



Organization Profile

Our aim is to become the global leader in providing sustainable irrigation systems.

Introduction

A high-tech company founded in Delft, Netherlands in 2013, aQysta aims to provide sustainable hydro-powered pumping solutions that can have a positive economic, environmental and social impact.

At its Delft office, aQysta conducts technology research, product design and development, sourcing and global sales of its innovative irrigation technologies.

aQysta works with partners from various sectors (government institutions, international development organizations, private distributors, manufacturers, and universities), to introduce and implement innovative, sustainable, and efficient irrigation equipment and services. Together with this qualitative network of partners, aQysta has been leading irrigation and agronomic projects in 12 different countries while building regional offices in Nepal, Colombia, Malawi, India, and Indonesia.

aQysta is on a quest to provide water for farming in sustainable ways!



Core Competencies

Knowledge On Irrigation & Farming Practices

We closely study the global irrigation market and research technological solutions applicable to different scenarios.

To understand the needs of farmers better and develop products that fit the market requirements, we carry out farming activities too.

Research & Product Development

aQysta's expertise lies in translating ideas to technological products and commercializing in the market. We have the capabilities to carry out all the underlying steps of product development, including conceptualization, prototyping, setting requirements and specifications, fluid and solid simulations and embodiment design.

Collaboration & Network

We collaborate with an international network of manufacturing partners and suppliers to manufacture high quality products at reasonable costs. We are constantly expanding our network of distribution partners in various countries in order to make our products globally available.

Innovative Business Models & Financing Mechanisms

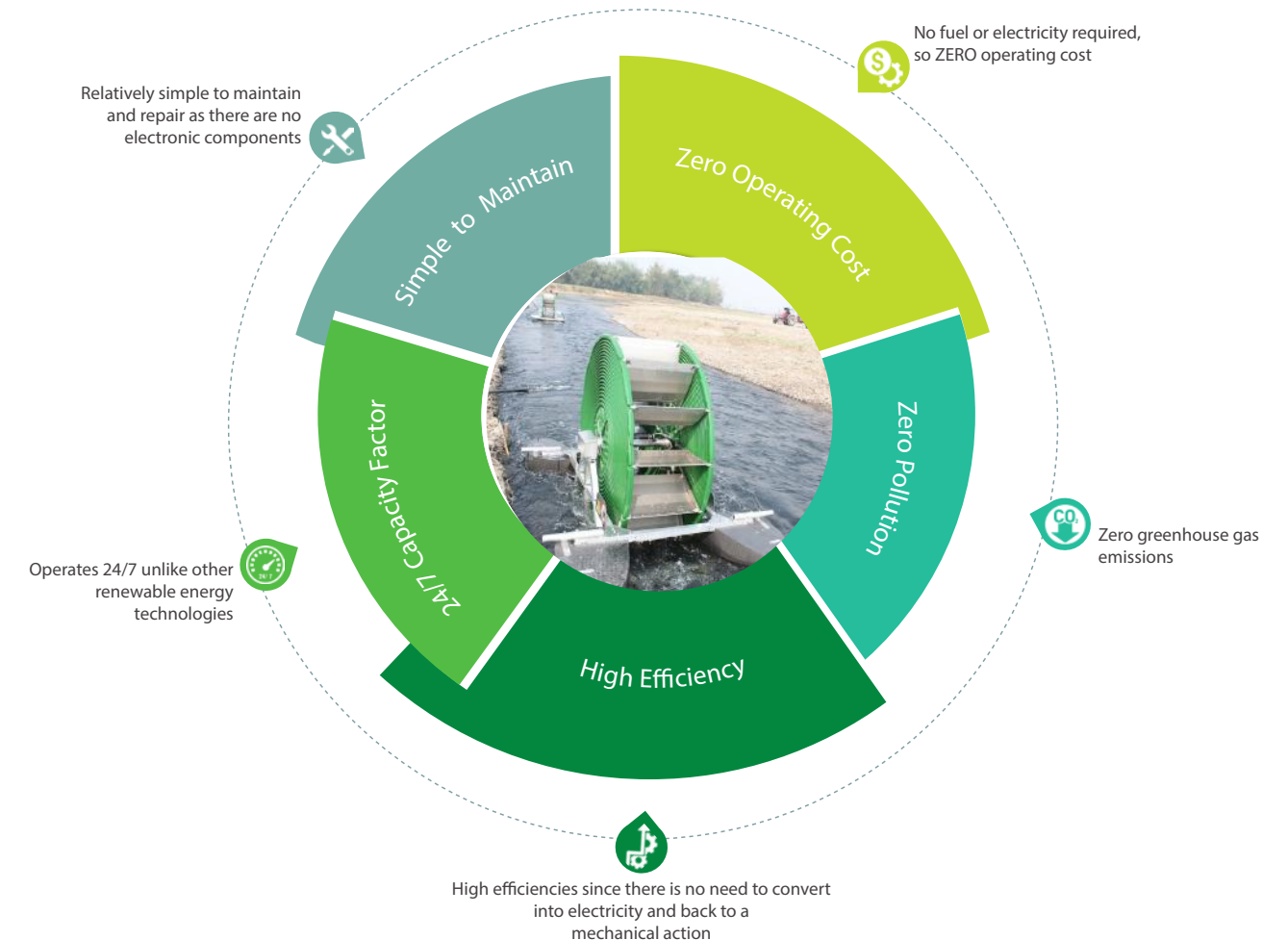
Innovation at aQysta is not limited to product innovation alone but also includes innovation in the way these products are implemented. We are working with innovative financial mechanisms, e.g. "Pay-After-Harvest", where farmers pay for the product only after they have harvested their crops and earned revenue from it.

Products & Services

aQysta offers different variants of clean energy water pumps that match your requirement. All you need is a flowing source of water.

"Grow More & Save More With Zero-fuel Pumps."

Why Hydro-powered Pumps?



"Hydro-Powered Pumping is the Most Cost-Effective Water Lifting Technique in Geographically Feasible Areas (FAO)."

Hydro-powered Pumps



Barsha Pump

The Barsha Pump is the first type of hydro-powered pump developed by aQysta. It is a water wheel propelled pump that utilizes the energy from the flow of rivers and canals to pump water without requiring any fuel or electricity to be operated.

aQysta has deployed Barsha pumps in more than 21 countries globally.

HyPump

HyPump is an innovative hydro-powered pump, designed specifically for irrigation canals to deliver pressurized water to drip or sprinkler systems, thus saving water, without increasing energy consumption or energy costs.

aQysta is demonstrating this technology in Spain.



ITP

Integrated Turbine Pump (ITP) is a third hydro-powered pump of aQysta that uses the turbine like impellers to pump the water.

Currently, ITP is in the demonstration phase and is not commercially available.



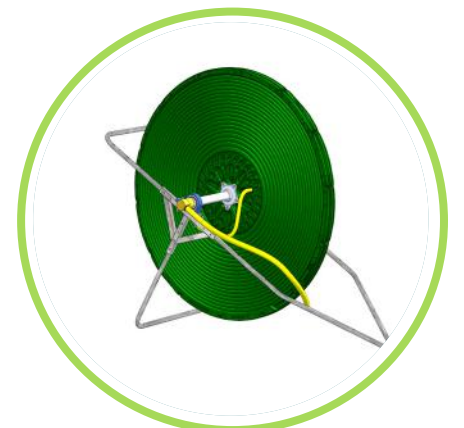
Solar-powered Pumps

aQysta aims to lift water from rivers and canals in a sustainable and cost-effective manner. Applying irrigation powered by renewable energy can increase global agricultural productivity. Therefore, we are constantly expanding our product designs to reach new heights - literally. To also cater to water needs for heights above 20 meters, where the hydropowered Barsha is reaching capacity limits, aQysta developed a solar-powered variant that is powered by the sun - introducing the "Solar Barsha".

Solar-Barsha Pump

Solar Barsha pump is the fourth variant of Barsha Pump which uses solar energy instead of hydro-power to operate.

Solar Barsha pumps are used in areas where water needs to be pumped from a lake or a reservoir to the farm lands.



Increased Population: Where is the food ?

By **2050**, the world population is estimated to reach **9.7 Billion** people, which means food production needs to be **Doubled!**



Irrigation Systems & Accessories

In addition to selling products developed and manufactured by aQysta, sourced through its network of partners and suppliers, aQysta also provides various innovative irrigation technologies and installation services for various size of farm sizes and water projects.



Drip System



Sprinkler System



Spray System



Lay Flat Hoses



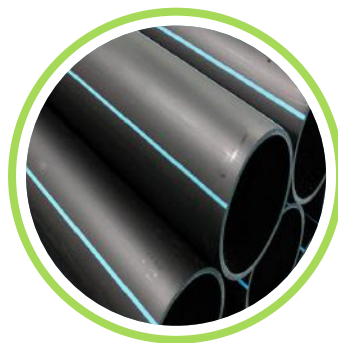
Rainhose Irrigation Kit



Storage Tanks



PVC Pipes



HDPE Pipes



Advanced Flowmeter



Connector Set



Drip Irrigation uses **30 to 50%** less water than traditional methods. But, due to the required pressure, Drip Irrigation increases energy consumption by **10 times** and with it, the cost for irrigation.



**Efficient Irrigation,
Increased Production**

Irrigation increases food production by **2 to 5** times.

Irrigation & Agronomic Services



Site Feasibility Study

aQysta provides a detailed site feasibility study and report to suggest the best irrigation solution for the given context, optimizing for cost and sustainability.

Site feasibility study can be a simple check of the site and suggestions of suitable technology or a very detailed report including economic and technical factors of irrigation planning with accessories and water management.



Installation of Irrigation System

aQysta is able to not only design irrigation plans but also install irrigation systems, in accordance with the feasibility study report and taking into account the preferences of the client.



Agricultural Advice

Farmers face several problems during their agricultural practices.

aQysta's professional team has proven to solve several complicated agricultural problems especially in rural areas. Social, environmental and economic impact are well considered in all our advice.



Water Right Certificate

aQysta is an expert in obtaining the water rights certificate wherever needed.

We can guide and control the application process for a minimal surcharge.



Agronomic Advice, Training, & Market Linkage

aQysta also provides services related to Organic farming plans (*green farming, permaculture farming*), Irrigation and farming workshops, Crop planning, and Soil fertility boost schemes.



Supervising & Managing of Farms

Farms or other agricultural projects which are funded or owned on distance can be assisted by aQysta managing services.

After intake and introduction, aQysta will set up a management contract to ensure the customer that their farm will be supervised, farmers will be trained and feedback will be given through weekly or monthly reports to the customer. Supervision or management service will be tailor made according to the situation.



Team aQysta

aQysta is comprised of a young, committed and global team of different nationalities working across 6 countries, with the common vision of successfully bringing hydro-powered irrigation technology to the world.

The team consists of a unique mix of expert designers and engineers, together with international business developers with sound knowledge on the irrigation context and user scenarios from different parts of the world. Complemented with senior experts who advise aQysta with business expertise, technical knowledge and network to grow further, it is aQysta's unique set up that is the driving force for its successful growth thus far and its ambitious plans.

Awards

Philips Innovation Award 2012



Bearing Point Award 2012



DOW SISCA 2012



Climate-KIC Venture Competition
Award 2014 - Europe



Frontier Innovators 2018



Siemens Empowering People
Award 2016



Get in the Ring - Startup Nexus - Agriculture 2019



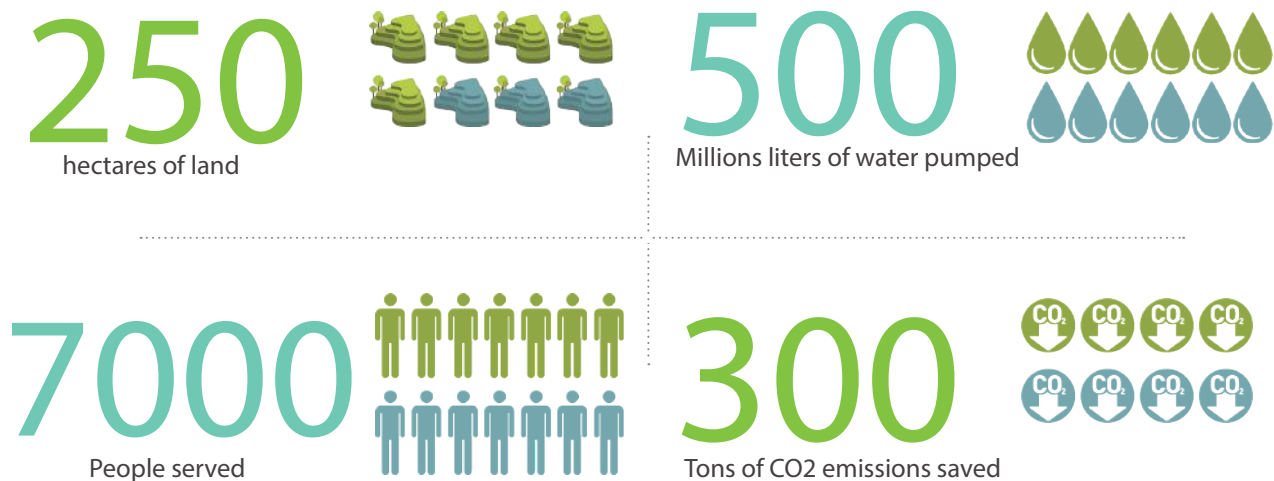
Forbes 30 under 30-Social
Innovation Europe-2017



Social Impact lab 2019



Global Impact



Barsha Pump is essentially a tool to provide water. However, its impact does not end with access to water. The pump can serve as a tool for social and economic transformation, without causing any harm to the environment.

Theory of Change



Success Stories

Barren Land to Cultivation, Sumba, Indonesia



“Many people in Sumba do not farm vegetables in dry season because sometimes one actually makes a loss at the end of the growing period due to the amount of money we have to spend in buying kerosene to pump water. Now that we have the Barsha pump and do not need to pay for the fuel, more people are able to grow vegetables. We are very happy and thankful.”

Community Leader, Kadahang, Sumba, Indonesia



Sprinkler Irrigation, Zalewa, Malawi

George Chimpanda

“I want to make my lodge a symbol of green and the Barsha Pumps are great assest to my in my lodge. I am using the pumps to lift the water to 3 fish ponds in the lodge and also using sprinklers to water the grass lawn.”

Riverbed Farming, Dang, Nepal

Nirmala Choudhary



“ Normally, the watermelon produced in our field weighed 8 to 10 kg, but after the use of Barsha pump, now we are able to produce watermelon that weighs 12 to 15 kg. Barsha pump has been very helpful for providing timely irrigation in our field. ”



Drip Irrigation, Andujar, Spain

Javier de la Brena

“The Barsha Pump is helping us drip-irrigate our fruit trees, and save on electricity costs that usually occur for pumping. ”

Partners

aQysta has worked with different partners from various sectors (Universities, international development organizations, private distributors, manufacturers and specialized plastics engineering companies) which add complementary expertise to the company, offer their international network and assist in accelerating the innovation and its market introduction.



Barsha Pump's Presence



Distribution-Collaboration



-  Are you interested in distributing our technologies in your region?
-  Are you an I/NGO, governmental/private company working on agriculture projects in your country, and are facing irrigation problem?
-  Do you work on implementing and financing renewable energy technologies?
-  Are you a farmer and are in need of irrigation equipment?

Yes?

Please get in touch with us and we can explore how we can work together.



Let us Irrigate Better, Together!

Global Office (Netherlands)

aQysta B.V.

YES! Delft Incubator

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