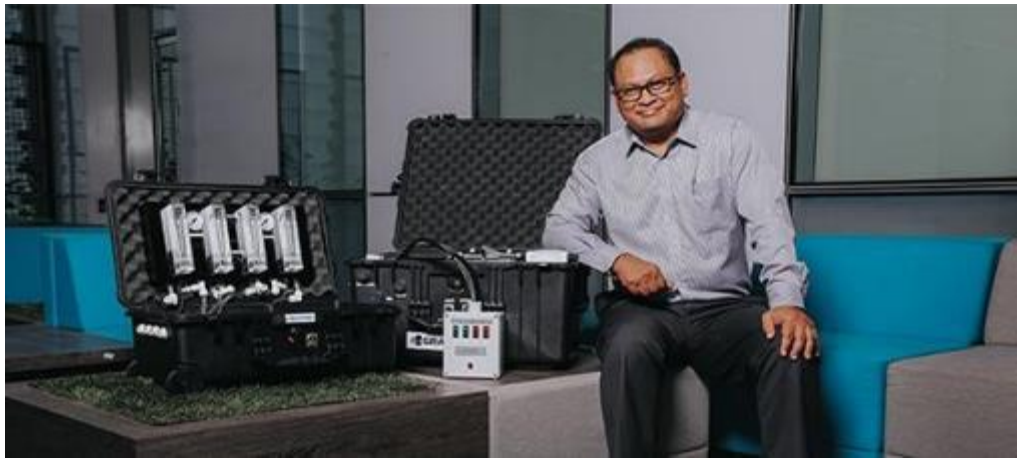
LIQUINEX

Singapore Water/Wastewater Treatment and Recycling Technology Specialist



ABOUT LIQUINEX

Founded in 2015 as a Specialist in Water and Wastewater Treatment Technologies, Liquinex is today an integrated turn-key EPC and O&M technology solutions provider.

Liquinex specialises in the design, fabrication and systems-integration of compact water & wastewater treatment platforms using next-generation technologies such as ceramic, biomimetic and graphene membranes. Our products also employ sterilising and oxidising components such as ultraviolet (UV) lamps and titanium oxide catalysts.

Our track record includes providing Innovative and Cost Effective Technology Solutions for various industrial and municipal customers, with variety of sizes ranging from small disaster relief drinking water solutions to water reuse systems for Multinational Corporations.

Founders:
Background

BASHIR AHMAD

- 18 years of experience in engineering design, construction and maintenance of water and wastewater treatment plants, as well as in air pollution and marine technologies
- Previously Deputy Director in **National Environment Agency (NEA) of Singapore**
- Senior Engineer at **Public Utilities Board (PUB)**, Singapore's National Water Agency
- Bachelor's Degree in Mechanical Engineering from National University of Singapore (NUS), and Member of the Institution of Engineers Singapore

RIAZ DEEN

- Over 10 years of experience in industrial and marine engineering, fabrication and manufacturing
- Executed numerous projects in Asia and other global markets, including water treatment plants, membrane systems, rigs, shipping systems, etc
- Bachelor's Degree in Engineering (Marine) 1st Class Honors from Madurai Kamaraj University, India

National Environment Agency
Safeguard · Nurture · Cherish

PUB SINGAPORE'S NATIONAL WATER AGENCY

Accolades

Recognized as Water Innovation Company by Singapore Government

- Liquinex is recognized as a Water Innovation Company in Singapore (by IPI Singapore), and is supported by Singapore Government Agencies

Igniting Innovation—Bashir Ahmad of Liquinex Group

Bringing clean water to the masses with open innovation

The sharing and co-development of synergistic water purification techniques will help secure the world's supply of clean, drinkable water, says Bashir Ahmad, CEO of Liquinex Group.

Mission

- To provide sustainable and efficient water treatment solutions to our customers through expertise and innovation

Vision

- To be the preferred partner for those who value water as much as we do.

SOLUTIONS
Focus on Technology

- Provide proven technology-based solutions to customers
- Focus on innovation to optimize performance & operational efficiencies, as well as cost-effectiveness (capex and opex)
- Example: use of ceramic membranes to provide industrial wastewater treatment and recycling solution for REC Solar (where other water companies failed)

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EXPERTISE

Water and Wastewater Treatment Systems

REVERSE OSMOSIS & UF WATER TREATMENT

WASTE WATER TREATMENT SYSTEM

OIL – IRON SEPARATION SYSTEMS

ALGAE HARVESTING / AQUACULTURE

INDUSTRIAL WATER REUSE

SWIMMING POOL WATER SYSTEM

OFF GRID WATER SYSTEMS

OPERATION & MAINTENANCE SERVICES

SOLUTIONS

Compact water treatment system using ceramic membrane

- Ceramic Membranes have unique properties, and excellent flux capacity
- Liquinex successfully utilized ceramic membrane to provide cost-effective and efficient water / wastewater solutions as **Ultrafiltration** units

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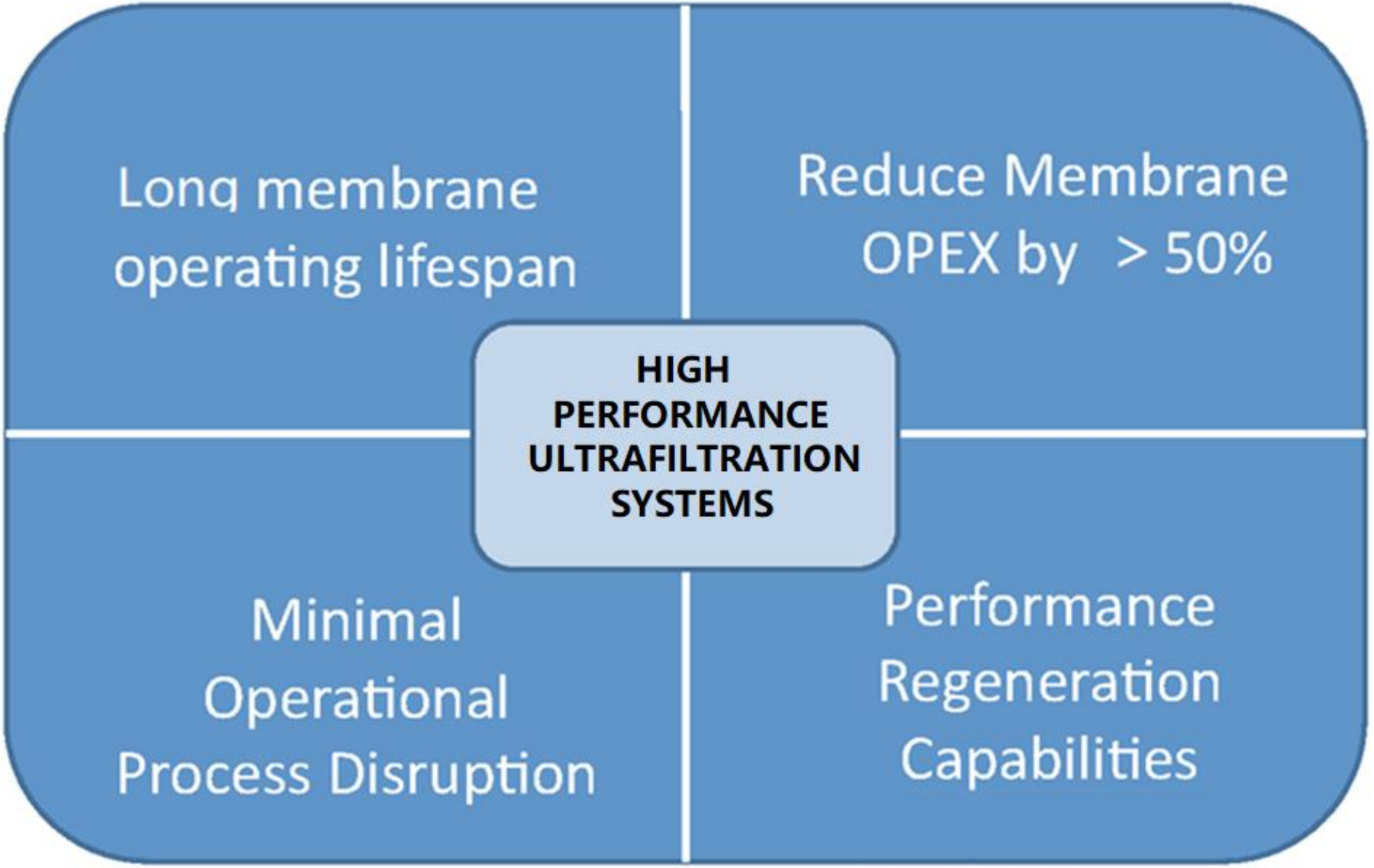
Strong Value Proposition



Customers

- References include both Private and Public Sector, covering a wide range of industries

TRACK RECORD

River Water Treatment System for Lembaga Air Perak – 30M3/Hr

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TRACK RECORD

Swimming Pool System – 100m3/hr

A water treatment system for swimming pools that requires very little maintenance and only 1/3 of the space required for common swimming pool water treatment system.

With this system, it is capable of maintaining water quality without the use of chlorine.

The system shown is installed at Civil Aviation Authority Singapore, pilot training pool

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Ceramic membrane UF System For Cooling Tower Systems @ REC Solar – 20m3/hr

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Combined Ultra-Filtration and RO Systems for Industrial Water Recycling – 1m3/hr

Liquinex provided a custom engineered solution for a chemical drum supplier in Singapore. The company produces chemical contaminated water from washing waste chemical drums which they will resell.

The water treatment system reduces the amount of water needed and recycle it for reuse.

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REC COOLING TOWER BLOWDOWN DBOO PROJECT – 40m3/hr

REC Cooling Tower Blowdown DBOO Project
5 + 5 years contract
Up to 40m3/hr x 24/7 @ $1.37/m3

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Containerized Water Treatment System – 1m3/hr

A containerised waste water treatment system designed to minimise the amount of waste water generated from offshore plant pipe cleaning operations. Due to the nature of the waste water generated by these operations, the waste water can not be discharge to the ocean and must be disposed by engaging specialised chemical disposal companies. The cost of such disposal is determined the volume of water disposed. The system by Liquinex can reduce the amount of volume by about 90%, therefore eliminates a significant portion of disposal cost.

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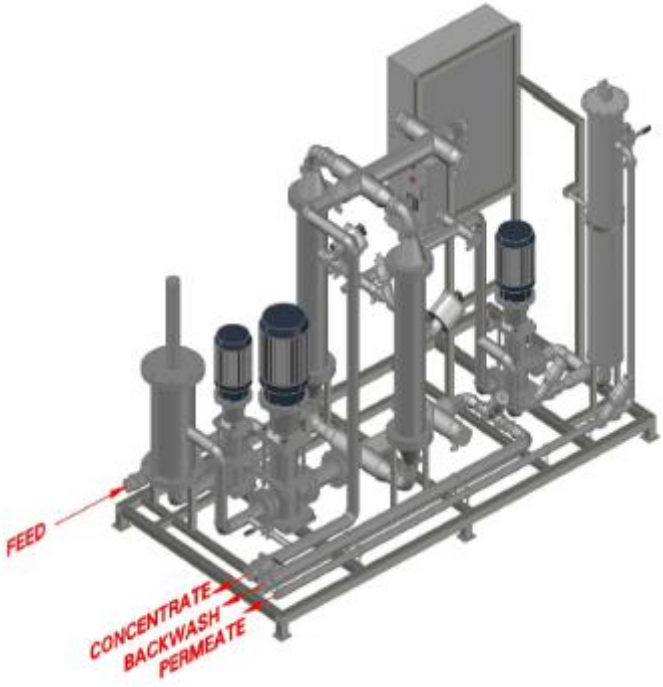
Oil-Water Separation – 5m3/hr



Liquinex provides an efficient oil and water separation system. Waste cleaning companies dealing in Marine and offshore related operations will normally has to deal with oil mixed with water. Normal oil water separation involves skimming the oil from water surface. However it will not recover the oil that is emulsified within the water. Liquinex oil and water separation system allows for the efficient separation and water that is emulsified in the water. The Liquinex oil and water separation is also applicable to other industries, such as Food & Beverage industry or Mining.

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Ultrafiltration @ Fishmeal Plant in Oman – 10m3/hr

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Rice Water Recycling System – 10m3/hr

The rice washing process in rice noodle factory is a highly water intensive process and produces significant amount of pale white starchy waste water. A system for recycling and reuse of water produced from rice washing in a noodle making factory.

Liquinex system is capable of efficiently recovers reusable clean water from the waste water. The water recovery and reuse significantly reduces the amount of water used in the factory process.

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Compact Algae Harvester – 2m3/hr

The Liquinex Algae Harvesting system allows for extraction of microalgae cells from water. Micro algal biomass are commonly used in the field of energy, nutraceuticals, pharmaceuticals, etc. For example, extraction of algae oil to be used for biodiesel or DHA source. The system employs measures to prevent clogging and fouling by the algal cake.

In other application, the system can be used for clearing water bodies from algae blooms, which has become more common due to global warming.

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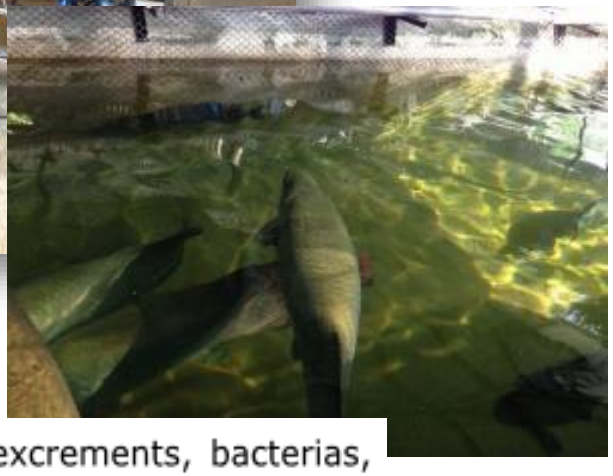
LIQUINEX'S TRACK RECORD

Aquaculture – Water Treatment Systems – 1m3/hr

Before



After

A system for keeping the aquariums, fish tanks, or aquaculture tanks from excrements, bacterias, impurities, and algae. The system was employed at the River Safari at Singapore Zoo. Sand filters are the more conventional method for dealing with fish tanks, however the limitations are it requires large amount of space, requires manpower to periodically replace the sand, and huge amount of water to flush the sands, to reduce clogging.

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1st Place Winner of Global Water Award

Shaikh Ahmed bin Mohammed bin Rashid Al Maktoum, hands over the award to Liquinex Group Pte Ltd from the Republic of Singapore, first place, in the category of Innovative Research and Development Award International Institutions, during Mohammed bin Rashid Al Maktoum Global Water Award - Second Cycle, at Madinat Jumeirah in Dubai. 29th January 2020. Photo: Ahmed Ramzan/ Gulf News

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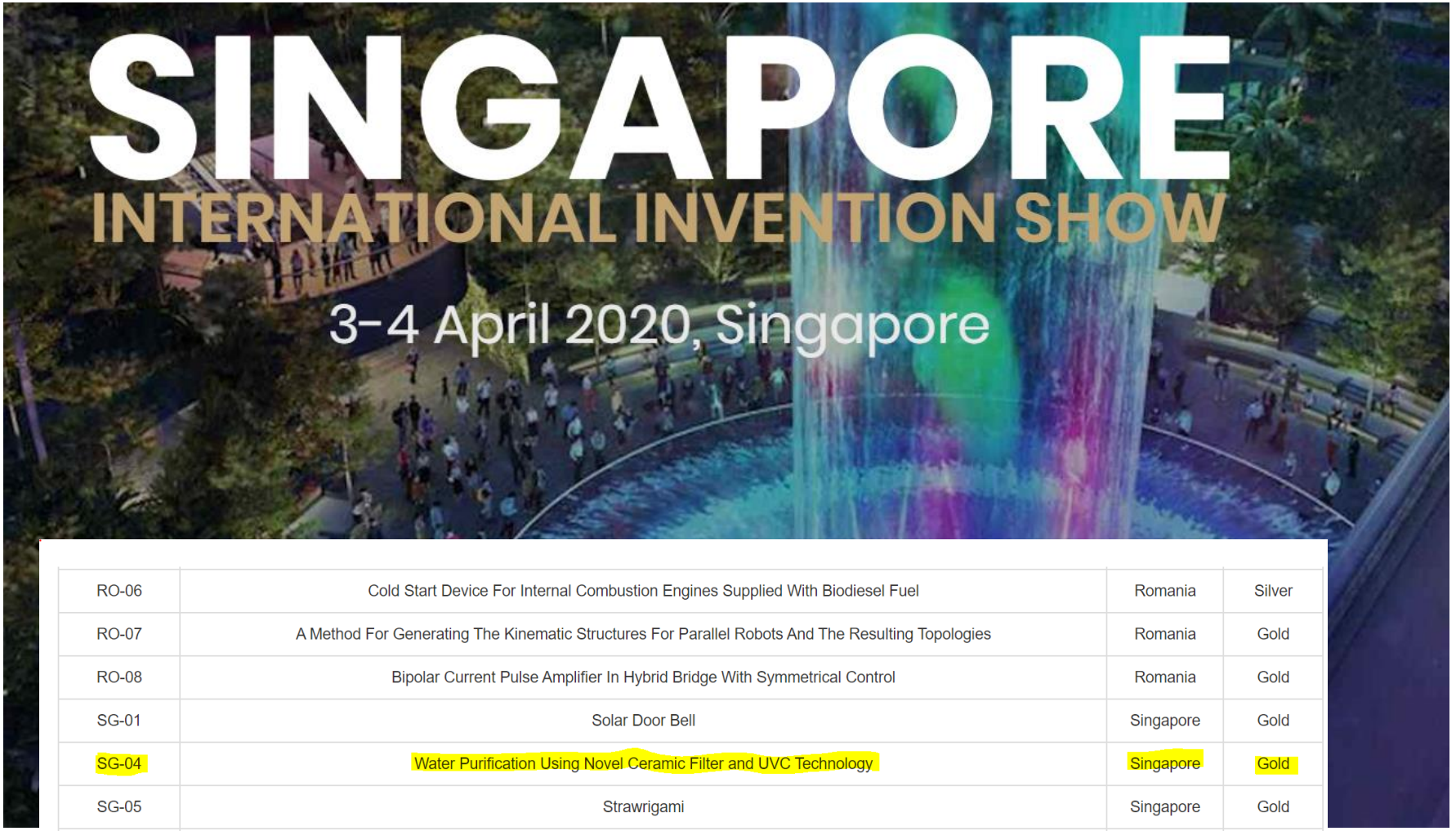
Awarded Gold Medal in AsianInvent Singapore 2020



RO-06	Cold Start Device For Internal Combustion Engines Supplied With Biodiesel Fuel	Romania	Silver
RO-07	A Method For Generating The Kinematic Structures For Parallel Robots And The Resulting Topologies	Romania	Gold
RO-08	Bipolar Current Pulse Amplifier In Hybrid Bridge With Symmetrical Control	Romania	Gold
SG-01	Solar Door Bell	Singapore	Gold
SG-04	Water Purification Using Novel Ceramic Filter and UVC Technology	Singapore	Gold
SG-05	Strawrigami	Singapore	Gold
TH-01	Bio Plastic Nursery Bag From Banana Peel	Thailand	Gold

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Award Video

https://www.youtube.com/watch?v=HXzgALXv1Oo

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Compact Mining System – 3m3/hr

Coal handling plant or mineral mining operations uses significant amount of water for washing or ore extraction. These processes produce massive amount of tailings filled with coal or sand particles that heavily pollutes the environment. Conventional treatment of the tailings is extremely inefficient and requires huge amount of space.

Liquinex has designed a compact and scalable system capable of recovering reusable water from the tailings, effectively reducing pollution and operating costs.

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THANK YOU

Water solution - Any situation, anytime, anywhere...

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