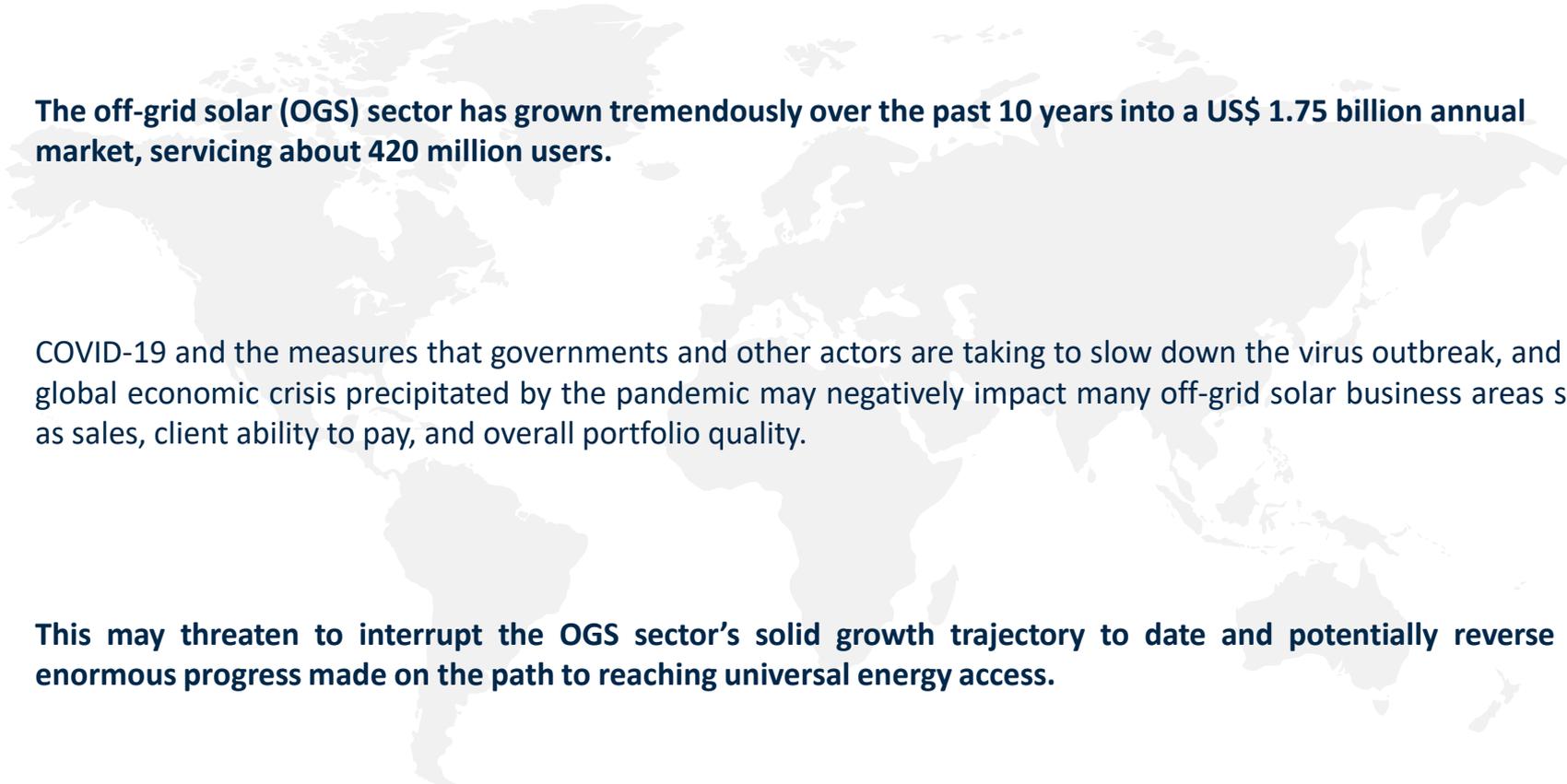




PAYGO COVID Impact Monitor (PCIM)





The off-grid solar (OGS) sector has grown tremendously over the past 10 years into a US\$ 1.75 billion annual market, servicing about 420 million users.

COVID-19 and the measures that governments and other actors are taking to slow down the virus outbreak, and the global economic crisis precipitated by the pandemic may negatively impact many off-grid solar business areas such as sales, client ability to pay, and overall portfolio quality.

This may threaten to interrupt the OGS sector's solid growth trajectory to date and potentially reverse the enormous progress made on the path to reaching universal energy access.

About the initiative

Identified need to collect data to inform all OGS stakeholders on the status of the market and the impact of the COVID-19 crisis:

- Most stakeholders currently rely on piecemeal and anecdotal data; **there is no systematic, aggregated market data.**
- Challenging for companies to understand the impact they are seeing in comparison to overall market trends.
- The global community of OGS funders and investors currently **lack data capturing the financial impact of the crisis.** They are focusing their attention elsewhere as a result.
- In many countries, policymakers and regulators are understandably preoccupied with the wider economic impact. As a result, **many of the initial policy responses do not address the plight of PAYGo solar companies.**

Anecdotal evidence from individual companies, investors and software providers indicates that, perhaps surprisingly, PAYGo payment rates have remained relatively strong. Though there is notable variation between countries, regions and customer segments.

The responses to the EnDev survey tell a different story and depicts the entire energy access sector as one in stress with a significant drop in sales and collection rates.

This tells us that we do not have the full picture of the current situation in the OGS PAYGo market specifically, across relevant regions, and that we currently lack the data needed to respond.

Systematic, precise, and meaningful market data is needed to provide an evidence base for informed decision making.

Objectives of the initiative

1. Establish a mechanism to act as an **early warning signal** for concerning trends and provide an evidence base to mobilize appropriate response.
2. Enable **companies to better understand challenging market dynamics** and inform business decisions and contingency plans.
3. Provide market insights to **inform funding decisions** that promote business continuity and promote growth of the sector.
4. **Inform the recovery and response strategies** of sector support partners and programs, to help companies and customers get targeted and effective assistance.

“In some ways, financial institutions [including PAYGo companies] must think like ER doctors - an apposite analogy these days. When a critical patient comes in, the first priority is to stabilise vital signs - pulse, blood pressure, breathing.

Once the person is stable, you look for the underlying ailments that brought them in and treat them. These secondary and tertiary treatments can't be ignored - failing to do so will simply bring about the very emergency you just addressed.”

In the PAYGo solar context, liquidity is the urgent priority, and the underlying challenge is the consumers' ability to pay. We need to monitor these vital signs to inform potential responses.

COVID-Finclusion. Full blog here.

Proposed plans - period, frequency and country focus



Period and frequency

- Data will be collected over a period of 7 months on a monthly basis
- A historic data point will also be collected to demonstrate BAU and give a baseline.



Country Focus

Companies that are present in on of the following countries/regions are invited to participate:

1. Kenya
2. Uganda
3. Tanzania
4. Nigeria
5. Senegal
6. Cote d'Ivoire
7. South Asia

The final set of focus countries used for the study will depend on company interest.

Proposed plans - type of organizations that can participate



PAYGo Companies

- Minimum of 4 companies per country (may not be distinct firms from each country)
- PAYGo, B2C only
- Minimum two years of operation
- Diversity welcomed – range of product sizes, large, small, multi-national and local

We further welcome **aggregators** and **investors** to participate and supplement the data from the companies, with a focus on portfolio quality.

Proposed plans - Data points that will be collected



12 data points that will ask companies to report at varying frequencies and with baseline figures:

Frequency

Financial

- Cashflow from non-PAYGo customers
- Customer deposits
- Follow-on payments
- Total Receivables generated

Monthly
Monthly
Monthly
Monthly

Portfolio quality

- Scheduled follow-on payments
- Outstanding receivables
- Outstanding receivables > 30 consecutive days
- Outstanding receivables > 90 consecutive days unpaid
- Outstanding receivables of units restructured or with promotion
- Value of receivables outstanding for written-off contracts

Monthly
Monthly
Monthly
Monthly
Every 2 months
Every 6 months

Liquidity

- Cash and liquid assets convertible to cash in the next 90 days
- Total costs

Monthly
Quarterly

Proposed plans - KPIs (Public)



The building blocks will yield the following **publicly available KPIs that will be calculated by MFR:**

Analysis breakdown available by

- Geographical area (region and subregion only)
- Time period

Financial

- Growth in total cashflow (%)
- Growth in receivables generated (%)

Portfolio Quality

- Collection rate (%)
- RAR 30 (%)
- RAR 90 (%)
- Growth in outstanding receivables (%)
- Restructured receivables ratio (%)
- Write-off ratio (%)

Liquidity

- Cash and liquid assets convertible to cash in the next 90 days / Total costs (%)

Proposed plans - KPIs (Private access to participants)



Participants will gain **private access** to **additional indicators** (incl. aggregate building blocks and additional KPIs, calculated by MFR):

Analysis breakdown available by

- Geographical area (country)
- Company maturity
- Company size
- Payment model

Financial

- Total receivables generated
- Total cashflow from customers
- Customer deposits
- Follow-on payments
- Cashflow from PAYGo customers
- Cashflow from non-PAYGo customers
- % cashflow from PAYGo customers
- % cashflow from non-PAYGo customers
- Growth in cashflow from PAYGo customers (%)
- Growth in deposits from PAYGo customers (%)
- Growth in cashflow from non-PAYGo customers (%)
- Growth in follow-on payments (%)
- Growth in total costs (%)

Portfolio Quality

- Scheduled follow-on payments
- Outstanding receivables
- Outstanding receivables > 30 consecutive days unpaid
- Outstanding receivables > 90 consecutive days unpaid
- Outstanding receivables of units restructured or with promotion
- Value of receivables outstanding for written-off contracts
- Growth in collection rate (%)
- Growth in outstanding receivables > 30 consecutive days unpaid (%)
- Growth in outstanding receivables > 90 consecutive days unpaid (%)
- Growth in RAR30 (%)
- Growth in RAR90 (%)

Liquidity

- Cash and liquid assets convertible to cash in the next 90 days
- Total costs
- Growth in liquidity

Data access, confidentiality and security



- MFR will collect and publish the data. MFR is a trusted global rating agency that has 20 years of experience and has **high standards of security and confidentiality of information**.
- MFR has conducted 2,000+ assignments with companies, investors, and regulators. They are the implementation partner for PAYGo PERFORM.
- The results will be anonymized, aggregated, and published on ATLAS (a data platform in the MFI sector managed by MFR). All data must pass the three data point rule to ensure privacy.
- Sensitive data at the respondent level will be kept fully confidential by MFR. IFC, CGAP and GOGLA will only have access to the anonymized and aggregated results.

Benefits of participating

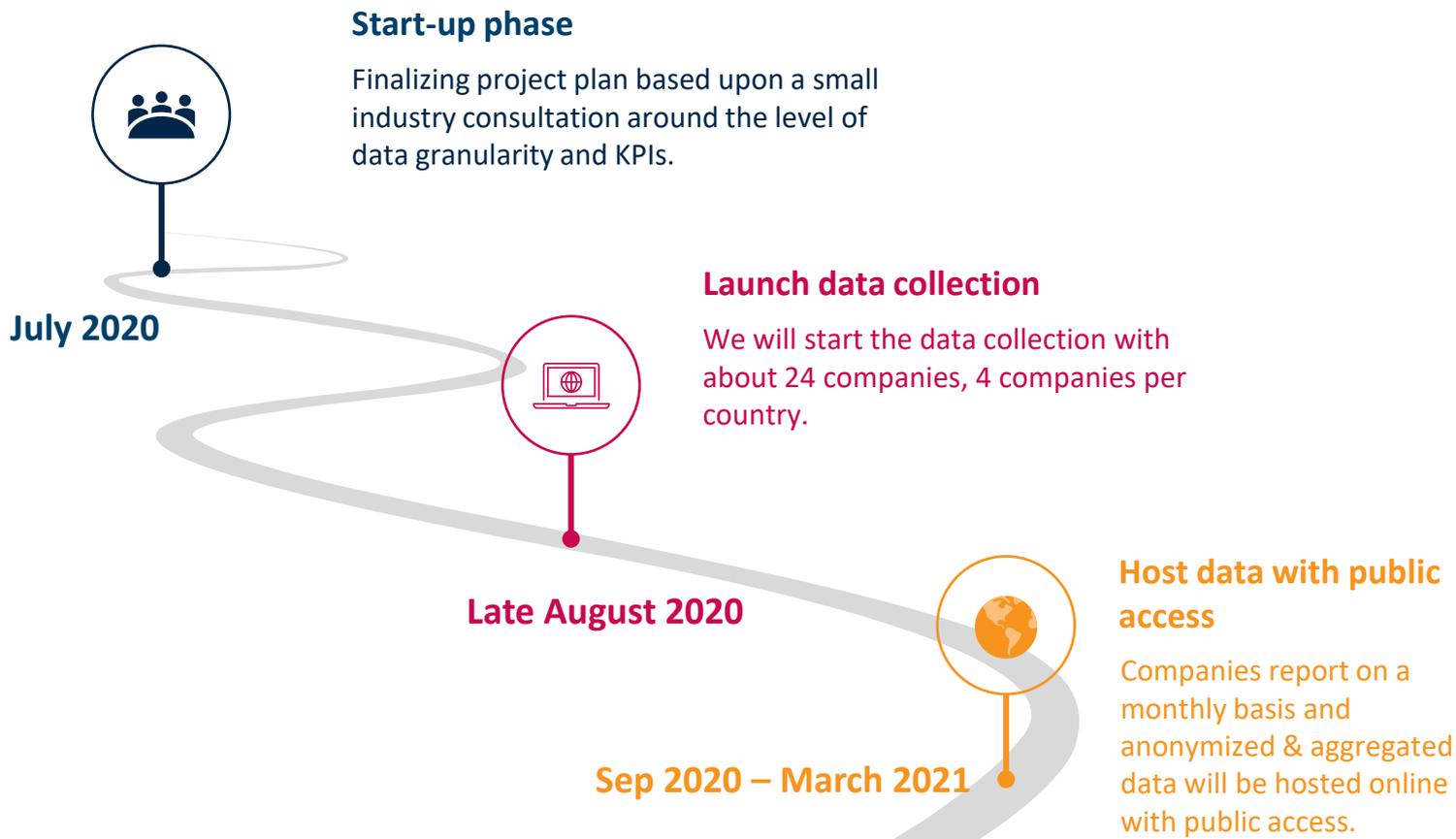
- ✓ **Help inform OGS** investors, policy makers, and other **stakeholders**, supporting decision-making and prioritization of support.
- ✓ Given the information to **better understand current market dynamics**, informing business decisions and contingency plans.
- ✓ Participating companies will have **privileged access** to additional results and analysis, e.g. calculated values that will not appear on the public dashboard.
- ✓ **Option to be recognized** as a champion of transparency and for showing solidarity with peers in this time of crisis (only if desired, ability to stay anonymous)
- ✓ **Opportunities to participate in webinars, blogs, and events** as an industry thought leader.

ILLUSTRATIVE MOCK UP



Your company will have access to customizable aggregated views, which can be customized according to analytical needs, including a comparison to country averages and time periods.

Timeline



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Annex

Annex A: Data security – ATLAS (1/2)



- The system is hosted on a virtual private server (VPS) on DigitalOcean
- The physical servers hosting the VPS are located in a datacenter in the Netherlands
- The VPS runs a Linux system, Ubuntu 16.04 LTS distribution
- The operative system is regularly updated and maintained
- The server is behind a DigitalOcean firewall and accessible from internet only through secure protocols: SSH and HTTPS
- All other ports/services are closed (HTTP is forwarded to HTTPS)
- SSH login is only allowed with Public and Private keys. Password login is disabled
- Technologies hosted in the same server: PHP 7, Mysql 5.7, Mongo DB 4 and Laravel Framework 5.8
- User accounts are protected by security mechanisms including regular required password updates

Annex B: Data security – ATLAS (2/2)



- Two factor authentication login
- List of last logged in devices identified by browser and country
- New device login notifications
- SSH security
- Root login not allowed
- Non-standard port
- File integrity monitoring
- Chroot Jail SFTP access
- New Relic to monitor Application and Server status
- Regular server security maintenance
- Daily unattended security packages
- Monthly attended security packages
- Distribution on end of life support for LTS distribution
- Application Security: malware monitoring in the app (<https://sucuri.net/>)