



Observatoire Europe-Afrique 2030

Case Study n° 20

**Degree of Local Integration
of the Green Industrialization Leaders in Africa**

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Summary

The fifty-two enterprises in the “Directory of Green Industrialization Leaders in Africa” are analyzed in the light of their degree of local integration. There is a preponderance (in number) of companies with a "medium to high" degree of local integration. This confirms that the green sectors manufacturing enterprises in Africa are not limited to screwdriver factories. The examples of several of the companies in the Directory, although very few in number given the continent's needs, demonstrate that it is possible to manufacture products with a relatively high technological content, such as bicycles, wind turbine masts, railway equipment and solar panels, on the African soil and under apparently profitable conditions, with a significant degree of local integration. The proportion of companies with a 'medium/high' degree of local integration reaches 91% for independent companies, but drops to 75% for companies with subsidiary status.

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1. Objectives and Definitions

The **Directory of African Leaders in Green Industrialization**¹ currently promotes 52 manufacturing companies in Africa, across eight different green sectors:

- Manufacture of solar panels, solar kits and other solar devices
- Manufacture of wind turbines
- Manufacture of bicycles
- Manufacture of electric motorbikes
- Manufacture of electric vehicles
- Manufacture of railway equipment
- Manufacture of ecological ovens and stoves
- Manufacture of waste and effluent treatment systems

This note analyses these companies in the light of their degree of local integration, as defined by the ratio:

Added value generated by the manufacturing activity of the enterprise on African soil

Company turnover

The following colour code is used in the tables of this case study to characterize the degree of local integration of a company:



“Medium to high” degree of local integration. The company designs and manufactures a significant proportion of the components of its products on African soil.



Low degree of local integration. The company mainly assembles imported parts or kits.



Company for which information is not available.

¹ This Directory is managed by the “Observatoire Europe-Afrique 2030”. For more information, use the following link: <https://observatoire-europe-afrique-2030.org/en/accueil-anglais/>

2. Sectoral analysis

2.1 Solar panels, solar kits and other solar devices manufacturing

Of the 18 companies in this sector, half carry out cutting, moulding and welding operations, as well as final assembly....

Four of them limit themselves to assembly operations at the "end of the line".

For five of them, the information is not specified at this stage.

Enterprises	Country	Status	Degree of local integration
Almaden	Morocco	Subsidiary (China)	
A.R.E Group Egypt	Egypt	Independent	
ART Solar	South-Africa	Independent	
Auxano	Nigeria	Independent	
Faso Energy	Burkina Faso	Independent	
Ifrisol	Tunisia	Independent	
Jinko Solar	South-Africa	Subsidiary (China)	
GTE	Egypt	Independent	
Greenage Technologies Power Systems	Nigeria	Independent	
Lagazel	Burkina-Faso, (Senegal), (Bénin)	Subsidiary (France)	
Microcare	South-Africa	Independent	
Milltech	Algeria	Independent	
Multi-Industries Group (MIG)	Senegal	Subsidiary (groupe ADS / Aluminium du Sénégal)	
NASENI	Nigeria (Karchi, Abuja)	Independent	
Seraphim	South-Africa	Subsidiary (China)	
Solink	Kenya	Subsidiary « ABM Group » (Associated Battery Manufacturers Ltd / Kenya).	
Sunprism Energy Technology	Egypt	Independent	
Zergoun	Algeria	Independent	

2.2 Wind turbines manufacturing

The three companies in the Directory manufacture the main components of wind turbine masts locally, by rolling sheet metal, welding, sandblasting and painting.....

The proportion of local added value in the manufacture of nacelles and components linked to regulation and power electronics has yet to be specified.

Enterprises	Countries	Status	Degree of local integration
Elsewedy	Egypt	Independent	
Kestrel Wind Turbines	South-Africa	Subsidiary Eveready (USA)	
Palmtree Power (Pty) Ltd.	South-Africa	Not available	

2.3 Bicycles manufacturing

Of the seven companies identified in the Directory, three manufacture conventional bicycles and four are developing a range of electric-assist bicycles (and tricycles).

Four of the companies have production workshops where part of the production process is carried out: welding of frames and certain parts, phosphating, production of rims, production and assembly of saddles, powder coating, semi-automatic wheel assembly.....

Enterprises	Countries	Status	Degree of local integration
Cloud Bike (Telus Bike)	Morocco	Independent	
Euro-Cycles	Tunisia	Independent	
Maghreb Cycles	Tunisia	Independent	
Multi-Industries Group (MIG)	Senegal	Subsidiary groupe ADS / (Aluminium du Sénégal)	
MyBoo	Ghana	Subsidiary (Germany)	
Real Bicycle Co	South-Africa	Independent	
ThinkBikes	Nigeria	Independent	

2.4 Electric motorcycles manufacturing

In 2023, the African two-wheeler market reached 1,880,000 units. Within this total, sales of electric motorbikes represent an extremely marginal share.

Over 90% of electric motorbikes sold in Africa are imported from China and India.

Most of the start-ups offering electric motorbikes for hire in sub-Saharan Africa rely on imported units that are fully knock-down (CKD) and then assembled locally.

Kenyan company Roam is one of the leading manufacturers of electric motorbikes in Kenya, with sales in excess of 200 units. The company has the capacity to design 100% and manufacture 35% of its electric motorbikes in-house. Roam has prioritised components for which local manufacturing capacity already exists, such as injection moulding, welding, metal bending and the assembly of certain sub-assemblies. The company is working with ten local suppliers who make parts for internal combustion engine motorbikes, to help them switch over to manufacturing electric motorbikes. However, certain components such as battery cells and basic electrical components (resistors and converters) still have to be purchased outside Africa.

Enterprises	Countries	Status	Degree of local integration
ARC Ride	Kenya	Independent	
Bako Motors SAS	Tunisia	Subsidiary (Germany)	
Cloud Bike (Telus Bike)	Morocco	Independent	
Roam	Kenya	Subsidiary (Sweden)	
ThinkBikes Limited	Nigeria	Independent	
Urjiin Motorcycle	Ethiopia	Independent	
Zuhura Solutions	Kenya	Independent	
Gogo Electric	Ouganda	Information not available	

2.5 Electric vehicles manufacturing

The electric vehicle manufacturing industry is just getting off the ground in Africa. There have been many announcements, particularly from the major car manufacturers, but investment has been slow to materialize. Only two manufacturers of small two-seater vehicles and one manufacturer of recharging systems are included in the Directory.

Enterprises	Countries	Status	Degree of local integration
Consortium Green Energy Park (IRESEN, UM6P), EDEEP, Halmes	Morocco	Consortium of Moroccan enterprises	
Bako Motors	Tunisia	Subsidiary (Germany)	
Manufacturing Commercial Vehicles	Egypt	Independent	

2.6 Railway equipment manufacturing

The most significant investments concern three countries:

- Algeria: assembly of tramways
- South Africa: vertically integrated train manufacturing chain, with a cluster of specialized local suppliers having the capacity to design and manufacture power resistors, transformers, power electronics equipment, AC and DC electrical panels and metal parts....
- Egypt has an ambitious policy to develop an integrated and independent railway construction industry. There are many projects in the pipeline, and production could start as early as 2025.

Outside these three countries, the railway construction sector is underdeveloped.

Enterprises	Countries	Status	Degree of local integration
Alstom	South-Africa	Subsidiary (France)	
Alstom Maroc	Morocco	Subsidiary (France)	
Cital	Algeria	Independent	
Gear Rail	South-Africa	Independent	
Naledi Ringrollers	South-Africa	Independent	
Penbro Lennick	South-Africa	Subsidiary (Italy)	

2.7 Stoves manufacturing

There are a number of specific features to the ecological stove and cooker manufacturing industry:

Local manufacturers cover only a very small part of the market. Imports, mainly from Asia, predominate.

Many local initiatives are part of time-limited aid programmes.

Local manufacturers offer a wide range of business models and technologies:

- The ACE One combustion chamber is designed to reduce smoke emissions by creating clean combustion of the biomass using a fan that blows oxygen into the top and bottom of the combustion chamber.
- The Gyapa™ cooker contains a ceramic lining, fixed in a metal casing with mortar and painted. All the stoves are handmade and the metal casings come from scrap metal, usually discarded aluminum sheeting, roofing, car bodies, fridge exteriors and air conditioners.
- Obamastove has its stoves made by craftsmen, one by one, using a mould to form the ceramic, shears to cut the steel and hammers to assemble it all.

The basic models offer a 20-35% improvement in efficiency, while the intermediate models increase this figure to 66%.

Overall, the level of local value added is high.

Enterprises	Countries	Status	Degree of local integration
ACE	Lesotho	Subsidiary (The Netherlands)	
Burn Manufacturing	Kenya	Subsidiary (USA)	
Gyapa Enterprises	Ghana	Local network	
Obamastove	Ethiopia	Local network	
SupaMoto	Zambia/Sweden	Independent	

2.8 Manufacturing of waste and effluents treatment systems

There are few local manufacturers in the waste and effluent treatment facilities market. The local offer is limited to metal-treatment companies capable of supplying components such as hoppers, profiles, sieves and metal containers on a one-off basis, and to plastics processing companies capable of supplying containers.

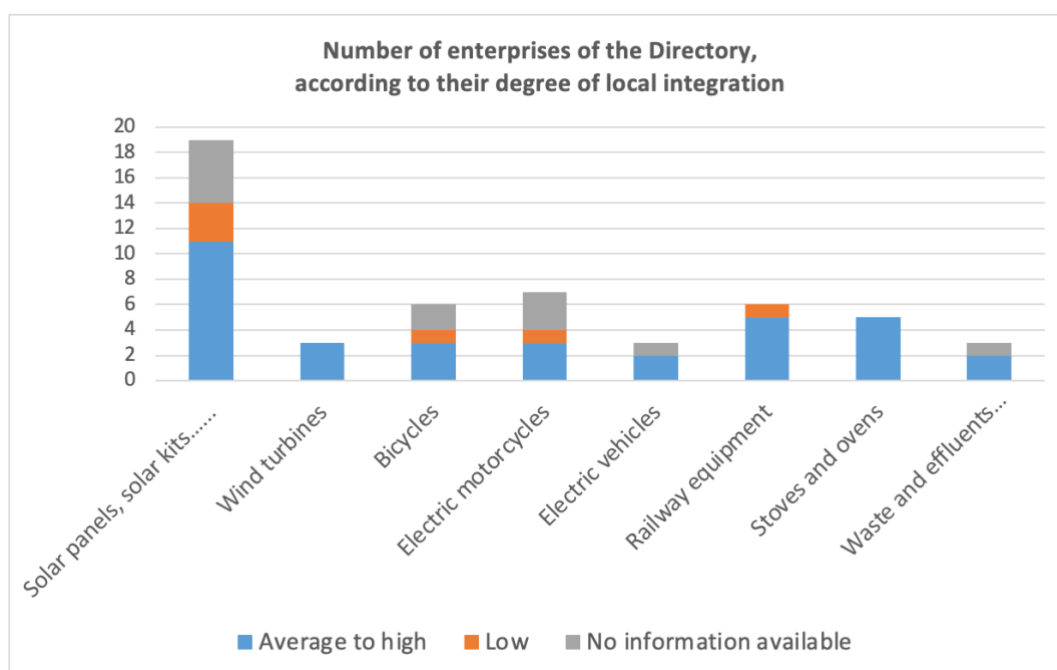
Enterprises	Countries	Status	Degree of local integration
Chanja Datti	Nigeria	Independent	
Jia Ming Plastics manufacturing	Gabon	Subsidiary (China)	
Ferrovial	Algeria	Independent	

3. Conclusions

3.1 Overview

The diagram below summarizes the level of local integration of manufacturers listed in the African Green Industrialization Directory.

There is a preponderance (in number) of companies with a "medium to high" degree of local integration.



This confirms that the African “green” industry is not limited to screwdriver factories. The examples of several of the companies in the Directory, although very few compared to the continent's needs, demonstrate that it is possible to manufacture products with a relatively high technological content, such as bicycles, wind turbine masts, railway equipment and solar panels, on African soil and under apparently profitable conditions, with a significant degree of local integration.

Manufacturers in the "ecological stoves and cookers" sector generally master all the manufacturing stages.

In the wind turbine manufacturing sector, the level of local integration of companies is high as far as the manufacture of masts is concerned. A more detailed analysis would be needed to get an overall picture of the situation, including the manufacture of nacelles and electrical and electronic equipment.

The production of electric motorbikes shows mixed results, for two reasons: On the one hand, production of electric motorbikes is extremely low compared with the potential market, particularly in sub-Saharan African countries. Secondly, the vast majority of companies that declare themselves to be motorbike "manufacturers" limit their activities to the assembly of imported kits (CKD).

3.2 Local value added vs. Status of the enterprises

Do independent companies have, on average, higher or lower levels of local value added than companies with subsidiary status?

The graph below shows that the proportion of companies with a "medium/high" degree of local value added is 91% for independent companies. This proportion falls to 75% for companies with subsidiary status. As a reminder, 80% of the companies in the ranking with subsidiary status are controlled by non-African groups.

