

THE  
SUSTAINABLE MATERIALS  
**VALORIZATION**  
CENTER






# VALORIZEN

RESEARCH AND INNOVATION CENTER

## WHO ARE WE

VALORIZEN is a research and innovation center that develops, scales up and commercializes technologies to valorize sustainable materials

## ABOUT US

 VALORIZEN is the research arm and a wholly owned subsidiary of United Kingdom-based Scaleup Innovations Holdings Limited and it was incorporated in Egypt as a private Limited Liability Company in 2022.

 VALORIZEN operates in 3 core areas, including biomass valorization, waste valorization, as well as knowledge valorization.



### **Biomass Valorization**

Converting and refining biomass, including agricultural residues into value-added industrial raw materials.



### **Waste Valorization**

Recycling and upcycling industrial waste, including textiles and fibers into industrial raw materials.



### **Knowledge Valorization**

Transforming the results of research and innovation into sustainable products, processes, and services.

# STRATEGIC PLAN



## Valorize

[ˈva-lə-, rīz] verb

1. To make something valuable or useful from an existing substance
2. To think or state that something has value or is valuable

## MISSION

To create a platform for transforming scientific research into sustainable innovations that valorize material resources, bring economic value, and benefit society towards a greener future.

## VISION

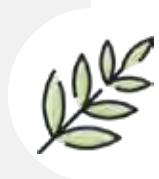
We envision a world in which valorizing biomass and waste enhance sustainability and improve livelihoods for all.

## CORE VALUES

- Diversity
- Equity
- Inclusion
- Collaboration
- Innovation
- Sustainability

## GOALS

VALORIZEN main goals are to develop and commercialize technologies to valorize biomass and waste. Further, to transform them into sustainable materials with significant levels of demand and build a knowledge-based circular bioeconomy out of such underutilized resources.



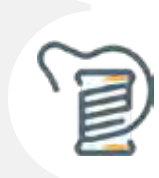
VAROLIZE RESOURCES



COMMERCIALIZE TECHNOLOGIES



BUILD CIRCULAR BIOECONOMIES



PROVIDE GREEN RAW MATERIALS



CREATE GREEN JOBS



PRESERVE LOCAL CULTURES

# OUR ACTIVITIES



Over the years we have crafted our own technology development process, taking an idea from a lower Technology Readiness Level (TRL), towards commercialization.



## TECHNOLOGY SCOUTING & VALIDATION (TRL 1-2)

Our process often starts with scouting for emerging technologies (externally or internally).









We then match those technologies with existing or future business needs and determine whether those technologies are suitable for further valorization.

With the help of our business developers we write an invention disclosure, and further prepare a business/ commercialization plan.

## INNOVATIVE EXPERIMENTAL RESEARCH (TRL 3-4)

Once the business case is validated, the technology is then refined on the lab scale, including proof of concept (POF), process optimization, material characterization and benchmarking.

We operate through a multidisciplinary network of scientists and researchers in the fields of biomass and waste valorization in the following domains:

-  Textile, fiber and leather
-  Lumber substitute
-  Biocomposite
-  Pulp and paper
-  Cement and concrete
-  Fertilizer and compost
-  Fodder and silage
-  Biofuel

## TECHNOLOGY COMMERCIALIZATION

Our technology commercialization activities are handled by our holding company in UK, Scaleup Innovations Holdings Limited (SIH).

This includes, patent filing, LCA, certification, branding, trademark registration, technology marketing and licensing.

In cases when spin-off appears to be the best way forward, SIH will usually license the patent to the spin-off in exchange for royalties/shares.



## PILOT SCALE EXPERIMENTS (TRL 5-7)

Our pilot scale experiments are performed in our 250m<sup>2</sup> pilot plant which is dedicated to pilot system trial runs and pilot production for end-use application development.

The main purpose of the pilot experiment is to learn about the technology and to demonstrate the commercial feasibility of the process.

Our pilot systems are designed and developed internally by our specialized CAD/CAM experts and manufactured by our approved OEMs.



## DESIGN AND DEVELOPMENT OF INDUSTRIAL SYSTEMS (TRL 8-9)

The knowledge obtained from the pilot plant is used for the design of full-scale industrial systems.

Our industrial systems are manufactured in coordination with our approved OEMs and managed by our holding company in UK (SIH).



# OUR FLAGSHIP PROJECT



## PalmFil







PalmFil is the world's first textile fibers and reinforcements extracted from the byproducts of pruning of date palms, such as the frond and fruit stalks.

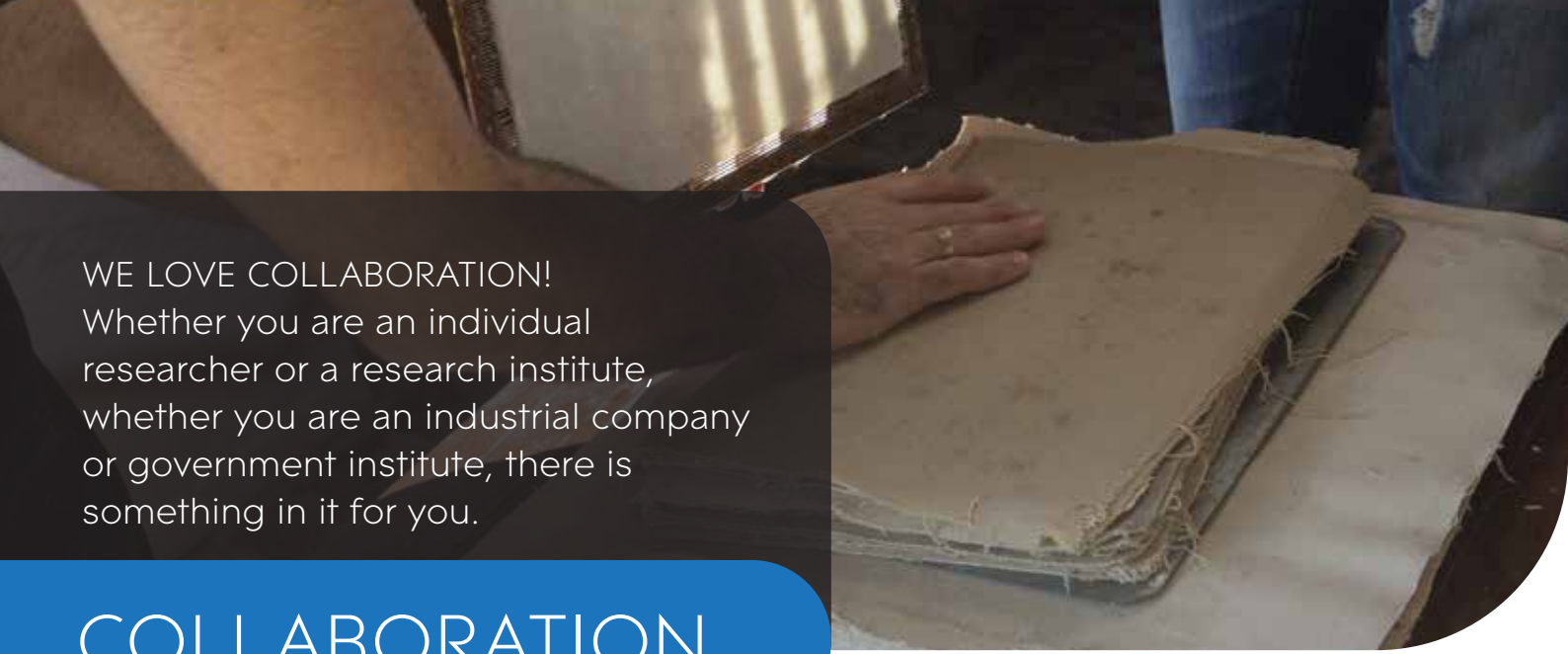


PalmFil creates value out of the large quantities of underutilized byproducts of the 140 million date palms (FAO), which are otherwise open field burned!

It expands the palette of natural fibers and increases the biodiversity of fiber crops. Resulting in larger, more sustainable, and economical supply, which supports and encourages the industrial shift back to natural fibers.

### PALMFIL STANDS FOR

-  High performance palm fibers and reinforcements
-  Available in many forms, including, long fiber, yarn, nonwoven, and woven
-  Suitable for a wide range of industries, such as automotive and construction
-  Obtained from renewable bioresources and 100% biodegradable
-  Abundant and available in large quantities
-  Strong, light weight and safe



WE LOVE COLLABORATION!  
Whether you are an individual researcher or a research institute, whether you are an industrial company or government institute, there is something in it for you.

## COLLABORATION



### LICENSING

If you are an industrial company/ government institute and searching for sustainable technologies for resource valorization. We can help you select, license, and industrialize one of our high impact innovations.

Our technology licensing activities are handled by our holding company in UK, Scaleup Innovations Holdings Limited (SIH).



### SCALING UP

If you are a scientist/ researcher and have a proof of concept and unable to scale it up. VALORIZEN can help you refine, scaleup and commercialize your invention.

You can discuss your concept with our business developers and scientists to determine the best way to valorize your knowledge



### CONSULTING

If you are an industrial company and need to outsource your R&D in biomass and waste valorization. VALORIZEN can provide external R&D services to match your institutional needs.

We can also collaborate with research consortiums on submitting a high-quality research proposal in partnership with principal investigators.



### SPONSORSHIP

If you are a government institute or developmental organization and want to promote the sustainable valorization of material resources.

VALORIZEN can help you in sponsoring one or several purpose-driven innovations in various technology readiness levels (TRL).



# CONTACT US

## WE'RE HERE FOR YOU

Get answers to questions about activities, collaboration, careers, support and everything else.



GIVE US A CALL  
+20 225 734 250



WRITE US AN EMAIL  
[info@valorizen.com](mailto:info@valorizen.com)



VISIT OUR WEBSITE  
[www.valorizen.com](http://www.valorizen.com)



VISIT US

Corporate Address: Unit 571, New Cairo Industrial Zone, Cairo - Egypt

FOLLOW US



@Valorizen