



**NOORNATION**  
نور نيشن للطاقة المتجددة

# Introduction to SlaaS

(Solar Irrigation as a Service)

By NoorNation

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 - 28.8 km Alexandria - Cairo desert road, Abu Rawash Industrial Zone, Giza, Egypt  
- Industrial Unit no.67, Industries Complex, Hurghada, Red Sea Governorate

# Problem

80% of arable lands in Egypt intensively rely on flooding and diesel irrigation pumps for small-scale farming. Additionally, unaffordability or lack of creditworthiness by farmers to have better solutions. These lead to excessive water wastage, elevated expenses, hinder agricultural production, and lower income for farmers. Finally, lead to high CO<sub>2</sub> emissions and an unhealthy environment for both farmers and crops.



**Over flood irrigation  
low irrigation efficiency**



**High energy cost of irrigation  
50% energy share  
Lower profitability**



**Immense CO<sub>2</sub>  
emissions**

# Market Size



> 25B USD

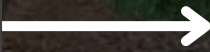
Substituting the diesel pumps & flood irrigation in the agriculture sector in Sub-Saharan Africa & Egypt (ref.: mescilinius sources)

**Multi Applications**

- Water Pumping
- Smart irrigation
- Solar Home Appliances
- Powering small business
- Water treatment

**Larger Market**

**Higher Revenue**



# Solution

## SlaaS (Solar Irrigation as a Service)

SlaaS by NoorNation, is an innovative model that transforms flood irrigation into modern/smart irrigation systems driven by LifeBox (solar powered), where farmers can pay as per use for time of water pumped during pre- or after post-harvest. This model eliminates the need for large upfront investments, allowing farmers to pay with ease based on their usage. Ownership can be transferred to farmers within 5 to 7 years.



Transform ownership  
within 5-7 years



Ease of Payment



Smart irrigation

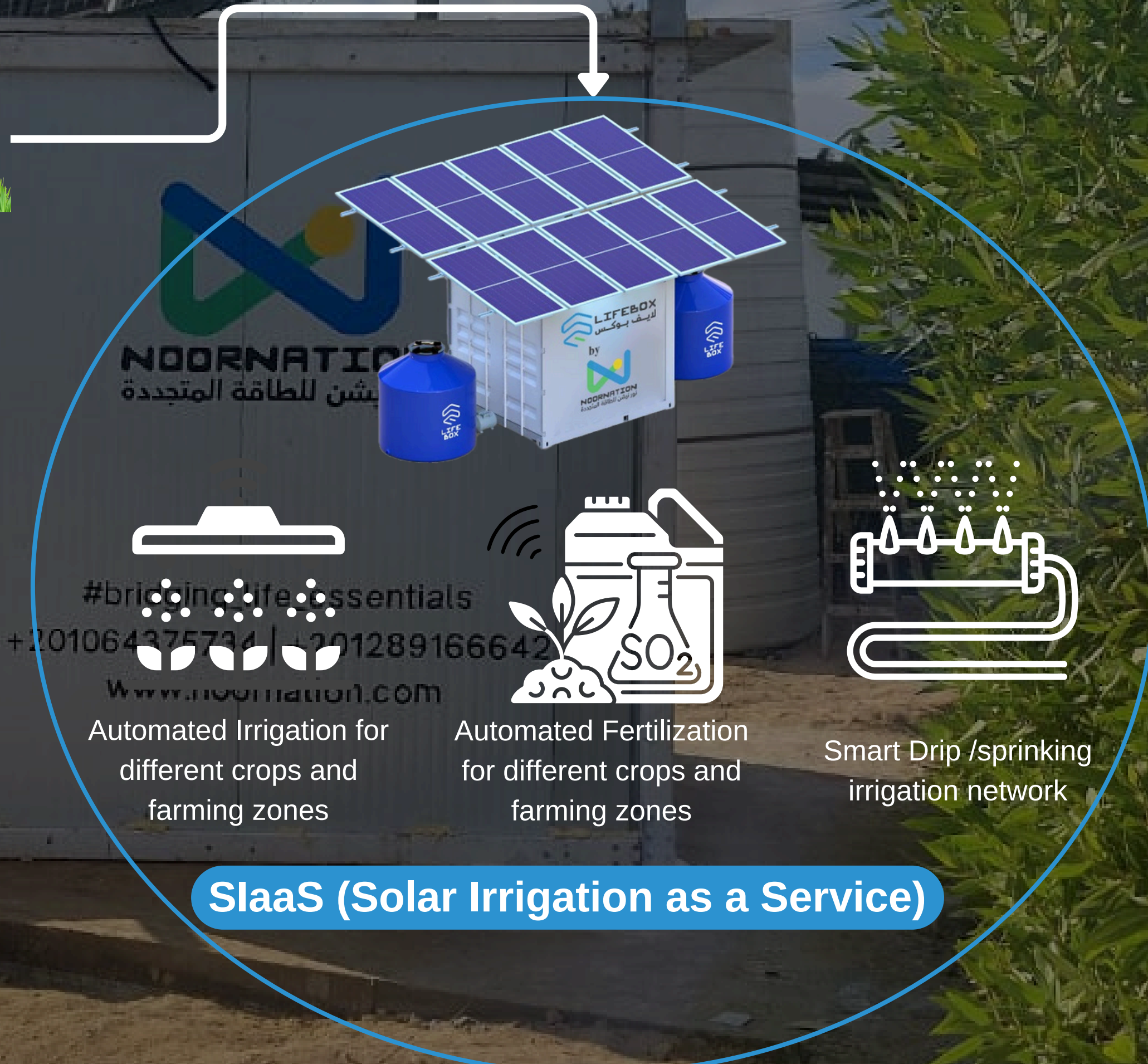


Reduces High upfront  
investments

# SlaaS



- Flood Irrigation
- Diesel Pumps
- Less cultivated Land
- Unreliability
- Lower Income
- Tons of water are wasted every day



Automated Irrigation for different crops and farming zones

Automated Fertilization for different crops and farming zones

Smart Drip /sprinking irrigation network

## SlaaS (Solar Irrigation as a Service)

# SlaaS Key Features



## Affordability

Similar to paying utility bills, SlaaS incorporates a user-friendly payment system through Fawry POS for hassle-free transactions.



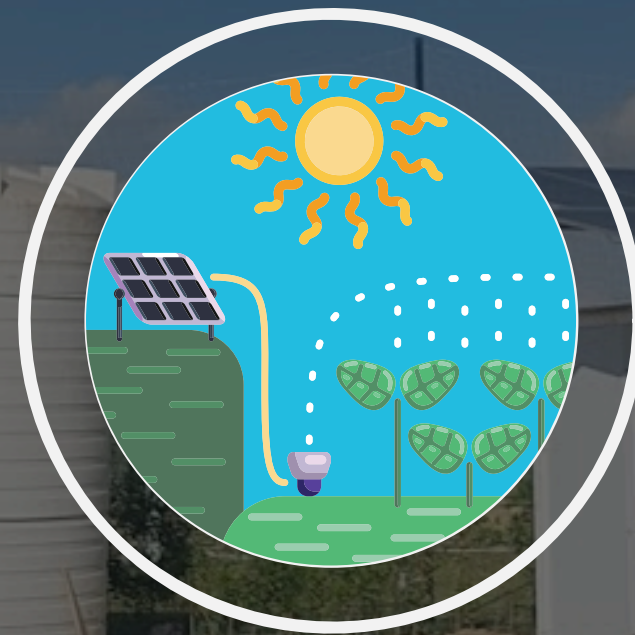
## Cost Savings

Reduces expenses associated with diesel pumps, resulting in long-term financial benefits for farmers



## Remote Monitoring and Control

Offers the convenience of monitoring and controlling the system from anywhere.



## Modern Irrigation Advantages

Replaces outdated flood irrigation with efficient drip/sprinkling systems, conserving water and boosting productivity



## Smart Irrigation System

Utilizes data from various sensors (flow meter, humidity, moisture, pressure, and TDS) for precise irrigation tailored to crop needs.



## Environmental Impact

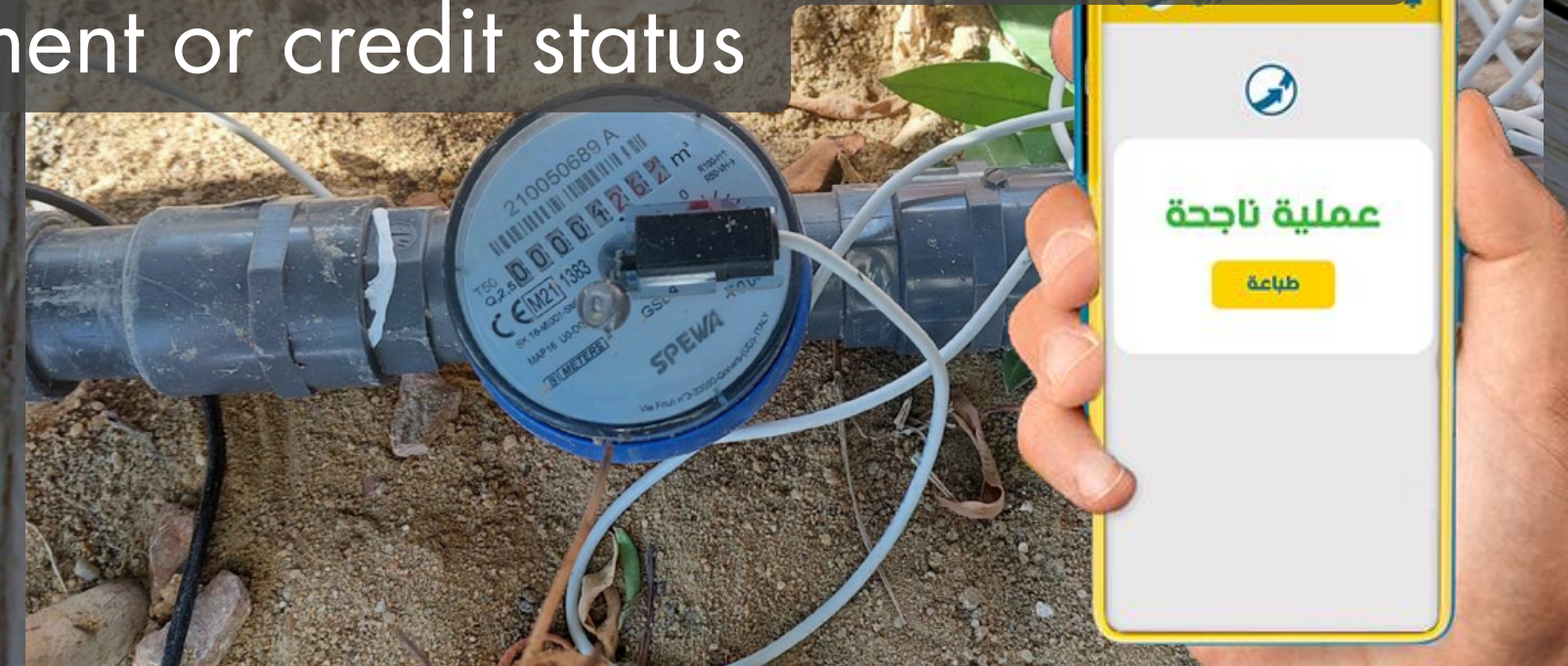
Lowers annual CO2 emissions through the transition to cleaner, renewable energy sources.

# SlaaS in action

## SlaaS Solar Irrigation as a service



Our SlaaS pilot on a 2 feddans farm testing both ground-water and simulating stream/canal surface water pumping built with smart irrigation through field sensors and remote monitoring & control web platform, while optimizing the system operation through actuating the on/off control functions via payment or credit status



# NoorNation Scope of Work



**Providing access to finance**



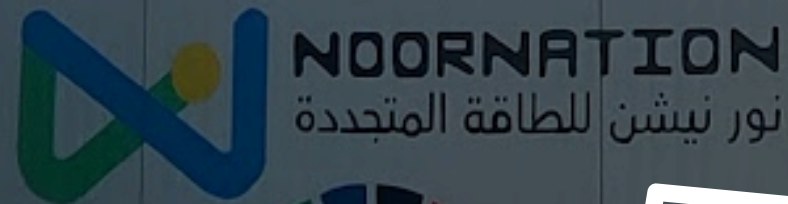
**Turnkey Delivery**



**Project Development and Project management**



**Operation and impact reporting**



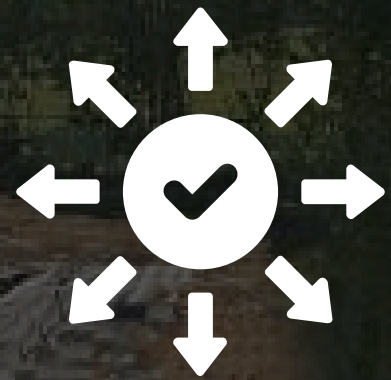
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# Risk Mitigation



**Innovative industrial design**



**Fast-deployment**

Product on-the-shelf,  
two days supply &  
installations



**Quick Dismantle**

Our product is 100% plug  
& play, 100% dismantled  
with 0 damage



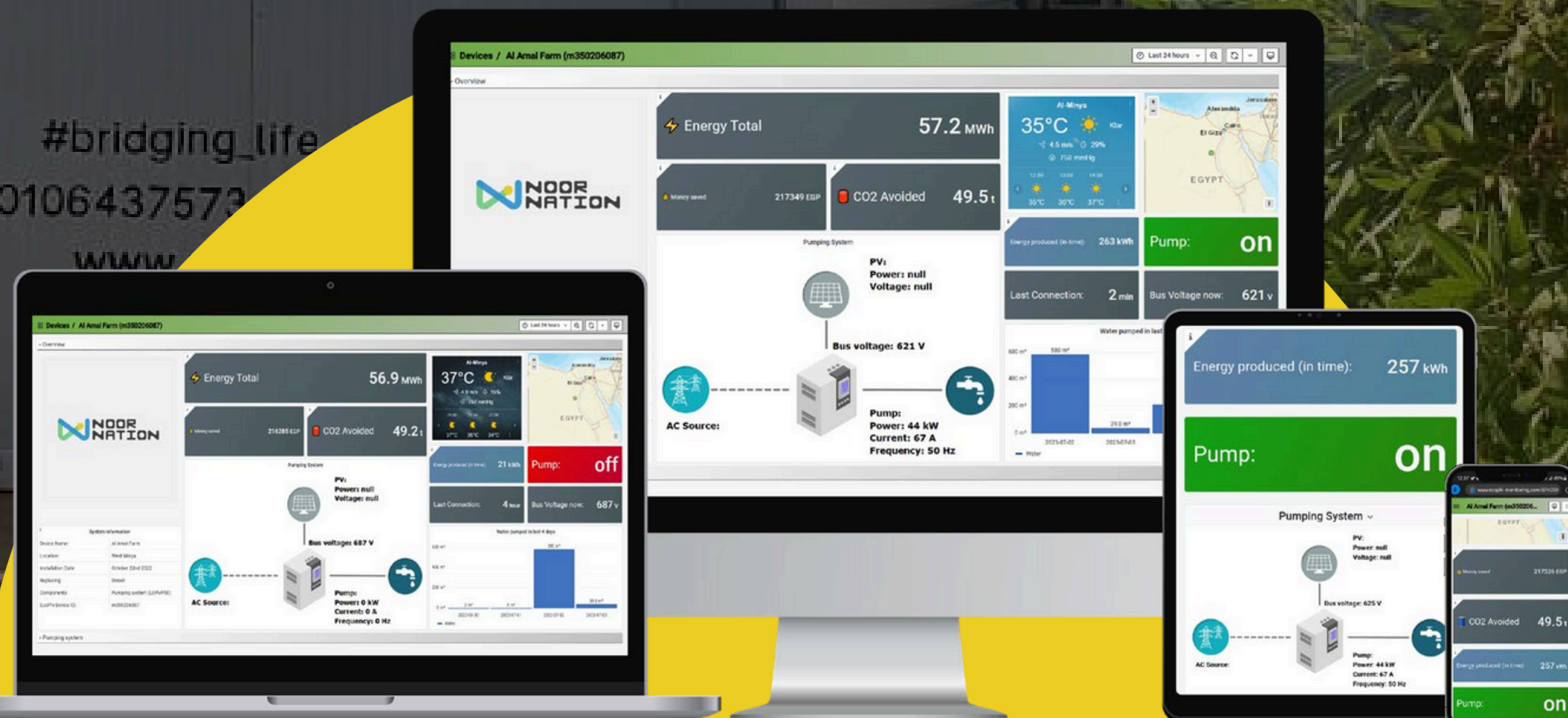
# Risk Mitigation

- Full integration to your platform or application.
- Highly secured
- Remote monitoring for predictive maintenance and assuring the long-term operation
- Automated cut-off and shutdown for clients with due payments.
- Master Lock-down feature, to lock LifeBox operation until payments are settled.



## Remote Control and Monitoring

The system allows us to monitor many parameters such as daily water pumped, energy production, CO2 avoided, and many more, allowing us to predict maintenance, control the LifeBox units, and also shut off the whole system if needed.





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**THANK YOU**

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