

## Interview with Pratap Thapa, CEO of aQysta

Pratap, you are the creative mind behind the idea of [aQysta's](#) Barsha pump. What inspired you to invent this solution for emission-free, low-cost irrigation?



*Pratap Thapa*

As a child of a farming family in Nepal, I led a double life: going to school in the city during the week and then returning to the village on weekends. What I remember vividly is that whenever the Monsoon season started, the rains brought happiness, since we could irrigate our fields. Later, when I had my degree in engineering and taught entrepreneurship in Nepal, part of the course I gave was to write a business plan. My students were engineers, so the solutions they would come up with had to be technology-based. This inspired me to take my own advice. Although my family's farm was close to a river, we always had to wait for the rains, because there are a lot of hills and we couldn't access the river for watering our paddies. So why not use technology to harness this energy, I asked myself. This was the starting point. I'm always full of ideas, but this one really stuck with the people I shared it with.

[How did you develop the pump from there?](#)

I met my co-founder Fred Henny once I received a scholarship from the Delft University for Technology and moved to the Netherlands. Fred was the one who took the idea and shaped it into a technology. Then we talked to Lennart Budelmann, who was my class mate and very good at leading teams and organising projects, so a perfect addition to Fred and me in terms of skills. We developed the prototype together, participated in several competitions and once we graduated, we decided it's worthwhile to start aQysta.

*The aQysta team in Delft*

[Do you remember the first reactions to your product from potential customers or other stakeholders?](#)

Right after we founded aQysta, the three of us went to Nepal, organised a lot of meetings and talked to many farmers. The first reactions were quite positive and we clearly saw that there's a need for our pump. Of course, some people had wild imaginations about how the pump would look like. For example, the person who took us around to the farmers said he'd expect it to be a 30 kg tool that would be easy to carry around. Our first prototype was big and weighed around 160 kg. Nevertheless, we took the feedback seriously and tried to come closer to that idea. Of course, there were other comments such as how we would deal with flooding and how affordable the pump would be. Bottom line was that everyone we talked to saw the benefits, but they first wanted to see the pump with their own eyes.



Such an innovative tech-based impact solution is typically very scalable. Where do you see the limiting factors for scale?



One limit comes from the technology side: We target farms that are close to rivers, which means that we need specific geographies for our pumps to work. Another challenge was that we initially thought we could continue selling our pumps out of the Netherlands, but reality told us that we have to be much closer to our customers. A third and very important insight was that any irrigation device is just a tool. You promise to farmers that you can increase their income and improve their livelihoods, but there is

no guarantee that this approach will work. If the smallholder farm is not profitable, it simply cannot afford to buy the pump. This is why we realised that we have to tackle the problem more holistically: Instead of seeing aQysta as a tech provider, we understood that we need to go beyond these boundaries, become part of the value chain and help farmers to become profitable. Of course, this transition takes time. After some reflections within the team, we announced in 2021 that selling pumps is no longer our primary source of revenue, but that we will position ourselves as a holistic service provider to smallholder farmers.



You could say that aQysta has pivoted towards deeper impact. How did your investors react to this strategic move?

Quite positively. We recently closed a new financing round that gave us a lot of assurance and reinforcement to pick up the right battles. It also provided us with some buffer and enough breathing space to experiment. The SIINC for WASH programme is another perfect support to push aQysta towards deeper impact. This opportunity came just at the right time.

SIINC incentivises you for an increased percentage of farmers using your pay-after-harvest model. Is this model one of the USPs that clearly differentiates your solution?

Yes, it's the combination of our pumps and the pay-after-harvest model that makes aQysta unique. When we advance the money to buy the pumps, we become real partners to the farmers. We share their risks as well as the value that comes from using our services. This



approach requires a lot of trust from both sides. It also builds close relationships. A lot of companies in our space wouldn't take this extra risk. But trust and relationships also offer us the potential to become a platform on which other providers could add their services, cold storage, for example. This can fuel our big vision to enable farmers to sustain themselves and their families with just farming - no need for side jobs anymore.

You talked about SIINC supporting you to push towards deeper impact. What are the value adds for an entrepreneur when you compare SIINC to other results-based programmes that you have been participating in?

*Satisfied customers*

One of the big differences is that the other programmes typically had milestones based on implementation, not on impact. For example, they rewarded how many pumps we installed or how many acres we irrigated, but not how much we were able to increase the income of the farmers we serve. SIINC for WASH is much more targeted towards outcomes, not outputs. Also, the metrics are not predefined but customized to what you want to achieve as an entrepreneur in terms of depth and breadth of impact.



How did you experience the collaboration with the Roots of Impact and Aqua for All team when defining these metrics?

I have to say that the process was relatively easy for us. We had already been thinking a lot about how to set incentives and in principle, Roots of Impact and Aqua for All had the same ideas. It took a bit longer to figure out how exactly we would calculate these metrics and what would happen in different scenarios. But in general, the process went smoothly and we are very happy with it. I would also hope that SIINC for WASH and the results that we achieve will prove to bigger institutional investors that our approach works and thus help to raise more capital. I would also like to see that our SIINC transaction inspires others to follow the same approach.

If others ask you about SIINC, how will you describe it in one sentence?

SIINC is a solution that allows an entrepreneur to pursue both, impact and revenue, without having to choose between them.

Speaking of pursuit: Where you would like to see aQysta 5 years from now and what do you need to get there?

*Farmer group from Grown Farm Incubator*



Our dream is to impact 1 million farmers by then. We always wanted to scale globally, but with the pay-after-harvest service model, we will first focus on depth of impact and then focus on breadth later. To do this, we will need more investment and other resources such as partnerships. If corporates could buy the harvest from the farmers we work with, this would help us to scale much faster and impact many more lives.

*Interview by Christina Moehrle, Roots of Impact / Pictures by aQysta*