to be highly valuable to manufacturers**. Many companies see a future revenue stream in selling data directly to them.
- In North America, granular ”de-identified” data are collected at scale primarily to serve sales force targeting and marketing purposes. Use in public health planning or practice is mostly an afterthought. **Could the health policy use cases for such data in newly digitizing markets be prioritized strongly early on?**

Illustrative examples of how companies offer increased visibility into product movement and consumer behavior

MYDAWA

Tracks product movement from manufacturer to point of dispensation, **providing visibility into when, where and to whom it was dispensed.**

shelf life
growth x access

Offers “full service” inventory management of fastest moving products for community pharmacists. **Generates visibility into the movement of key products at the community pharmacy level.**

PharmaSecure®

Offers voice & SMS follow-up after consumers authenticate their product. **Use with TB patients showed a 60% increase in adherence.**

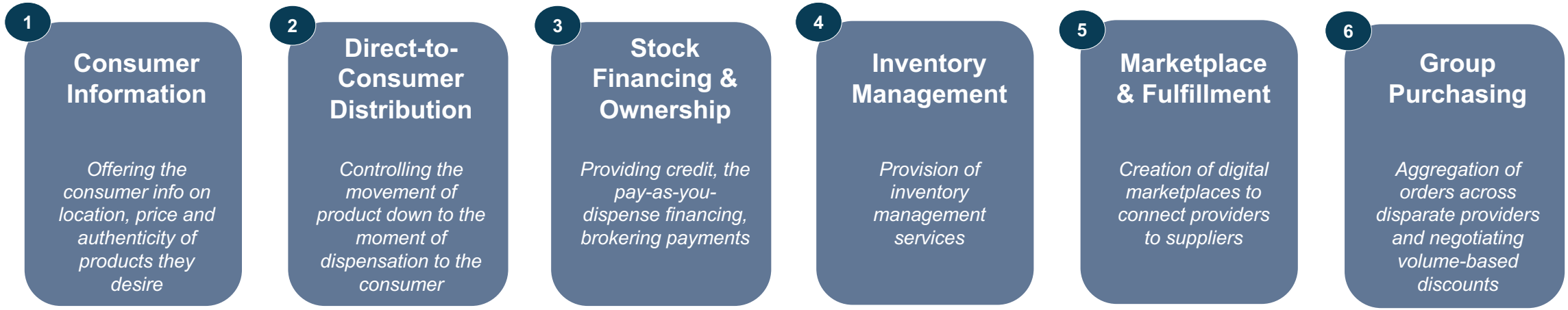
Kasha

Through a flexible e-commerce channel, Kasha **creates novel relationships with lower-income women**, helping open markets for large FMCG businesses.

KEY FINDING | Companies are offering 6 categories of services as solutions to critical distribution challenges

Consumer-facing companies
are offering services in these categories

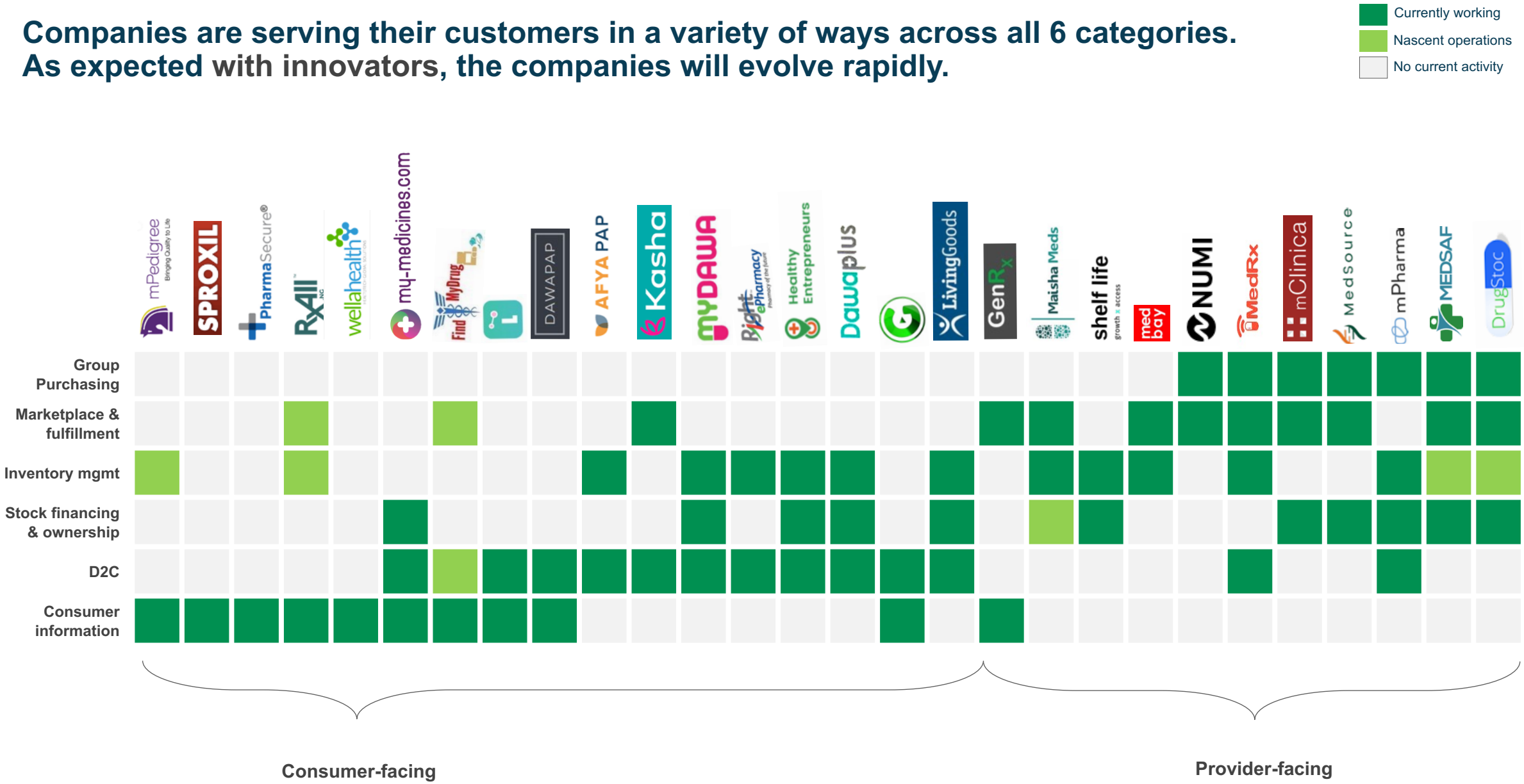
Provider-facing companies
are offering services in these categories



Distribution challenges addressed…

1. ✓ Consumers lack information on product availability, quality or price which results in potentially high transaction costs, high prices and use of substandard or falsified medication.
2. ✓ Consumers have limited options for conveniently accessing products, potentially resulting in higher prices and transaction costs.
3. ✓ Providers have limited working capital to purchase quality products at the right time.
   ✓ Providers can only access credit at some suppliers (if at all).
4. ✓ Providers use manual inventory management systems potentially resulting in stock outs, soon-to-be-expiring stock and overstock which can influence dispensing behavior.
5. ✓ Providers cannot see across multiple suppliers to easily access the lowest price for their desired products. The transaction costs involved in resupply can be high, and prices and quality can be variable.
6. ✓ Providers work in isolation and have small orders. They cannot negotiate volume-based discounts to reduce costs. Variability in prices can be high.

Companies are serving their customers in a variety of ways across all 6 categories. As expected with innovators, the companies will evolve rapidly.



Companies' projected impacts on target consumers were evaluated on 7 measures and by scale

AVAILABILITY	**Availability of health products**	Does the company ensure health products are in stock in the appropriate quantities in the facilities?
QUALITY	**Quality of health products**	Does the company control quality in any way beyond choosing quality partners? Do they ensure transport is appropriate to maintain quality?
	Quality of dispensation	Does the company directly impact the behavior of the provider? Does it indirectly impact by reducing stock-outs and thereby reducing the incentive to substitute at the point of sale?
COST	**Cost to provider**	Is the cost of the product to the provider reduced?
	Cost to consumer	Is the cost of the product to the consumer reduced at the point of sale?
	Consumer transaction costs	Does the company directly impact the behavior of the provider? Does it indirectly impact by reducing stock-outs and thereby reducing the incentive to substitute at the point of sale?
GEOGRAPHIC ACCESS	**Rural reach**	Does the company work outside urban areas?

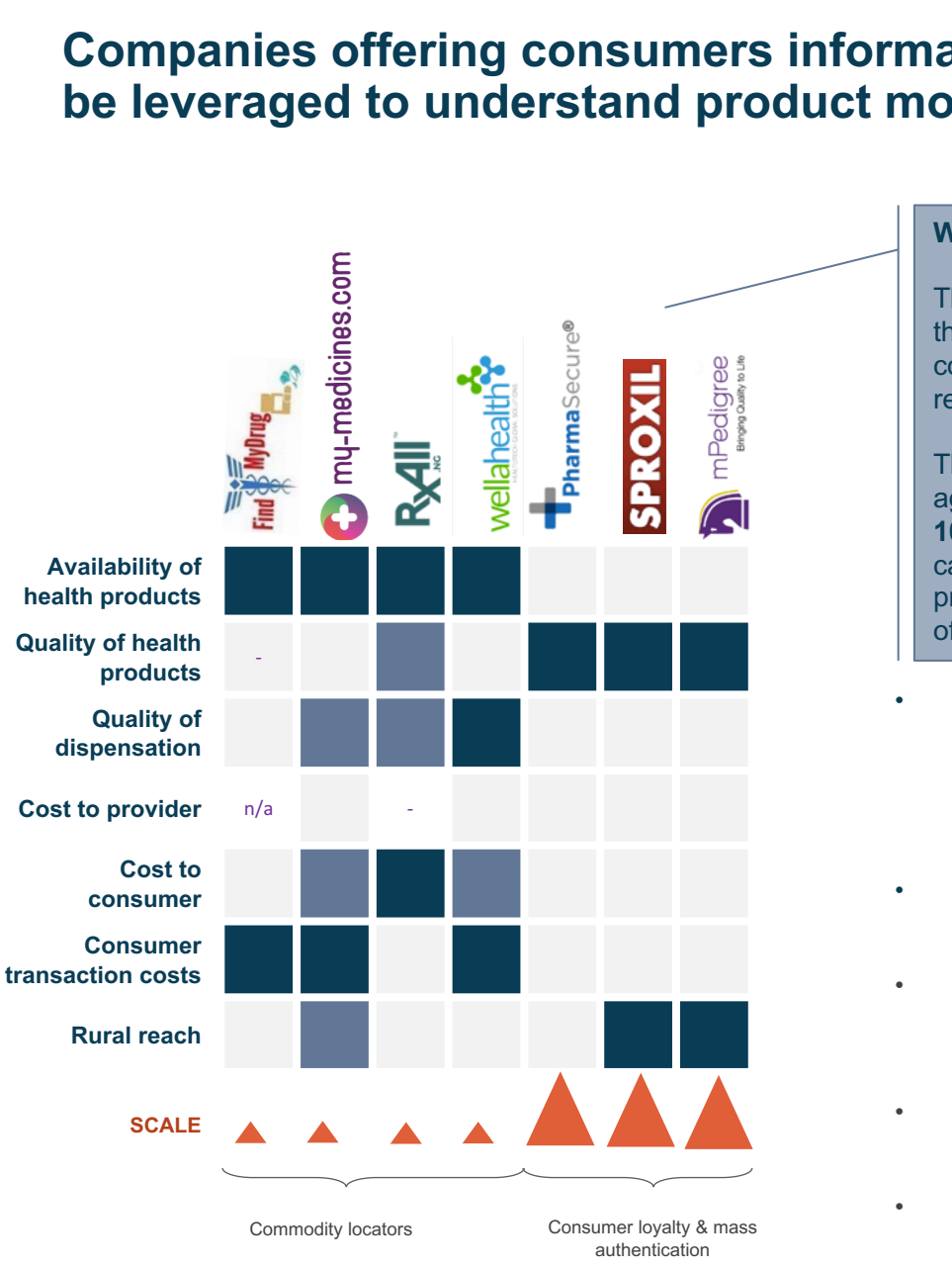
IMPACT RATINGS

- Likely impact
- Potential / marginal impact
- Likely no impact

SCALE RATINGS

- Operating in multiple countries approaching national scale
- Operating in key cities or districts in one country
- Nascent or pilot stage
- Pre-launch

Companies offering consumers information hold valuable digital relationships that can be leveraged to understand product movement and nudge consumer behavior



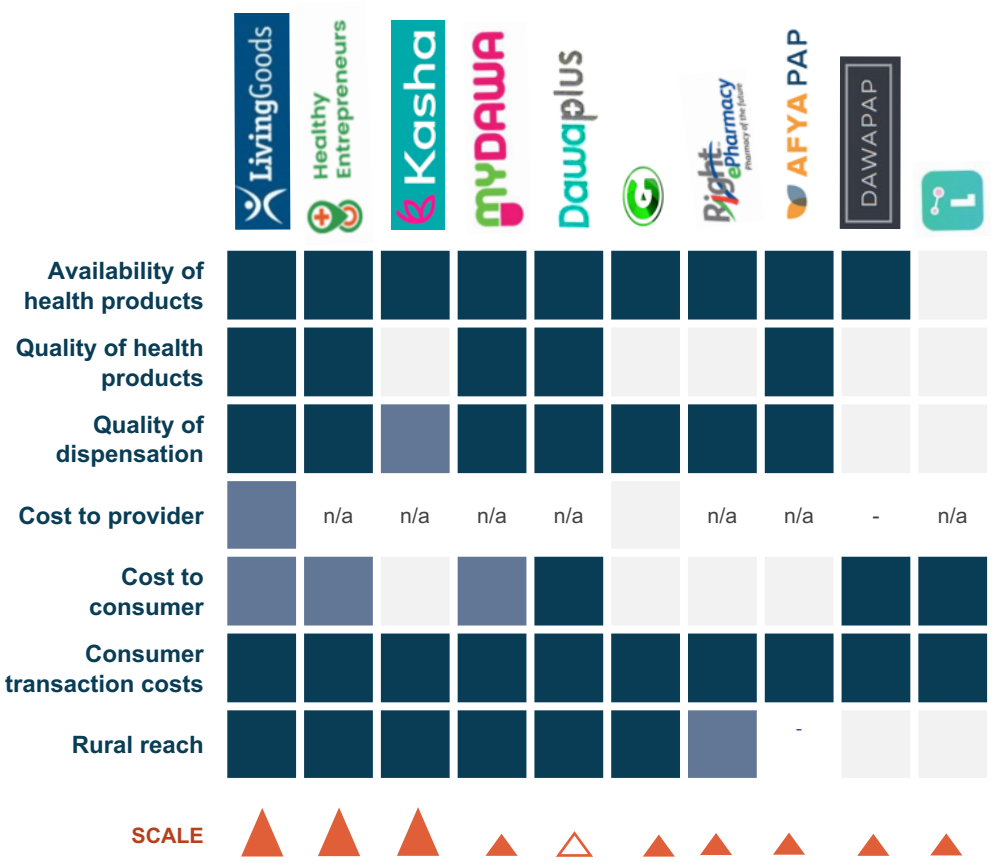
What are "mass authentication" companies?

These companies launched ~10 years ago aiming to prevent use of falsified products using smart labels for medications that could be placed or printed on the product boxes at the manufacturer. These labels could be authenticated by the consumer at the point of purchase to confirm the product wasn't counterfeit. In some countries (Nigeria, India) regulations were crafted to ensure authentication for some essential health products was included on all packaging.

The three major companies have now branched into authentication of products for a wide range of industries including agri-inputs, cosmetics, FMCG and more and **collectively have authenticated over 5 billion transactions with over 100M users.** Today the authentication products are largely embedded into marketing campaigns, so that manufacturers can ensure their advertising efforts expand their market share, not the market share of genuine and counterfeit products. The authentication data has now become large enough that each company has added new service offerings/monetization streams.

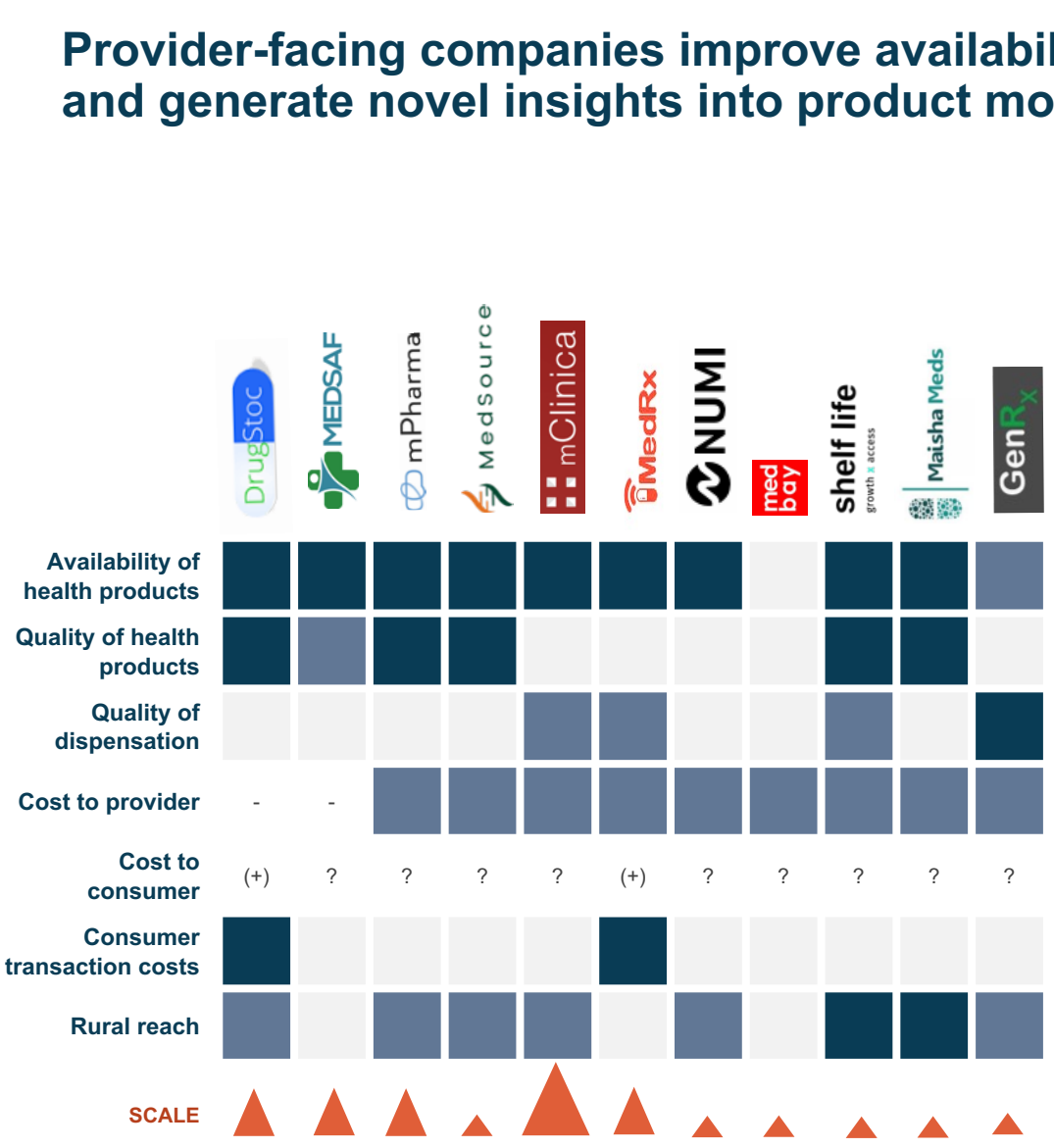
- **PharmaSecure, Sproxil and mPedigree are operating at the largest scale of any companies found, offering manufacturers a marketing service** that embeds quality verification into the campaigns, encouraging consumers to report when and where they've purchased health products. Mass authentication companies have the potential to generate visibility into product movement, from the manufacturer down to the point of consumer authentication. Note that this requires several actors in the supply chain to adopt the process.
- **The consumer relationship allows organizations to understand where and who authenticates the product, and can be used to nudge adherence and follow-up.**
- Existing mass authentication services do not provide insight into potential degradation of products as they move down the supply chain. In reaction, companies are developing ways for providers and consumers to test and signal for potential product degradation (mPedigree, RxAll).
- These companies do not appear to be offering provider-facing services, such as allowing providers to scan products and see drug interaction warnings, verify quality, etc.
- Commodity locators were operating at small scale, and did not yet provide a clear or compelling set of impacts.

Commercial D2C distribution models are evolving to serve some consumers. Companies may extend their rural reach through hybrid models that supplement & improve care by existing rural actors.



- We define “D2C distribution” companies as organizations that control the movement of product down to the moment of dispensation to the consumer.
- Almost all companies in this category appear to increase the availability of health products. **Grant-funded organizations are controlling for quality of products in a rigorous way, as are some commercial entities who are focused on building for scale** (MYDAWA, Dawaplus, Afyapap)**. Quality of dispensation is being managed by directly employing staff to handle dispensation or via telepharmacy.**
- All models are decreasing transaction costs for consumers, and some are able to reduce product prices as well. Companies promise reductions ranging from 10-75% than the best prices regularly available to their customers.
- As expected, with donor financing Living Goods, Healthy Entrepreneurs, Kasha and Right ePharmacy can reach customers directly in rural areas with health products, offering high-quality care.
- **Commercial D2C distribution models are naturally emerging to serve two main consumer groups**:
  - Urban consumers who care about convenience for wellness products (MYDAWA, DawaPap)
  - Rural consumers who need regular access to high-cost, hard-to-source products for chronic diseases (AfyaPap, MYDAWA)
- **Expansion by commercial entities into rural areas is emerging, but not through a strict D2C distribution model**. MYDAWA, DawaPlus, GoPharma all leverage existing rural providers, tapping into their assets, customers and reputation and improving their quality, while reducing costs.
- **LiviaDawa** uniquely delivers consumers lower prices and convenience through reverse-price auctions, which skips the need for intervention at higher levels in the supply chain. The savings they can offer are quite high, which is attractive enough for private insurers to sign on.

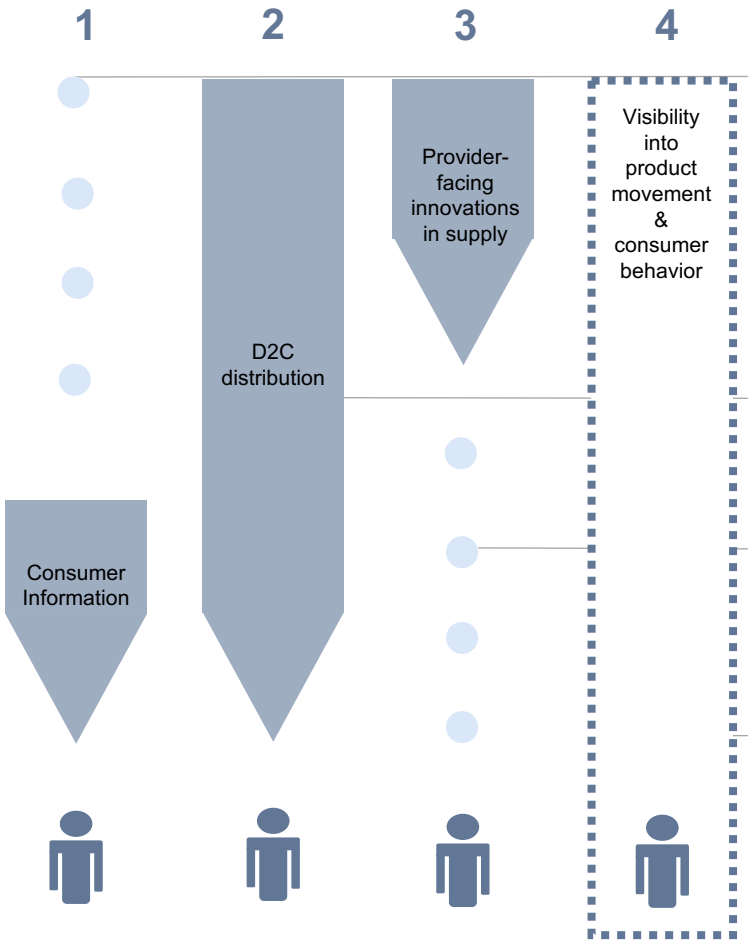
Provider-facing companies improve availability, reduce product costs to providers, and generate novel insights into product movement



(+) these companies offer small secondary D2C services in which they reduce price points to the consumer.

- **All companies in this category appear to increase the availability of health products**.
- **All companies are reducing the cost of health products to providers**; the amount varies by product category and by volume, with companies quoting reductions in cost ranging from 7.8 - 33% lower than the best prices regularly available to their customers. Most are betting they can reduce the mark-ups along the supply chain through disintermediation and offer high-volume, low-margin services. **It is not clear that these reduction in costs filter down to the prices offered to consumers.**
- In addition to direct cost savings, **companies are decreasing the variability in health product pricing**.
- Some are also competing on exceptional customer service, to **decrease the significant transaction costs providers face in resupply** and improve operating efficiency.
- Most are still small companies are relying on government certification and reputation as indicators of quality for the medication sources. Companies struggle to batch test or control for quality through the supply chain. There is no perceived incentive or demand for more testing.
- Companies are not focused on directly supporting quality dispensation, though better supply may indirectly improve dispensing behavior.
- **Most companies seem to have the potential to reach rural providers with some level of service**, and some companies have made this their explicit focus.
- **All companies provide novel visibility into the flow of product to hospitals, clinics, pharmacies and even 2nd tier drug shops they serve**. Through these systems, one can track the movement of product to these providers and sales behavior, and from this, intuit client demand. The value of this visibility is high for both manufacturers and for public health purposes.
- **The data generated is important to manufacturers and 3rd party payers. Relationships with public and private insurers and manufacturers are developing.**

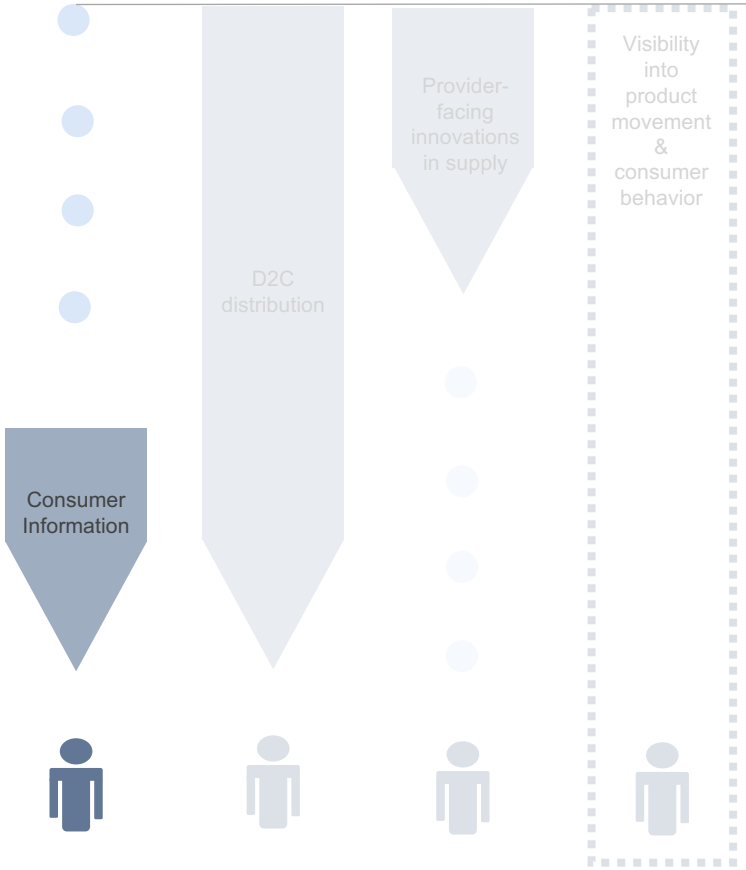
There are likely 4 opportunities to engage innovators in efforts to increase coverage of priority health products



DESIGN QUESTION	RELEVANT PRODUCTS	ILLUSTRATIVE ORGANIZATIONS
Is there an opportunity to leverage consumer relationships to increase adherence, support follow-up, improve demand-generation, forecasting, more? Do these models offer new opportunities for targeted product discounts to increase access by adolescents, poor, high-risk populations, etc.?	EC, OCPs, DMPA-SC, malaria RDTs, ACTs, ORS/zinc, HIVST, HIV, TB, pregnancy tests, other	MYDAWA, Kasha, LiviaDawa, AfyaPap, Sproxil, PharmaSecure, mPedigree
Can we leverage D2C companies for wider distribution of priority products to target consumers, by studying the unit economics of rural expansion and/or nudging it? Do these models offer new opportunities for targeted product discounts to increase access by adolescents, poor, high-risk populations, etc.?	EC, OCPs, DMPA-SC, malaria RDTs, ACTs HIVST, ORS/zinc, nutritional products, 1st line TB, other	MYDAWA, Healthy Entrepreneurs, LiviaDawa, Kasha, GoPharma
Can we leverage innovative supply models for wider distribution of priority products with increased visibility? Can we nudge them to serve rural providers?	EC, OCPs, DMPA-SC, malaria RDTs, ACTs HIVST, ORS/zinc, nutritional products, 1st line TB, other	NUMI, DrugStoc, shelf life, MaishaMeds, mClinica, mPharma
Can the enhanced visibility of product movement arising from new distribution models inform efforts in overall health system strengthening? How can we protect data and patient privacy as digital technologies grow?	ALL	Manufacturers, Donors, Governments, Insurers

NOTE: This is a landscape, not a strategy. Early thinking only. These need to be assessed.

1 Leverage consumer relationships generated through marketing and authentication campaigns to understand product movement, encourage adherence and target discounts



DESIGN QUESTION

Is there an opportunity to leverage consumer relationships to increase adherence, support follow-up, improve demand-generation, forecasting, more?

Do these models offer new opportunities for targeted product discounts to increase access by adolescents, poor, high-risk populations, etc.?

RELEVANT PRODUCTS

EC, OCPs, DMPA-SC, malaria RDTs, ACTs, ORS/zinc, HIVST, HIV, TB, pregnancy tests, other

ILLUSTRATIVE OPPORTUNITIES

PharmaSecure®

Have authenticated over 3 billion products with serialization. Offer voice & SMS follow-up after consumers authenticate their product, which can be used to nudge behavior. **Use with TB patients showed a 60% increase in adherence.** Possible to offer a targeted discount to users, check on side-effects and more.

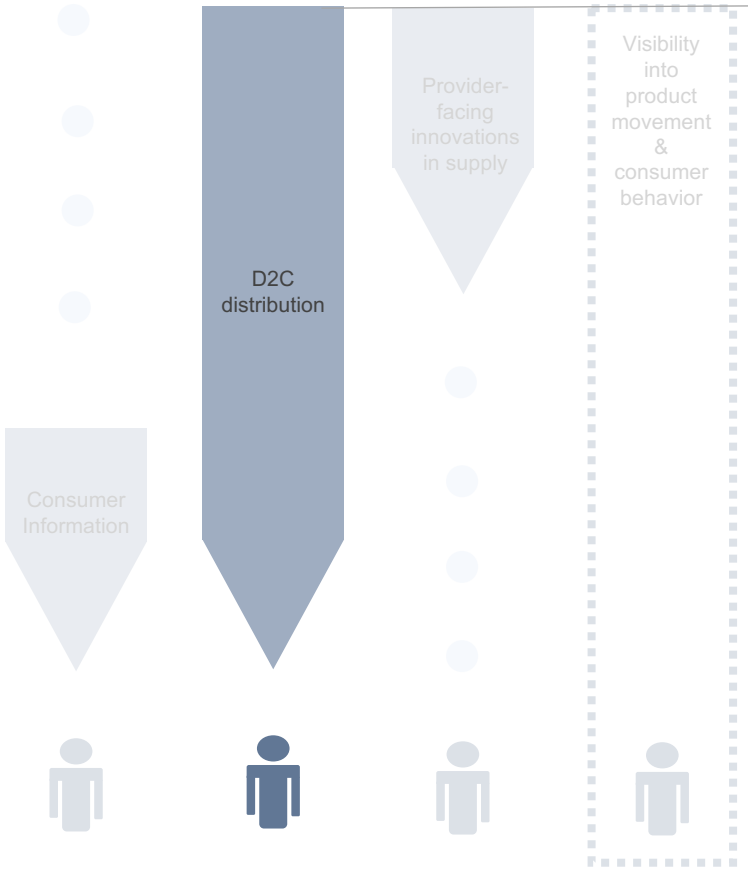
mPedigree
Bringing Quality to Life

Have authenticated 2 billion products from 100M users. **90% of EC that contains mPedigree's smart label is authenticated by users.** This provides novel visibility into the movement of EC, and a connection with EC consumers. Possible to offer a targeted discount to users for longer-acting forms of contraception, check on side-effects and more.

wellahealth

Wellahealth connects patients to pharmacies for point-of-care testing for malaria. Could extend the scope of this program to offer targeted discounts for self-tests (HIV, pregnancy, mRDTs), episodic care and chronic medications.

2 Understand unit economics of D2C providers to see when and where it makes sense to engage them as they scale. Leverage consumer relationships to target discounts directly to priority populations.



DESIGN QUESTION

Can we leverage D2C companies for wider distribution of priority products to target consumers, by studying the feasibility of expansion and/or nudging it?

Do these models offer new opportunities for targeted product discounts to increase access by adolescents, poor, high-risk populations, etc.?

RELEVANT PRODUCTS

EC, OCPs, DMPA-SC, malaria RDTs, ACTs, ORS/zinc, HIVST, HIV, TB, pregnancy tests, other

ILLUSTRATIVE OPPORTUNITIES

MYDAWA

Engage for **delivery of priority high-quality generics to urban & peri-urban pharmacies, offices or homes using pharmtechs and telepharmacy**. Also engage direct-to-provider delivery in **rural areas for chronic products**; e.g. for HIV meds. Could target discounts to priority consumers. Quality is highly controlled, scale is still small.

Healthy Entrepreneurs

Could be leveraged as a distribution channel for priority products, by **engaging the thousands of rural entrepreneurs for self-test, episodic & chronic product distribution**. Financing to scale and demonstrate sustainability could be useful. Quality is highly controlled.

Kasha

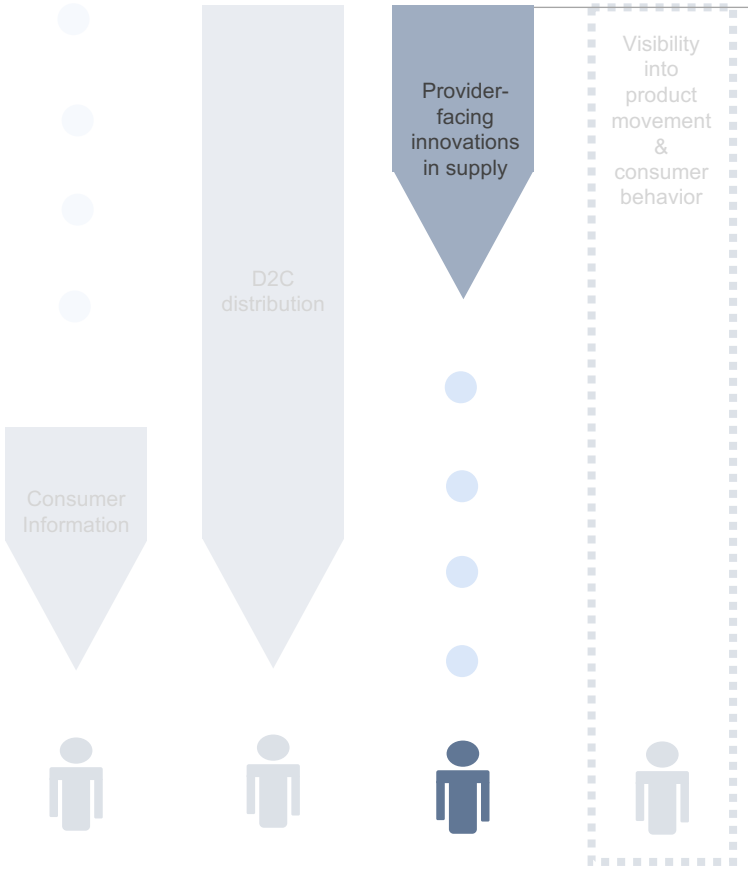
Flexible e-commerce platform could be leveraged as a channel for priority products in urban and peri-urban areas. Understanding unit economics to expand to rural areas for delivery of priority products will be useful. Quality assurance for health products needs to be addressed to scale.

Right ePharmacy — Pharmacy of the future

ATM dispensers & secure lockers (with tele-pharmacy) could be leveraged as a dispensation channel in urban and per-urban areas for products that require regular delivery like FP, TB medications, etc when the supply chain can be controlled for quality. The scale is still small.

Model extends prescribing and product delivery from full pharmacies to 2nd tier pharmacies in Ghana using telepharmacy and delivery. Could leverage the model for distribution of priority products, target discounts to priority consumers, and finance to accelerate scale. Quality assurance needs to be addressed to scale.

3 Leverage innovative supply models for wider distribution of priority products with increased visibility, encouraging them to serve rural providers when possible



DESIGN QUESTION

Can we leverage innovative supply models for wider distribution of priority products with increased visibility?

Can we nudge them to serve rural providers?

RELEVANT PRODUCTS

EC, OCPs, DMPA-SC, malaria RDTs, ACTs, ORS/zinc, HIVST, HIV, TB, pregnancy tests, other

ILLUSTRATIVE OPPORTUNITIES

DrugStoc

Already serving the largest number of providers of any company in the category (~1,500), pooled purchasing and marketplace could be leveraged to increase access to priority products, and the model could be **expand further into rural providers and 2nd tier drug shops.**

mPharma

Offers 4 business lines: group purchasing, PBM services, D2C financing and distribution, and managing poor-preforming retail pharmacies. In the first category, it is still small, serving 188 providers. Growth ambitions are broad - it is unclear how they will play out. Potential to leverage the channel for distribution of priority products & watch the retail strategy. Business has garnered the largest investment in this category.

NUMI

Currently working with peri-urban pharmacies to supply 250 fast moving products with tech-enabled, high-quality customer service at low cost. Model could be leveraged as a distribution channel for priority products, and a partnership formed to accelerate plans to expand into 2nd tier drug shops. Still small (~20 pharmacies), so risk is higher.

shelf life

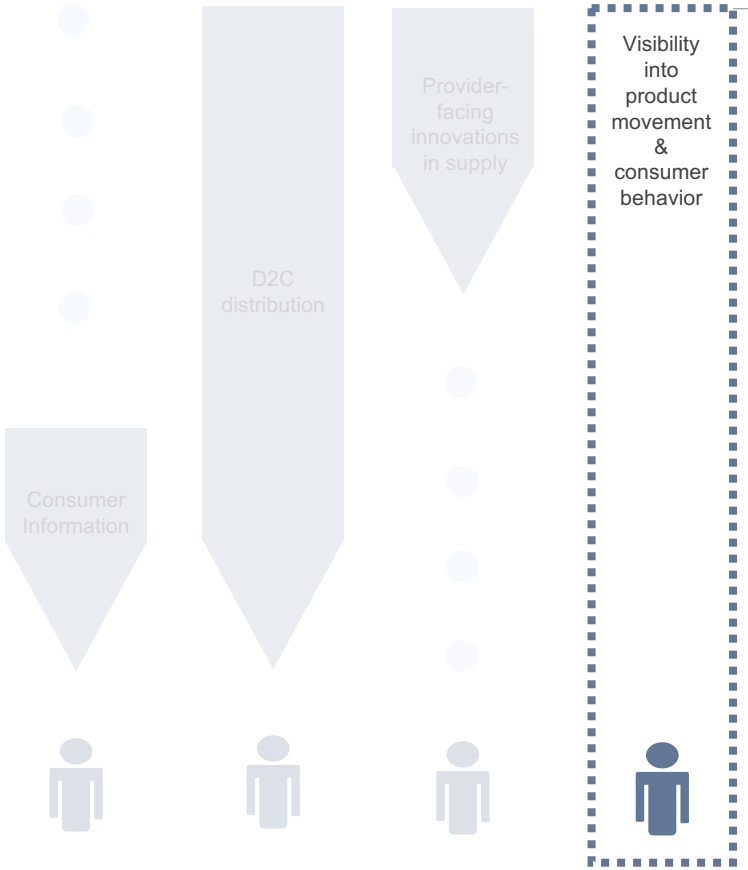
growth x access

Model could be leveraged **as a distribution channel for priority products, and improve stock management in priority channels**. Potential to finance work with the Pharmacist Council of Nigeria on a **strategy for expanding into 2nd tier pharmacies in Nigeria**. Still small (~50 pharmacies), so risk is higher.

MEDSAF

MedSaf connects high quality generics manufacturers to ~400 hospital and retail pharmacists. Model could be leveraged as a distribution channel for priority products, and supported to grow. Risk is low, but upper limits of scale are not yet clear.

4 Ensure that as novel visibility into product movement and consumer behavior develops, data are able to inform health system strengthening efforts. Support the protection of consumer (patient) privacy.



DESIGN QUESTION

Can the enhanced visibility of product movement arising from new distribution models inform efforts in overall health system strengthening?

How can we support patient privacy as digital technologies that reach consumers emerge?

RELEVANT PRODUCTS

ALL

ILLUSTRATIVE OPPORTUNITIES

GLOBAL LEVEL

Invest and engage to ensure global financiers of health systems & delivery can access and use key data generated by companies to inform:

- R&D
- Supply chain forecasting
- Financing
- Target setting
- Monitoring
- Demand generation strategies
- More

Support efforts to ensure global agencies are operating in ways that protect consumer (patient) data as they engage with innovators. The risks associated with action are low, the risks associated with inaction are high.

COUNTRY SYSTEMS

Support countries to develop and actualize policies that allow country systems to access and use key data generated by companies operating in their jurisdictions for :

- Forecasting
- Supply chain management
- Analytics for insurers
- Financing
- Demand generation
- Adherence
- More

Support countries to develop laws that protect consumer (patient) privacy as the scope and scale of digital platforms grows. The risks associated with action are low, the risks associated with inaction are high.

Feel free to follow-up
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DrugStoc employees, Nigeria