



N. Edwin Widjonarko, co-founder and Director of Technology of Xurya, speaks about his entrepreneurial journey in Indonesia's solar power generation space.

From being trained as a physicist to becoming a scientist in a US national research laboratory, then cutting his teeth at corporate Intel, Xurya co-founder and Director of Technology N. Edwin Widjonarko has worn many hats in the course of his career. Edwin speaks about his journey to boost the adoption of solar energy in Indonesia's commercial and industrial sector, and why he believes now is the best time to do so.

WHAT LED YOU AND PAK EKA HIMAWAN, CO-FOUNDER AND MANAGING DIRECTOR OF XURYA, INTO THE SOLAR POWER GENERATION BUSINESS?

The idea goes a long way back. Eka and I have known each other since our secondary school days in Singapore. We met again in the early 2010s when we were in the US. I was doing my PhD in physics with a specialisation in solar materials, and Eka had just landed his first job as a hedge fund manager. This was when solar was booming in the US, and Eka had been tasked with seeking investments in renewable energy. We met and discussed how to start a similar business in Indonesia—but decided that solar was still too expensive back then. Eka went back to Indonesia and built his first start-up, while I joined the private sector and began my career at Intel.

We met again in 2016 and revisited the idea. We started analysing the market outlook in Indonesia, and found that prices for photovoltaic (PV) systems were beginning to go down. We believed it could reach grid parity pretty soon, which meant that the cost of PV energy would be about the same as that of power generated off the grid. It seemed like a good time to draw up something a little more concrete.

We continued to monitor the market and timed our entrance into the Indonesian market in late 2018, right before it hit grid parity.

HOW CHALLENGING WAS IT AT THE BEGINNING?

From 2016 to 2018, we were just bouncing ideas back and forth. We ruled out manufacturing because it was too capital-intensive and there were several practical difficulties involved. Besides, it might have been hard to find staff for PV manufacturing in Indonesia. We did a lot of brainstorming until late 2017, and the company was eventually founded in mid-2018. Early that year, we got a few angel investors to put in some money, and that was when I went back to Indonesia.

The early days were really rough. The level of public awareness of PV was very low then. People didn't understand our product, and that was the biggest challenge. When we presented our product, we were posed questions like: "If there is no sunlight, such as when a passing cloud blocks the sun, does the building's electricity stop working?", or "If we install this, for how long can it provide electricity in the event of a blackout?". Even if they had heard of PV, they did not understand how it worked or how it would benefit their daily life. In fact, PV was often compared to HVAC (Heating, Ventilation, and Air Conditioning), which is totally different, except that they are both placed on rooftops. We had to educate people on how they are different.

It took us about a year and a half, with help from local partners and the media, to raise awareness of what PV is and how it would benefit users, how to pay for it, and what kind of maintenance it needed.

CAN YOU GIVE US A THUMBNAIL SKETCH OF YOUR BUSINESS MODEL AND CUSTOMERS?

Back in 2018 when I returned to Indonesia, there were two major problems that prevented solar energy from growing in the country. From the technical point of view, there was a problem with design and O&M (operations and maintenance).

Project developers might not be using good products, or they might not be using good design practices. They were also not conducting good product installations, and did not take care of the O&M.

Secondly, there was the matter of finance. Electricity is heavily subsidised in Indonesia. But there have been fewer efforts to subsidise renewable energy as compared to the heavy subsidies allocated to fossil fuels. Therefore, reaching grid parity was important. Although we could have matched the grid in terms of costs, someone else would have to bear the initial capital expenditure, and typically it is the customer. For many customers, it would be expensive—so that was the second problem. They had to foot the bill themselves.

We help customers tackle these two problems by providing a feasibility study and design service. We also provide financing support by renting out solar energy, thereby making it more affordable. We further help with construction management, quality control, and commissioning, and we take care of the O&M over a 25-year period. It really is a birth to end-of-life system, and therefore a one-stop solution for solar energy.

Initially, our focus was on the C&I (commercial and industrial) sector, and we differentiated ourselves by providing a one-stop solution for C&I solar. Now, we distinguish ourselves in different ways. I believe we are the first to offer solar energy on a rental basis, so a customer does not need to bear any capital expenditure. Moreover, as far as we know, we are the biggest to focus on the C&I segment in Indonesia.

HOW DID XURYA GET ITS BIG BREAK AND GARNER TRACTION?

Looking back, one of the things that really helped us was a small system we installed on the rooftop of the Grand Hyatt hotel in Jakarta, Indonesia at the end of 2019. Although it was a small system, it was a marketing masterpiece because heads of state stayed there when they visited. Despite our limited funds then, we spent a lot of money hiring a drone to take a picture of that system, and we included that picture in every presentation we made. That was one of the turning points.

Also, happy customers bring in more new customers. Our customers have been very pleased with the service we give them. It's hassle-free, so they are more than happy to refer us to their network. We have grown steadily, even exponentially, during the pandemic and up till now.



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WHY DO YOU FOCUS ON C&I, AND NOT RETAIL? WHAT ARE YOUR CONSIDERATIONS?

Many investors like to go big. They want large- or utility-scale mega projects, but that involves a lot of capital expenditure. As a start-up and a relatively small company, we do not have that kind of money, so we have to operate on a smaller scale, and the usual option that goes with this is rooftop solar.

But if we go into the really small segments such as retail or residential, we will face three problems. First, it is very hard to promote solar to them. We are penetrating the market now, but back then, almost nobody was installing solar. It was incredibly challenging to break into the residential market without any incentive. Second, profit margins were really low because there were no economies of scale. Third, operations would become very expensive because there would be so many relatively small systems distributed across Indonesia, which is also a no-no.

We found C&I to be less capital-intensive compared to utility-scale projects. While it shares some of the problems of residential and retail, it is not that bad, and it is sizeable enough to be manageable, so it is a sweet spot between utility-scale and residential.

PREVIOUSLY, YOU SAID THAT THE PANDEMIC HAS ENABLED THE COMPANY TO GROW AT A TREMENDOUS RATE. HAS IT ALSO MODIFIED YOUR BUSINESS MODEL?

The pandemic has forced people to move away from their daily routines, allowing them to think more about sustainability, and also to learn and save more. That is how interest in solar and renewable energy, as well as carbon capture, increased significantly in Indonesia. And this has had an enormous impact on our sales. People are more receptive now as they look for savings for their operations.

At the same time, the series of lockdowns have changed the way we operate; working from home was one of the biggest changes. Right now, we work in hybrid mode. While we have a new office in Jakarta, we find that our staff are more efficient when they are working remotely because traffic is bad in Indonesia. We do not want our employees to spend up to three hours daily commuting.

We designed our new office to be a collaboration space. On the days when people do come into the office, they sit in an open office setting. Whiteboards are everywhere, and there is not a single cubicle. The most junior staff can talk to any of the senior executives to exchange ideas.

Even the work schedules are arranged in such a way that every team member will have a chance to interact with other team members. We focus more on inter-departmental exchanges rather than intra-departmental collaborations. This is one of the biggest positive changes.

If it hadn't been for the pandemic, we would not be as ready as we are now to manage remote, distributed operations. For example, along with our corporate headquarters, we also have four operation bases in Jakarta, Medan, Semarang, and Surabaya. I do not think people would have been ready to work far away from the headquarters without the lockdowns. That is probably the biggest operational impact the pandemic has had on us.

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LOOKING AHEAD, WHAT GROWTH AREAS ARE YOU KEEPING A CLOSE WATCH ON? HOW ARE YOU STEERING THE TEAM TOWARDS THOSE GROWTH AREAS?

The solar boom has just begun in Indonesia post-COVID. From state-owned companies to local conglomerates to foreign companies entering Indonesia, it's amazing. It feels like the game has just begun. We are currently number one or two in Indonesia for C&I, and I think the sector is about to boom.

We have also increased our workforce exponentially. We started with about 17 people in 2019. By 2020, we had about 40, and now we have 80. The hiring is in response to demand. We spend a lot on automation, and we have a group of dedicated software developers to help us improve our efficiency to become one of the best at remote deployment in the solar energy sector. We definitely want to spend on technology as well as staff development. I believe the quality of the workforce is just as important as the quantity.

With the increasing demand for renewable energy, more players are coming on board, which can affect the talent and recruitment side of the business. We know that the pie is big, and even though we are the largest right now, compared to the market size we still account for a very small percentage, so there's a lot of room to grow. As for the workforce, it is a different landscape. The solar industry, while booming, is still in its infancy, so getting the right people can be difficult.

Our solution is to develop in-house training. Our engineers and field engineers are trained internally, as are our O&M crew. Do we worry about our staff hopping to other companies? Not really. We have seen a couple of our staff do that, but we haven't seen critical staff moves. I believe our company culture and the opportunities we give them to grow make a difference. I know for a fact that some of my engineers were approached by other companies, but they rejected the offer flat-out. They said that they were not interested because they have the opportunity to grow here at Xurya and they enjoy working with their teams.

WHAT AND WHO HAVE BEEN SOME OF THE GREATEST INFLUENCES IN YOUR PERSONAL LIFE, SHAPING YOU AS AN ENTREPRENEUR?

If you ask most Indonesians, they'll say entrepreneurship is what they've been pushed to do since they were children. Ask any Indonesian, "Do you want to work for someone else? Or do you want to start your own business?", and almost everyone will say they want to start their own business. I went to school in Singapore and the US, and somehow almost every

Indonesian I met wanted to start their own business. I guess it's the culture here that you have to go out and try your luck.

I had wanted to start my own business from a very young age because I saw my father do it. Both my parents are entrepreneurs. My dad is an architect by training, and he runs a building and construction business in Bandung. My mum is a pharmacist and also has a small pharmacy there. I have learnt many lessons from them, and the most important one, I think, is frugality. We are quite frugal in our spending.

My dad was very hands-on. He took me to visit the construction projects he handled, so I got to interact with his workers. And through my dealings with business owners in Bandung, I was exposed to people from the upper rungs of society too. That helped me a lot in the early days of Xurya, and even now, it has been useful to be cognisant of differences in background, to respect others, and make sure everybody feels at home in the company.

And I learnt a lot about how corporates operate during my Intel days, such as why things like standard operating procedures are important. But too many procedures can also be a hindrance for a new, small company like Xurya. I have to balance the need for stability and certainty on one hand, and flexibility and nimbleness in responding to opportunity and change on the other.

WHAT ADVICE WOULD YOU GIVE TO BUDDING ENTREPRENEURS, ESPECIALLY THOSE WHO ARE TECHNICALLY TRAINED AND DESIRE TO START A BUSINESS JUST LIKE YOU?

Whatever your background is, don't try to be a superman. Many people idolise someone who can build a business empire singlehandedly. I think such days are over. Right now, it is more important to collaborate with other people to realise your dream. Technology and society have become very complex, so what the market needs has become complex as well.

I would say that it is best to collaborate with people and firms who are very different from yourself. Xurya received funding recently from notable companies such as Schneider Electric and SEACEF (Southeast Asia Clean Energy Facility). We are incredibly lucky to have active and helpful shareholders who contribute in their own ways. It goes both ways; often, they ask us for our insights on local developments. We use a lot of Schneider Electric products, especially those for electrical safety. They also brainstormed with us on off-grid or microgrid solutions—something different from what we would typically do and could just be a future business model for us. Similarly, SEACEF shared insights from a big project in Indonesia, while some other shareholders opened doors to future project leads or helped close a deal. It happens on a daily basis. They give us lots of input and add a lot of value too.

I believe there are three important things companies need to be good at. It needs to have a good product, which means that the company's offering provides value. So the company should have knowledge of what it offers, be it a technological product or something more service-oriented. Second, it needs to have good financial systems and processes, which means it can manage its money well, including payments. Third, the business must be well-run. With good operations, the company can offer more to help as many people as possible.

But I would like to emphasise that while the company needs to have all these right from the beginning, you don't need to—and probably can't—do everything yourself. So get a co-founder. In fact, perhaps it's best to have three co-founders so that there is holistic knowledge about the product, financing, and operations.

Remember, you can't do everything by yourself. The days of being a superman are over. [Ami](#)



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