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The Company

Afri Technics

emerges from the **Deep Synergy** between:

a **Zambian Company**
with a consolidated presence in
the Sub-Saharan Market

&

an **Italian Company**
with a deep know-how in Mechanics
and Industrial Applications

The Company

Afri Technics

ZAMBIA: THE RIGHT PLACE

- It is **strategically located** to operate in **Sub-Saharan region.**
- It is experiencing a **renewed impetus for development.**

The Vision

- Providing **products** and **services** that **Improve People's Lives** in the **sub-Saharan region.**

- Start a **process that Frees** the **sub-Saharan area from Foreign Technical Dependence**

- Providing an **Accessible and Competitive Engineering Support** to the industries of the region, thus **Helping to Foster Industrial Development.**

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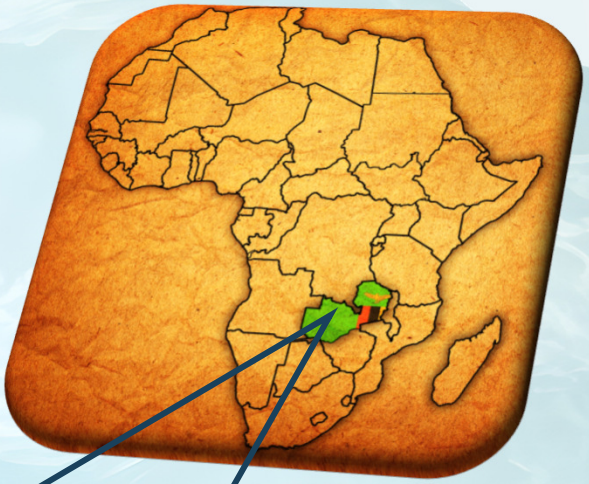
MECHANICS & INDUSTRIAL APPLICATIONS

The Mission

- To Become the **first important Engineering & Manufacturing Company** located in the sub-Saharan region
- **HUB** and **Reference Point** for stakeholders operating in the region for energy and industrial development



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ZDA
ZAMBIA DEVELOPMENT AGENCY

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The Proposal

Hydro Power Plants

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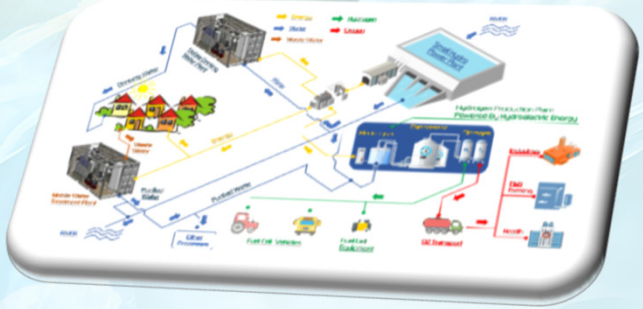
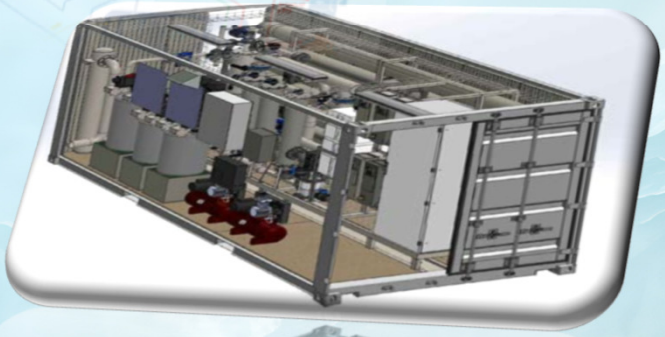
An *Integrated Proposal* aimed at maximizing the *Value* of the *Water* as a key to the *Sustainable Development*



"H2 GREEN" Hydrogen Project



Plug & Play Water Treatment Plants

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The Proposal

Hydroelectric Power Plants

- New Hydropower Plants:

  turn-key solutions for **Micro & Small HPPs**

  from 20 kW up to 20 MW power.

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The Proposal

Hydroelectric Power Plants

- **Working HPPs Refurbishment**
  implementing of specific solutions adopted with the aim of:

  - Increasing of overall efficiency
  - Reduction of the environmental impact
  - Increasing of operating time
  - Reduction of plant downtime / failure risk and maintenance costs

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The Proposal

Afri Technics H2 Green Hydrogen Project

- *Small Hydro Power Plants*

Combined with

- *Hydrogen Production Plants*

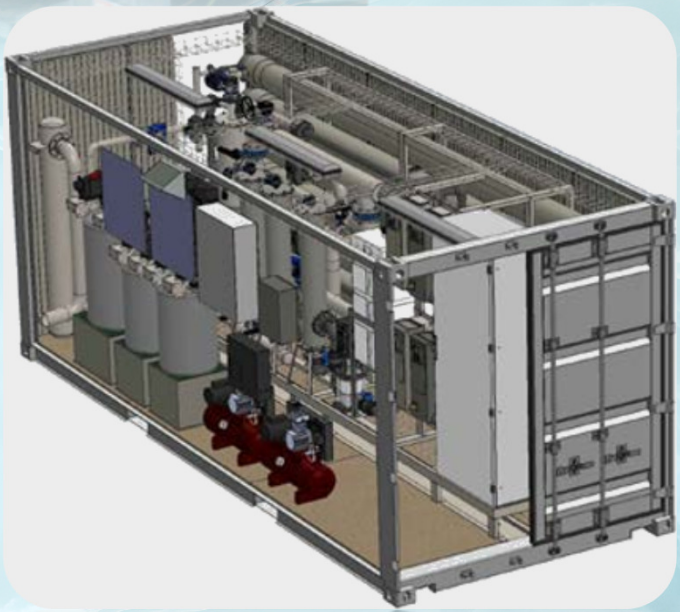
❑ An Effective Solution for Off-Grid Contexts:

- **Hydrogen** is produced by constantly capturing and exploiting the **excess energy** produced by a **Small HPP** and not absorbed by utilities
    - The Hydrogen can be stored, and than used in vehicles or in every equipment powered by fuel cells.

The Proposal

Water Treatment Plants

- **Mobile Drinking Water Plants:** from **Fresh, Brackish** and **Sea water:**
  - **Full Plug & Play**
  - **Modular**
  - **Practical:** In a 48" container a plant can be set up that can supply drinking water to up to 2,000 people 24H/Day



- **Civil Waste Water Plants**
- **Industrial Waste Water Plants**

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Integrated Solution

Some Considerations:

1) **Hydroelectric Energy** is the **most constant** and **reliable renewable energy**

2) **Less than 10% of hydroelectric potential** is used in the Sub-Saharan region

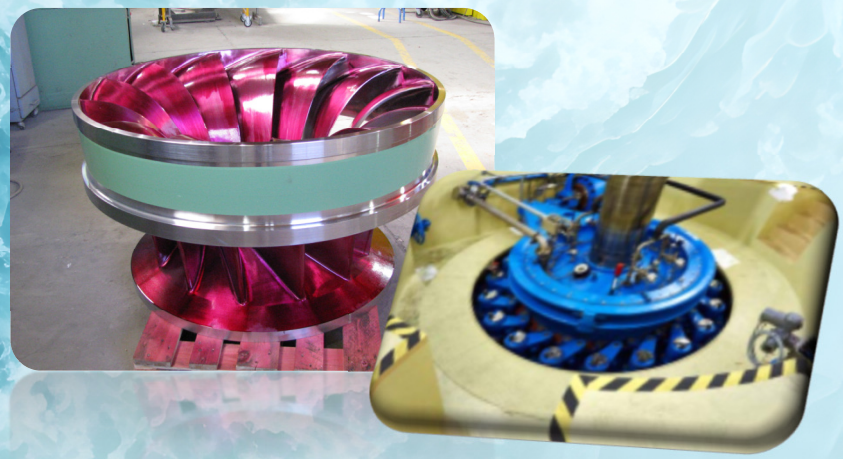
3) **Large Hydroelectric Power Plants** can be only part of the solution:

- *They take a long time to make*
- *They do not solve the problem of electrifying rural areas*
- *They need a widespread distribution infrastructure*

Integrated Solution

4) Small Hydroelectric Power Plants:

- ***Faster*** *to implement and to finance*
- *They do* ***not change the morphology*** *of the territory*
- *They* ***manage better*** *the variations in the flow of the watercourses that feed them.*
- *They are installed* ***near the place*** *where the energy will be used*



- *They can work* ***Off-Grid***
- *Very effective in the* ***rural contexts***
- ***Simple*** *to manage*
- *Extremely* ***efficient and reliable*** *in the long run*
- ***Lower*** *operating costs*

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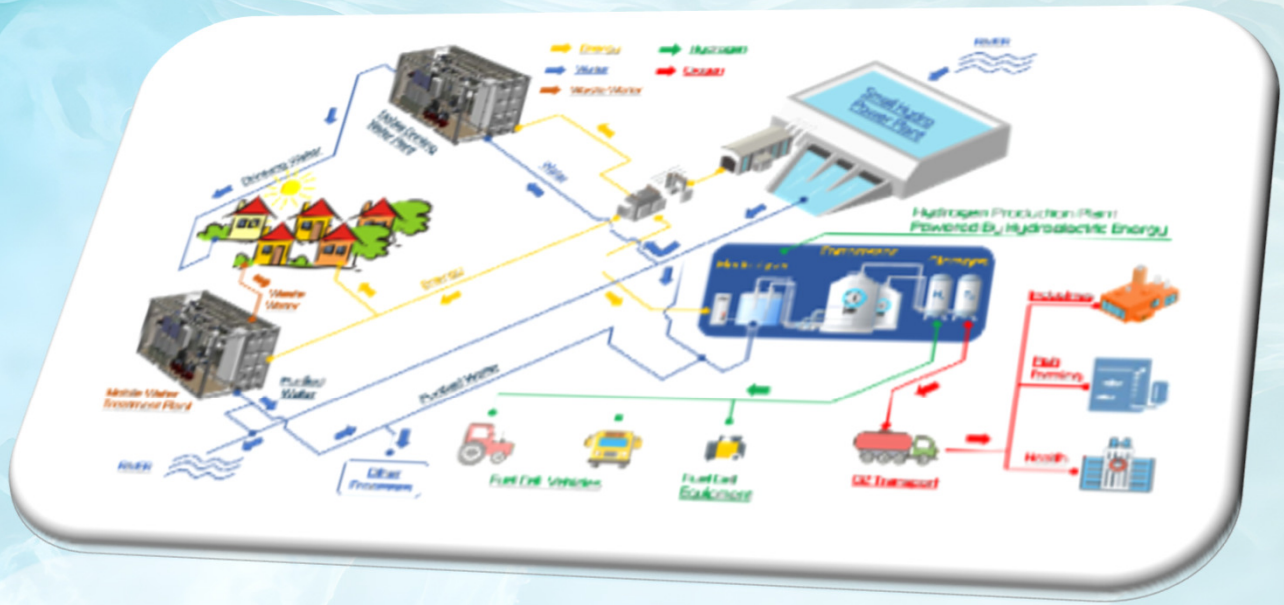
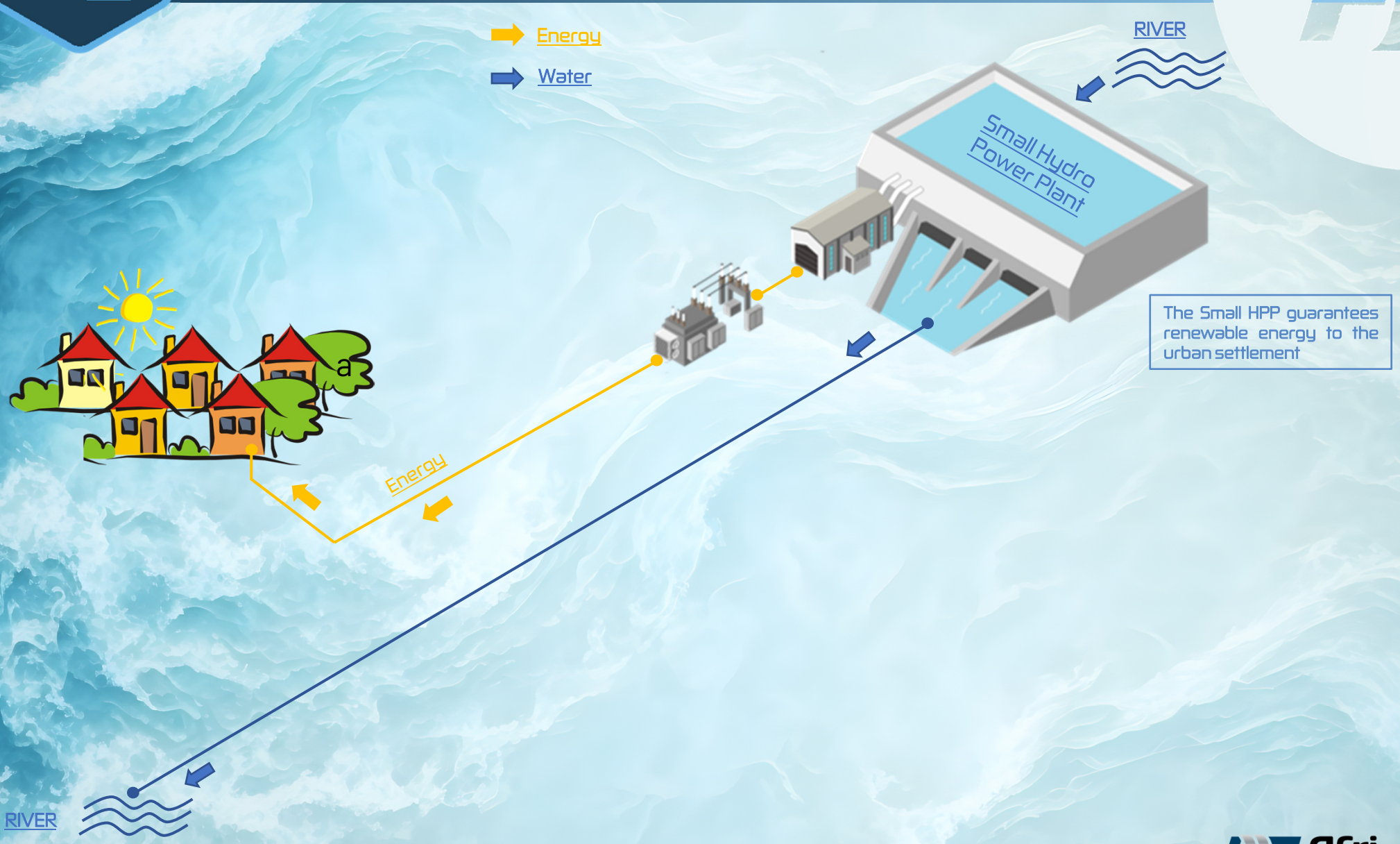
Integrated Solution



The **new model of development** that we propose is based on a **system that can be massively replicated** along the many waterways in the region.

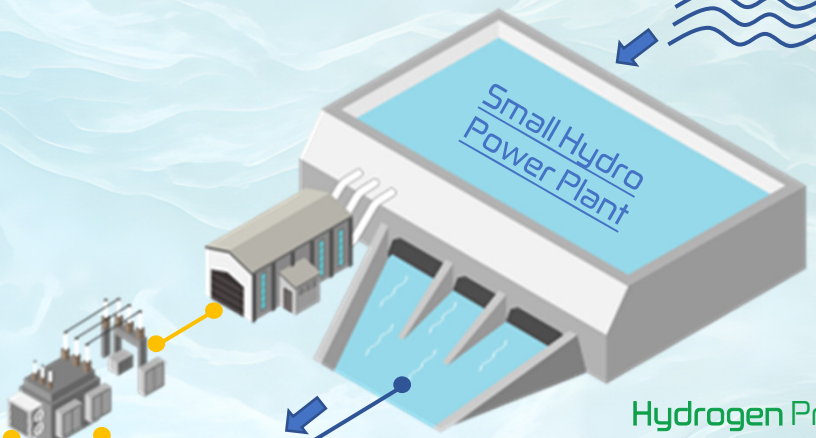
Integrated Solution



Integrated Solution

Energy
Hydrogen
Water

RIVER



Energy

Hydrogen Production Plant Powered By Hydroelectric Energy

It exploit the energy not absorbed by the utilities

The amount of energy that is used for H2 production is modulated In real time, , according to the demand coming from the utilities

Hydrogen is stored and used in vehicles, operating machines and equipment powered by Fuel Cells

Fuel Cell Vehicles

Fuel Cell Equipment

RIVER

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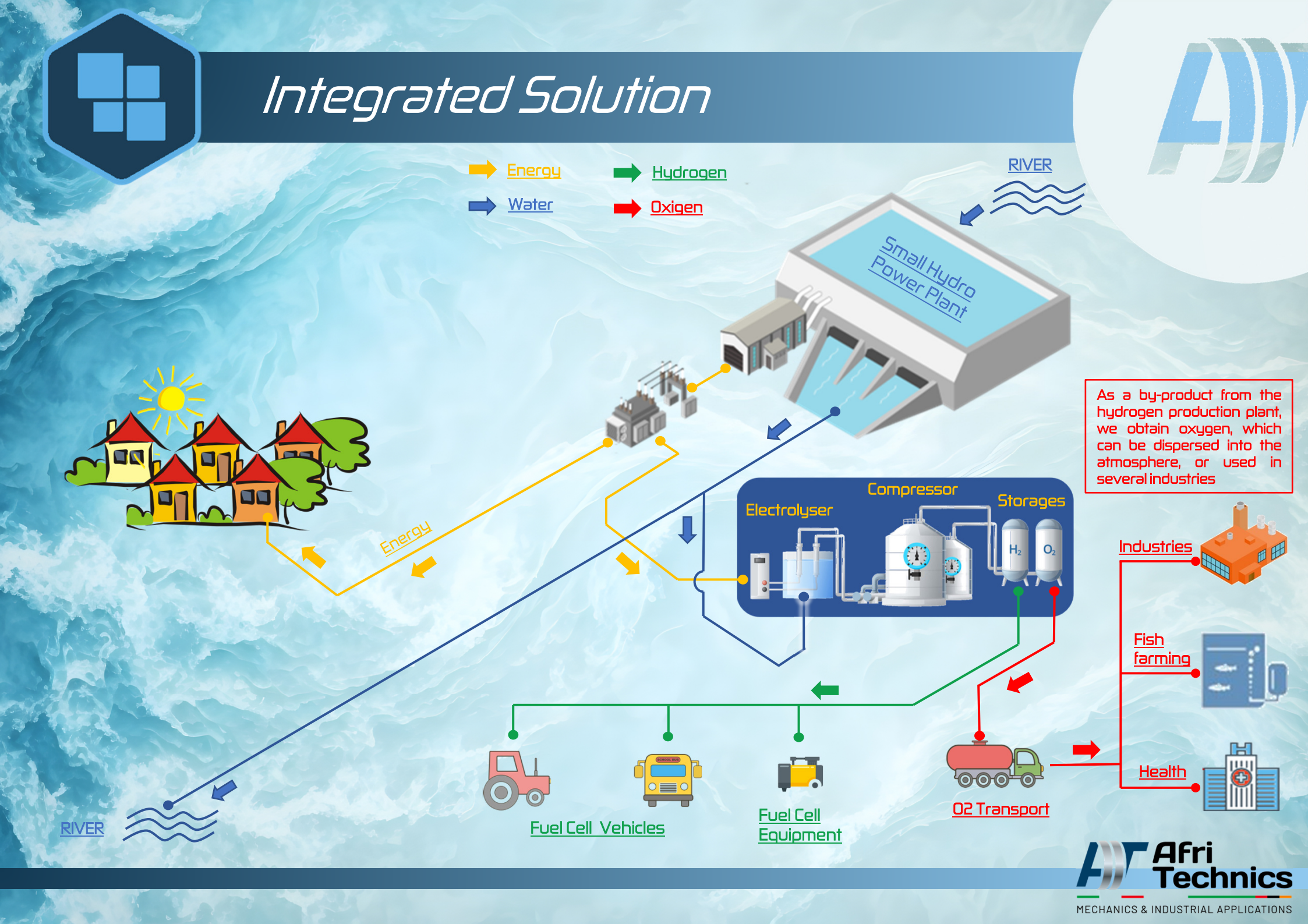
Integrated Solution



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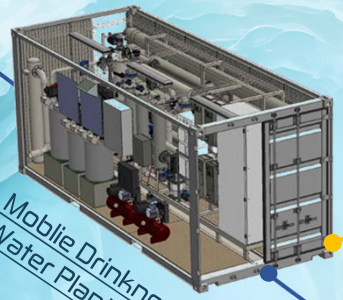
Integrated Solution

The availability of drinking water is guaranteed through a containerized system

Energy
Hydrogen
Water
Oxigen

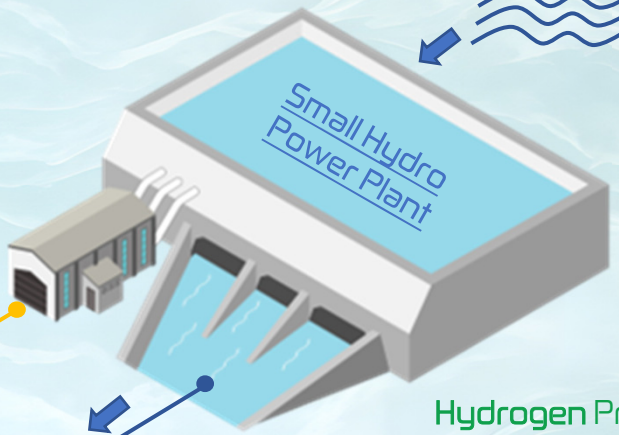


Moblie Drinkng Water Plant

Drinking Water

Water

RIVER



Energy

Hydrogen Production Plant
Powered By Hydroelectric Energy

Industries

Fish farming

Health

Fuel Cell Vehicles

Fuel Cell Equipment

O2 Transport

RIVER

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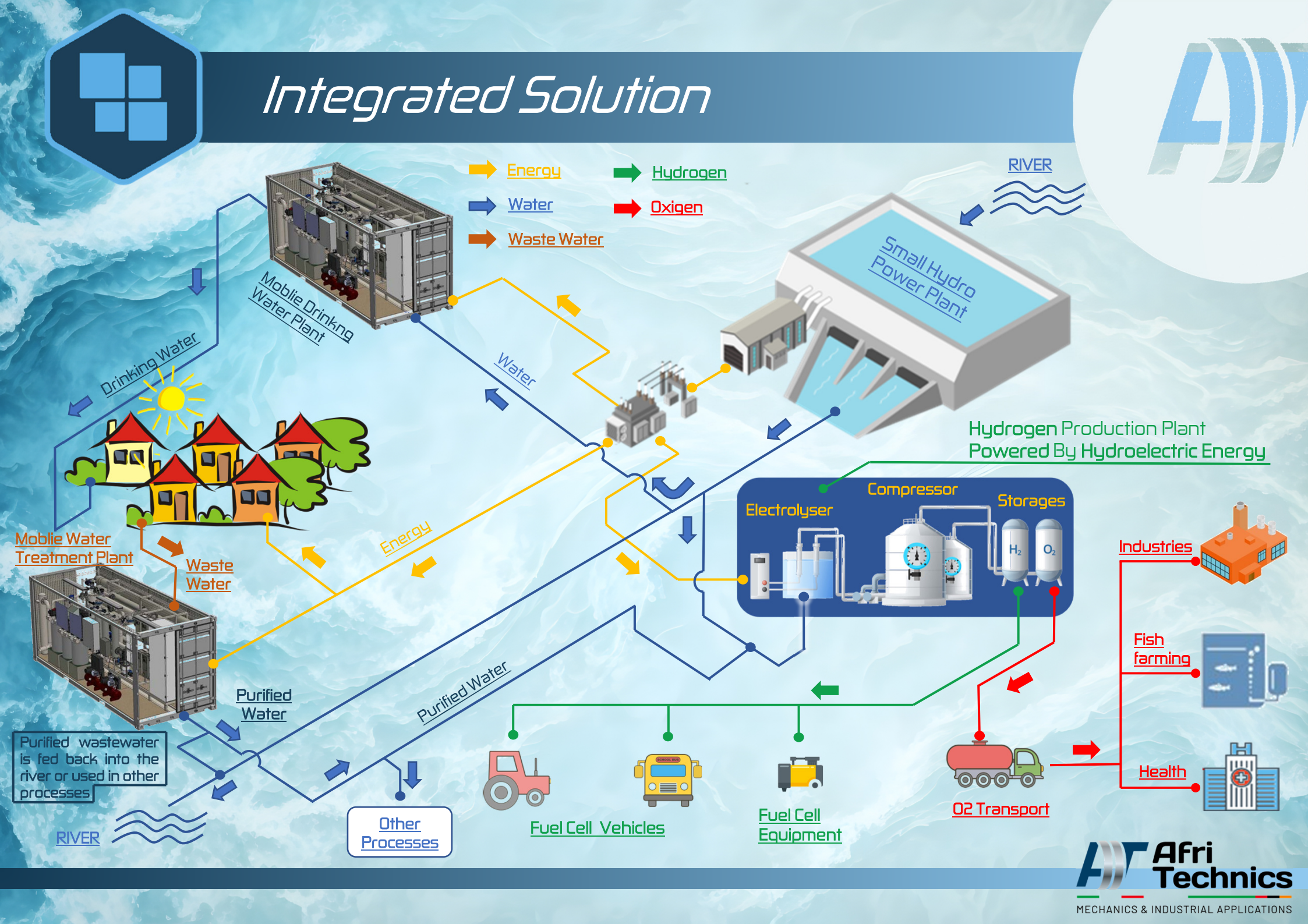
Integrated Solution



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Quick Solution

It is essential to have solutions that produce an impact in the short term

(On average, it takes around 3 years to set up our system)

FINANCIAL POINT OF VIEW:

Less Time *means*
Less Uncertainties

ECONOMIC POINT OF VIEW:

*A **quickly and widespread boost** to development, anticipates a **"Domino Effect"** in terms of **Economic Growth***

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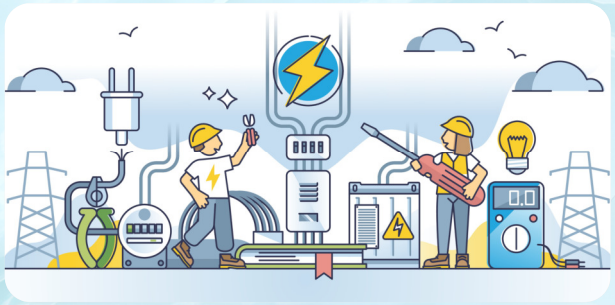
"Growth from below" development model

SOCIALLY SUSTAINABLE MODEL

It is a development model that we could define as "growth from below", which in addition to being fully sustainable from an environmental point of view (practically zero impact), is also from a social point of view

Energy self-sufficiency *and* ***independence*** *for the* ***Local Communities***



Technical Culture Development:
The relatively simple managing of the systems, gives the opportunity to start the know-how transfer and consolidate it in the field

New technical culture *fosters* ***new different opportunities*** *for* ***economic growth***

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Sustainable Development

Faster sustainable development is possible:

Water is the key...

ew Approach

Together with a new approach

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THANKS

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