Sivan Ya'ari - Innovation Africa Brings Israeli Solar, Agricultural and Water Technologies to African Villages

- Welcome back everybody. Today we have a very, very special guest, my great friend, Sivan Ya'ari. Sivan Ya'ari is the founder and CEO of Innovation:Africa, a not-for-profit that brings Israeli solar, agriculture and water technologies to African villages. She was born in Israel, raised in France, educated in the United States, with degrees in finance from Pace University and a master's in International Energy Management and Policy from Columbia University. Sivan has an extraordinary story, she has been working in Africa for over 20 years, and over the past decade, using Israeli technologies, has brought clean water and light to over 2.8 million people across 10 African countries.

Sivan and her organisation, Innovation:Africa, have received multiple awards, including the Innovation Award from the United Nations. Sivan lives in Tel Aviv with her husband and three children. I'm now going to hand over to Sivan who will tell you about her extraordinary journey. Sivan, I'm absolutely thrilled to finally have you here with us. I'm so proud of you and it is my great pleasure to hand over to you right now. Thank you for joining us on Lockdown University, and for joining the family, not that you haven't been part of the family for many years now, but over to you. Thanks.

- Thank you, Wendy. I'm truly delighted to be talking with all of you today. I would like to start with sharing with you a movie about the work that we've been doing here from Israel, helping African villages with Israeli technology. I will start sharing my screen, thank you.

- Typhoid, diarrhoea, vomiting. People use the water, and people get sick.

- Darkness, because we don't have light. We use kerosene. We don't deliver the services as we must.

- It is very difficult for us children to study at night.

- People drink muddy water, children studying without having a light. Even the mothers couldn't give birth because the health centre doesn't have a light at night. And for us as Innovation:Africa, we want to change that.

- Innovation: Africa was founded 10 years ago with a very simple mission: to bring Israeli technologies to transform schools, medical centres, but most importantly to pump water.

- When we reach to communities, and you mention the word "water", at that time, you see the smile on faces of these people.

- We identify the villages that are in need of water, we build a tower and we distribute the water taps all around the village.

- The first transformation we see ever, their skins improve.

- Any human being should have access to clean water.

- We have water under the ground. The sun is shining every day. With the knowledge and technology, we can make a change and forever.

- Once we do it, it completely transforms the village.

- I believe Innovation: Africa can change Africa.

- We didn't have any dream of getting clean water in our community in Uganda here. So, we really appreciate the water, clean water.

- When we use the solar at night, children are able to read properly, the teachers are able to teach. We are very grateful for Innovation:Africa.

- [Sivan] Are you ready?

- [Students] Yes!
- [Sivan] One, two, three, go!
- I take this opportunity to thank Innovation: Africa for bringing us power in our facility.
- You are our fathers and mothers. We are really glad to receive you.

- Innovation: Africa has made more children to come to study because of the lights and the water.

- Innovation: Africa We are committed to bring water where there is drought, to bring light where there is darkness, to bring hope and dignity where there is despair. So, once again, I would like to thank you for taking the time to meet, and to meet with me and for allowing me to share the work that we've been doing. I was asked to share with you why, as an Israeli, as a mother, today, as a wife, I've decided to continue to devote my life to share solar technology, water technology with African villages. I would like to start by saying that I was not destined to work in Africa, there was really no reason for me to go to Africa. I was born in Israel, my father was not a businessman working in Africa, he was not a diplomat. In fact, most of my childhood, my father was unemployed, and at some point my parents were looking for a better opportunity and we moved to France. In France, my parents...we opened a pizzeria and they were selling pizza in the market.

And, I'm not joking, after having pizza every breakfast, lunch and dinner, I told my parents I could really use better nutrition and I know where I should go, I am going to join the Israeli army. I went back to Israel, I joined the army, and after two years, at the age of 20, that was 22 years ago, I got lucky. I was looking for a job in Israel and then I met the owner of Jordache Jeans. Now, I'm not sure if all of you know, but if you remember, Jordache used to be quite popular in the '80s. And I met with the owner and I was asking for a job and then he told me, "Listen, you're lovely, but your English is not good, I cannot give you a job."

And then I told him, "You know, I speak French." He said, "Ah," look how I get lucky, he said, "If you speak French, I do have a job for you. We own a factory in Madagascar where we are making jeans. Why don't you go to Madagascar and do quality control of the jeans?" I said, "Madagascar? Where it is?" He said, "In Africa." And this is how, 22 years ago I arrived to Africa and I've never left. Allow me to share with you some pictures of how it all started. The good news about the next picture is, as you can see, I haven't changed. Look at me... I am clean, I have shoes. When I arrive to Africa, only then is when I realised what does it mean to not have much. I grew up always thinking that we're poor and we don't have much, and we truly didn't have. But only when I arrived to Africa is when I saw what it means really, poverty. And here is my first picture outside of the factory of Jordache in Madagascar, and I'm spending time with the children. They took me to their villages, and as you can see, and even today, over 60% of Africans are living this way. Mud homes, no windows.

And the more time I spent in the villages, the more I realised two things. The first, many of the children were not going to school, and some people needed some medical attention. I wanted to help, so I was looking for a medical centre. But when I found one, there were so many people waiting outside, inside. I asked for the doctor, they said, "There is no doctor." The nurse came, I said, "Excuse me, why are you not helping the people? Can I help you?" She said, "No, unfortunately I cannot help them myself," and I said, "Why?" She said, "We do not have vaccines, medicines. There is no refrigerator." I said, "Why?" She said, "There is no electricity." And in the evening I could see some mothers who just give birth, some that were waiting, and the nurse was using a kerosene lamp to deliver babies. I went by to the nearby school, and here again, I could see students studying using one kerosene lamp. Now, I found out that the students that are sitting in the first row are the students that are the richest in the village. And why is that? It's because they brought the money to buy the kerosene.

If you have money, you can sit by the light to study. If you cannot, you sit in the back and wait. I said, "Oh, if I could just help, to bring some electricity, it can make a change." But at that time I didn't know how to do it, and I just continued working for Jordache, and at that time they had a few factories across Africa. So, I went and travelled and then I realised it wasn't about one or two villages, about one or two countries, it's actually about a continent. And even today, if you look at the satellite map of Africa at night, even today we have over 600 million people across Africa that have never seen a light bulb. And if we compare this map to the map of Europe, we can truly understand the difference. Then, I wanted to help, I needed some education. I went to the US, got my master's in energy, and as a student I asked my professor, "How can I go back

to help that medical centre?" And my professor told me, "Sivan, what's the big deal? You only need two solar panels. Two solar panels will be enough to bring enough energy to the medical centre and even to a refrigerator." I bought two solar panels and I went back.

Do you like my hairdo? Please trust me, it was in fashion. So, with the two solar panels, I was happy. We installed it on top of the roof of the medical centre and that was enough, enough to bring enough energy to 12 light bulbs inside and outside of the medical centre, and I even purchased a small refrigerator for vaccines and medicines. The next day there were lines of mothers and children waiting to get vaccines. I said, "It is so simple, so cheap, we have to do more." And so I continued and brought solar panels to the school. At that time, we already opened the not-for-profit, I'm still a student, and I said, "We have to do it." I founded Innovation:Africa and brought the two solar panels to the school. And I have to tell you, it is absolutely priceless when we see children looking at a light bulb for the first time, I was very happy, I went back to New York, but then I realised I made a mistake. Now, I made many mistakes over the years, I failed many times, but that was my first mistake. Now, probably some of you can already understand, if we think about it, I went and installed solar panels on the medical centre and I left. I did the same at the school and I left.

I forgot something, something small but important. Who is going to pay when the light bulbs will be burned out? Because in a year somebody will have to replace the light bulbs. And what I was thinking, that the nurse will be paying for new light bulbs using her salary? That the students will find the money to buy light bulbs? I understood that in a few months, in a year from now, they're going to go back to darkness. And so, I needed to find a solution. I needed to find a solution for the school and the medical centre to raise money so they have money to maintain the solar systems. So, I got lucky. Going back to the villages, I could see many people having cell phones, and I was quite surprised. I said, "I don't understand it. Where do you charge your phones? There is no electricity." And this gentleman in the picture here, he came and told me, "I am in charge. I am in charge of taking all the cell phones, and every few days I'm going to another village where I charge the phones." I said, "This is fantastic. Is there electricity in the other village?" He said, "No, there is a car and we are using the battery of the car to charge phone by phone, and I do it every few days."

So, I told him, "Please, tomorrow, bring the phones to the school. We're going to use the solar energy to charge the phones and you can pay the same amount of money to the teacher so the teacher could have money to replace the light bulbs." Now, do you think it was a good idea? Let's see what's happened. Here's what's happened the first day, it worked. Here's what's happened after three days, everyone came to charge their phones, it worked terrifically. And three months after, the school opened another business with the solar energy, a barber shop. I said, "It's working, it is sustainable, they are making more money than they need to replace the light bulbs, let's continue." So, we continued bringing a few solar panels to more schools, more medical centres, until one day I realised I made another mistake. It was not really a mistake, it's when I realised that everything that I've done until now, maybe didn't solve the real problem. Here's what happened. I'm here at the school, Sapiri school in Uganda. I went just to check that

they are actually using the solar energy and everyone is happy.

But when I arrived to the school, the teacher told me, "Sivan, thank you, but we're not using the energy." I said, "Why?" He said, "Look, there are no students." I said, "Where is everyone?" He said, word by word, he said, "They are too weak to walk." I said, "Too weak to walk?" I said, "Why?" He said, "There is famine, there is no water." And this was the first picture I took, not too far from the school, and this is when I realised that actually the first mistake that I've made is why I didn't ask, back then in Madagascar, at the first village where I could see children not going to school, I should have asked, "Why are you not going to school?" I will then understood that they're spending hours every day searching for water. And the pictures that you're seeing here, it's not about one, two, three villages, we're talking about 400 million people across Africa, that every day wake up to search for water. Water that they know will make them sick, but there is nothing else. These, actually, are pictures from not too long ago, February, 2020. This is a village in Zambia. When I arrived, there were 4,000 people in that village almost at the edge of starvation, and that was the only source of water they had.

Now, allow me to tell you that at that time, at the beginning, I didn't know how we can give them clean water. It took me time to realise and to understand that actually there is plenty of clean water in Africa. The water, you can find it in the aquifer. Actually, you can find water everywhere in Africa, as long as you drill, we can find water. Sometimes you have to drill 100 metres deep, sometimes more, but you always find clean water and plenty of it. I would like to stop here and I would like to tell you that today with the coronavirus, access to clean water, it's even more crucial than before. When we tell people that they have to wash their hands so they can stop the spread of the virus, they don't have that luxury of getting clean water. And more than that, I do want people to know that today people are starving because of the lack of water, and not really the water, because there is plenty of water, it's because of the lack of energy. And I would like to share with you one movie and you're going to see me in Uganda, a few years back, when I arrived to the villages, it was a bit too late.

- These are some of the communities which I want you to see. And you see how these people, how they are being affected with famine.

Video plays.

- Okay, let's go.
- Yeah.
- Hi, thank you for allowing us to come. Hi, good morning. How are you?
- For three days some of them have not had food.
- But what do they eat now? I mean, what do they have? They eat the leaves of the trees right

now?

- [Charles] Yeah. This is unbelievable, Charles. It's not human. Because of hunger she tied her stomach?

- [Charles] It is what they eat. Get us corn, get us beans. Is that okay? And find out where is the water. God bless her. Please tell them we're going to come back. That we're going to come back to pump water. God bless you.

Video ends

It is truly unfortunate, but we just continue to see it all the time, it's still happening in many villages across Africa. The lack of water, because of the lack of energy is a difficult situation. And yet, as you can see in the video, the solution is so simple. All we need to do is to harness the energy from the sun that exists, plenty of it, to pump water below their feet, in the aquifer there is plenty of water. And so this is what we do. This is what we build, we construct a tower. We're using the energy to pump water in villages. Villages of 5,000 people, 10,000 people, that have never had access to clean water before. And as you're going to see, it is simple. The first step, we bring the drilling machines and then we drill. And as I told you, almost 100% of the time we find water, plenty of it, and clean water. The second step, we construct, we construct a 10 metre tower.

Then we hire local villagers, people from the community in every village, we hire 10 people to help our team, to help the contractors, to help with the construction so they feel ownership and they know how to maintain the system. Then we instal solar panels on top of the tower, just enough to have enough energy to power the pump, the pump to pump water to the tank. We are raising the tank, 10,000 litres, on top of the tower. And then from there, through gravity, water flows to the pipes that we're installing throughout the village. And then with the help of the community, the community is involved all the time, we are constructing taps and installing them, up to 15 of them, throughout the village to make sure that everyone will get access to clean water. And I have to tell you, it is truly priceless to be there to open the taps for the first time, to see the people when they drink and taste clean water for the first time. It's just a rewarding, rewarding experience. And then we do the same, allowing the animals to also have access to clean water. And in some of the villages, when it is needed, we install an extra tank, this time for the drip irrigation that we bring from Israel.

This is truly to allow them to grow more food with less water. Now, I would like to stop and share with you a little bit of what inspires us, because when we bring clean water to a village, it changes everything. Everything. Children are going to school, you can see better education. People are healthier, less people are going to medical centres. But really what motivates us is when we go back to the villages and we are seeing the number of businesses, the economic development that is happening in a village. So many businesses. Let me share with you some stories for you to see how, once you give them access to water, the village is becoming rich.

People are better educated, they have better nutrition, and they're financially independent.

- I had been planning to grow some onions. I have here a nursery bed, very huge one, and it has assisted me to water, we had no rain. This problem has been running for centuries. We had no water right from my childhood, no water. About four kilometres away, where we could get water. But right now, I'm so happy that when Innovation:Africa came, I had this plan. Onions, if you grow onions, it carries a lot of money. I said, as I will grow these onions, I will enable myself to pay for my children to buy food, to sustain me. Even the family problems, I'll be solving them with the help of this water project.

- Now, do you remember... do you remember the first village I showed you and there was mud homes? When we go back to the villages, people are no longer living in mud homes. Now that there is clean water, they can make bricks, they can build homes. Allow me to show you another great story.

- At first, we used to get water from long distance. Having a baby, when I'm pregnant, it's very long distance to get water, it took me time. But when we got water from Innovation:Africa, I'm getting water near here. We are cooking, washing, even making bricks. After making bricks, now I'm building the house, new home. Even I sell bricks to the nearest villages, even from town, they come and buy from me. When I get money, I pay my school fees for the children. We are happy with it.

- Now, today, the organisation, Innovation:Africa, we are lucky, I think, that we had the opportunity to help almost 500 villages across 10 African countries. And I'm pleased to say that this is quite a conservative number, we have helped about 2.7, 2.8 million people that today have access to water, have access to electricity, energy, across the countries where we operate. Here is a quick list of all of the villages we have helped here, for example, in Uganda, you can see many schools, medical centres. The pictures are actually from 2020, from last year, where we have brought access to water and clean energy to over 206 villages. Now, in schools, not only we bring them electricity, but also computers, because now that there is electricity, they can use computers. In medical centres, we bring them not only a solar refrigerator, but also some medical equipment and beds. But really what has changed a lot is that in both the schools and medical centres, we also bring energy to the homes of the teachers and future doctors. Now, a few years ago we started a partnership with UNICEF, I'm pleased to say that it's been now ongoing for the past three years, especially in Cameroon.

In Cameroon, we're helping refugee camps where, unfortunately, people that were fleeing from Nigeria, coming into Cameroon, we've been helping in partnership with UNICEF, bringing access to water and medical equipment to refugee camps and medical centres. We are also operating in South Africa and in other countries. Now, of course, as a charity, we can only do it because of either foundations, corporations or families, families that are deciding to adopt a village. Each one has one village. And I'm pleased to say, until recently, until the Corona, most of them came with us to the village, because we're insisting that if you would like to adopt the

village, please come with us, meet the people, be there with us when we instal the solar panels, so you can see the experience when children are looking at the light for the first time, so you can understand the impact of what you are doing.

I'm pleased to say that, Wendy, thank you once again for you joining us in the village with Dennis and the family, and I'm sure you were able also to see the changes that is happening and the joy and the smiles of the face of the people. How much it cost? It cost \$18,000 to bring access to electricity to the entire school or medical centre, including, as I mentioned earlier, computers, medical equipment and electricity in the homes of the nurses, doctors, teachers, to attract better teachers, better doctors and nurses to the villages. Once we bring electricity to the homes, people are willing to move to the villages. And to bring access to water, clean water, to an entire village, up to 10,000 people, it costs \$50,000, in South Africa a bit more, but across Africa it's never more than \$50,000.

Allow me to complete by saying that we are very pleased that we have received a few awards, one of them also from the United Nations, just because I presented one of the technology that we have invented here in this office, which is the Remote Monitoring Units, which allowing us to monitor all the projects, which means that at any moment we know how much water is being pumped in every village. And so if something breaks, like you can see here, if the pump stops working, we know about it immediately, we get alerts, and then we have the team on the ground to fix it. Now, it's not only us, it's every donor. Every donor has his own page where he can see pictures of the before of the construction, the MOU that we signed with the community, and of course on his phone, how much energy and water is being produced? Allow me to conclude by telling you what I've learned from my experience, 20 years in Africa.

I understood two things. The first is that sometimes the source of the problem is also can be the source of the solution. In Africa, the sun, the sun was the problem, was making the land dry, was making them thirsty, but today it's the sun, and thanks to the sun that they have access to better nutrition, to water, a chance for education. And when you look at me, when I grew up, my problem was thinking that we were poor and I was ashamed next to my friends, but today, that's what really is my solution, it gives me to understand that truly I was very, very lucky, and it pushes me to go and help those that truly are in need. And finally, look at me. What we have done, what I have done, nothing. All I've done is I shared. I took existing technology, solar panels, and I brought them to where it was needed. Many times, and I know especially many of you are helping, it doesn't take much to help others, and we feel privileged to be able to do so, to share our knowledge, technology, and to make others strong, because I do believe that if we want, we can. Thank you.

- Thank you Sivan. It's great to be with you. I'm sad that we're separated between South Africa and Israel, as normally you would be over here visiting the projects if it wasn't for COVID. So, why don't we start with COVID, you touched on the need for water during COVID, but tell us about some of the obstacles that COVID has presented to you.

- Yes, of course. We, my team and I, used to be travelling to Africa all the time, at least two weeks a month, spending time in the villages with our local teams and contractors, meeting the community, searching for villages that truly are in need and so on, and we couldn't travel as much due to the Coronavirus. I'm pleased to say that all of us now are vaccinated here in Israel, so we should be going back in the next few weeks. But that said, we are very lucky that while we couldn't travel, we had a strong team, local team of engineers in every country, and they continued, they understood the urgency of the situation, especially in medical centres. Even today, only 34% of all medical centres across Africa have electricity. So, we need to bring electricity to medical centres. So, and solar refrigerators, because at some point, Carly, I hope that they will get the vaccines and then we are hoping to help as many medical centres as we can so they can store the vaccine and they can help the people in need.

- So, let's talk about the project itself. So, one of the things that people often ask about is how is the project sustainable? It's amazing that you go in, you give them access to water, but then what? Where does the community become involved? And how do you help make sure the local population engages?

- Yes, it's a great question, Carly. And yes, the community has to be involved from the beginning. Like, once we choose a village, we go, we meet with the chief, with the women association, everyone is involved, then they have to elect a solar and water committee, and then together they decide where to instal the taps in the village, and as I said earlier, we're even hiring at least 10 people from the village to come and help with the construction, so even when we are gone, they are at least 10 people that can operate and maintain the system. Now, because we keep updating our donors, our team, local teams, are going every three months, five months to the villages to get testimonies, videos and reports. So, truly we are staying in touch with the villages all the time.

- And in terms of the villages themselves, how do you choose which village to go to?

- That's not easy, Carly, because unfortunately there is no shortage of villages and there are just too many. So, we are oftentimes choosing the region where we are certain that the government will not be going, at least in the next 15 to 20 years. We're choosing villages where we know that we are dealing with large population. And then at the end of the day it's the donor, the donor is the one choosing which village. We give the donors a list of villages with pictures and testimonies and videos and we ask them to choose to adopt the village, and that's how it's happening.

- And I'm not going to guess at explaining the science, but presumably it's not possible to drill everywhere in Africa. So, explain to our audience a little bit more about aquifers and how you know that the water is going to last and that it's a suitable place.

- Yes, of course. We do hire hydrologists and geologists and we do geophysical surveys, and of course we try to identify how deep is the aquifer and where will be the best place to drill. And

once we drill, we are finding the yield, if the yield is good enough for the population, will it be sufficient for the population? And we test the quality of the water. Now, I can tell you Carly, that 95%, 98% of the time, the quality of the water is very good. Of course, here and there we have to use some water purification system, but in most cases we are finding water, the quality is good, there is plenty of water, and yes, we do have our Remote Monitoring System, making sure that we're not drilling too much, so everything is monitored and we are only drilling for seven days, for seven hours a day, only when the sun...seven to eight hours a day, and we are pumping about 30,000 litres of water per day, per village.

- And in each country you go to, at what point do you engage with the government, with the local federal systems, or even with the chiefs themselves?

- Yeah, from the beginning, from the beginning. Once we reach the country, I personally meet with a few ministers, I meet with the Minister of Energy to understand their electrification master plan, when will they extend the grid and to where, because we only want to go where we are certain that the government will not reach, or the grid will not reach at least 10, 20 years from now. And then I meet with the Minister of Water, he or she tells me about the aquifers, how deep are the aquifers, because we can drill as deep as 250 metres, so we are looking for the regions where we know that water cannot be accessed without drilling and energy to pump the water. And then I meet with the Minister of Health, understanding the health situation and so on, and then we decide on where to go. Once we reach the region, we meet with the local government, they give us a list of all the schools, orphanages, medical centres, and then we go deeper into the village and we meet with the chief, and that's how we start the process.

- So, you've given an incredibly inspiring account of being able to have an impact, but I know from some of the discussions we've had that this can be fraught with challenges. So, what are some of the most difficult challenges you've encountered over the last 10 years, and how have you overcome them?

- Yes, as I mentioned earlier, I made many mistakes and I've learned over the years, you know, some of the things that we have learned is that in some culture, for example, in Tanzania, at the beginning when I first started, when I reached the villages, they told me that the witches, for example, witchcraft, they were not happy with the solar energy, and I had to remove the solar panels. Today, we are double-checking before installing, and we are checking, will that be okay with the culture of the villages? So yes, Carly, you're correct, from one country to the other, it's different, from one tribe to the other, and we have to make sure that the community is engaged and that...and most of the time they're extremely, extremely, extremely happy and welcoming.

- Some of the areas where you operate, there's incredible poverty and there's also danger and often conflict. How do you navigate that with your team?

- Yes, especially in Cameroon. I have to tell you, in Cameroon we are not taking donors and it is quite dangerous. And our team is...it's not easy because we are talking about Boko Haram, and

it's unfortunate because we are talking about over 250,000 refugees that are living in not good situations in refugee camps. And so, although it is dangerous, I'm pleased to say that our local team, and even the team from Israel, we are often travelling and trying to help because we understand that truly, they truly need access to water and most importantly, medical attention.

- Your strap line is obviously that you're bringing Israeli innovation. How important is that Israeli innovation and where is it unique to the part of your .

- Yeah, it's not important to truly... When I first founded the organisation, I realised that in Israel... for those who have been to Israel, there are solar panels on every roof. I remember being a young girl and looking outside and solar panels are everywhere. And so when I came back to Israel and when I started, I started understanding what we have done here in Israel, in the desert, using the technology that allowed us to pump water and to grow food, as you know, Carly, today the desert is blooming. So, what I've done is I just shared, shared the same technology, the same know-how, and I just brought it to where it was needed. But it's definitely not crucial, and we're using other technologies, we're trying to bring the best system and the most sustainable system to the villages where we operate.

- And in terms of a timeline, help our audience understand from, you know, identifying a village to water appearing out of the tap, how long does that take?

- Eight months. I should not say that, but on average, three months. From the time we find the village to the time the community signed the MOU and helping us to decide where to instal the tap, the construction, everything that I described earlier never takes more... I should not say never, because sometimes it depends, on average it takes three months to complete the project, that's all.

- And you touched on your support from philanthropists around the world, but there's also a lot of aid programmes that Innovation:Africa presumably qualifies, you mentioned you work with UNICEF and the UN. Do you receive funds from aid bodies?

- From? I couldn't hear.

- From other aid agencies or is it all private philanthropy?

- So no, we do get funding from UNEP, U-N-E-P, as well, UNICEF, as you mentioned, individuals, as I mentioned earlier, but also corporation. Corporations that understand that while they are operating in Africa, they do have to help the communities, and I'm pleased to say that we do have some good partnership with a few corporations across Africa.

- So, over the time we've known each other, you've told me some incredibly moving stories about the people you've met. If you could give our audience just one story of a life, an individual that they can relate to, whose life's been changed by the water project, who would you choose

to highlight?

- Yeah, there is just recently, I think even, Carly, I shared with you that video, just recently I've met this orphan, she's 14 years old in Tanzania. Her parents died, her grandma took care of her from a young age and it was her grandma that was waking up in the morning to go and get water at the beginning, then she started helping her grandma. The water was making her sick. The grandma is now too old and she's not going to school because all she does is spending hours every day getting clean water, dirty water. And so we arrived to the village, we started drilling, she was very curious, she spent time with us, she was really moved.

She couldn't believe it, she didn't believe it's going to happen, and I'm pleased to say that today she's at school, she's taking care of her grandma, there is clean water and she wants to be a doctor, and I'm sure she will, Carly. She will become a doctor. She does have this motivation, she understand how lucky she is compared to the people in the other villages. So, it's one of the stories. We are truly transforming the lives of people, their destiny, I can say that. And our contribution is quite modest. As I mentioned, all we do, we just capture the energy from the sun to pump water, and yet we think we are doing something small until we are in the villages, going back and meet the people and hear the stories of the individuals we have touched.

- So, tell us a little bit more about your energy box and what it allows you to do. I can see one behind you, exactly.

- This is the small one, this is the mini one. So, you see...so we do have a lab in the office where all the engineers are working and brainstorming about new technology, but this is our latest one. This is the Mini Energy Box, and inside, everything that we need to bring energy to the home of a teacher or a nurse or a doctor, it's inside. We have a battery, an inverter, a controller, the Remote Monitoring System, and you connect the Mini Energy Box to one solar panel and a few light bulbs and that's it. This is good for at least 10 years. It's not like before, they don't need to change the light bulbs anymore, we do bring light bulbs that can last for 12 years. So, everything is cheaper, more sustainable, more efficient, more reliable, and I believe it truly is the future of Africa, and honestly of the world. Solar energy can be the solution for many of the energy challenges we have.

- So, obviously you touched on the fact that Israel is a powerhouse for solar energy. Do you make your solar panels in Israel and then take them to Africa, or how do you source them?

- No, solar panels are not made in Israel, we do not make solar panels, but other technology like the batteries, lithium iron batteries, LED light bulbs, inverters. So, some of the technology that's inside the Mini Energy Box is made here in Israel. And then yes, we buy them in Israel and then we bring them to the villages in Africa where we instal them.

- And you're an Israeli NGO, how does that shake out in terms of your staffing? How many staff are in Israel and how many staff are locally in Africa?

- Yeah, we are actually an Israeli NGO, also a 501 in New York, where I started back then when I was a student. So, we are also 501. Here in Israel, we are about 15 people, most of us engineers and the rest of the team members are Africans. We have large teams of water engineers, civil engineers, hydrologists, electrical engineers, field officers, managers, people that, many of them come to Israel for training or have been trained in Africa, and today they are the one, they are the real strength of the organisation. It's not from here, the real strength are the people that are working day after day, making sure that the projects are well done, that people are getting access to electricity and water, and I think, I am truly proud of our local teams on the ground.

- And one of the things I'm proud of is how female-led you are as an NGO. That's quite unusual in the humanitarian organisations that I've met around the world. Do you think that has an effect on the way you do your work and how you're received in the villages?

- Yes, it's true that we are... we're welcomed in the villages and also as an organisation we're truly making sure that most of the fundings that we are getting are being served and helping the communities. I'm also pleased to say that 100% of the money we get from individuals that are adopting the villages are going to the villages. We're very lucky that our overhead is being paid by a few donors, and so donors are feeling comfortable to adopt the village and 100% of the money, they're the one to decide how many taps, how many laptops, how many beds and mattresses should we bring the medical centres, so the donors are involved in every step as well.

- And I know that last year, or the year before, you brought some of your team from Africa to Israel, and I know it's something you hope to do again. What did you do with them on the ground in Israel?

- Yeah, it was terrific, Carly, it was really an experience, not only for us, but also for them, many of them have never left, for sure, Africa, some of them have never left even their countries or the villages. And for them it was the first time to come to Israel, they spent three weeks with us training. Actually the Israeli government paid for it and they spent one week learning about agriculture and agricultural technologies, about water, about solar energy, and then they had a chance to visit Jerusalem and the Dead Sea, it was really a great experience, it made us stronger. And as you can see today, this last year in 2020, we completed 206 villages during the Corona time, almost doubled the amount of villages we have done in 2019. And certainly this is part of the training and the strength that our teams on the ground have.

- So, in 12 years you've done 2.8 million people across 10 countries. What do you hope to be able to accomplish over the next 10 years?

- Yeah, we do have an extension plan for the next five years. For the next five years I do hope to... we do hope, and I believe we can do it, to help about 2,000 villages, and that will help

another 10 million people. And honestly, Carly, I hope that in 10 years they will not need us anymore. I hope that in 10 years every human being should have access to clean water. This is truly what I'm hoping.

- And if you wanted to leave our audience with one last story or one last urging about how this solution, which could seem very simplistic, but actually its simplicity is what makes it all the more urgent you know, when people look to support NGOs, and what is it you want them to remember about Innovation:Africa?

- I want them to remember that all we do, we don't do it out of compassion, we do it because we should, because we can, because it's not normal that in 2021 still people are struggling and not having clean water when the solution is so simple, when the technology exists, when it doesn't cost that much, when, as I mentioned earlier, if we want, we can. I believe that we are the one who are privileged, and with privilege comes responsibilities. And by doing what we do, and hopefully more people will join us so we can transform more lives, I believe at the end of the day, it will not only help the people we're helping, but all of us as a whole.

- Thank you Sivan, and I can't wait until I get to see you in person, either in Africa or in Israel. And I'm going to hand back over to Wendy.

- Sivan, I hoped that you enjoyed this presentation as much as we enjoyed having you. What can I say? Bravo, absolutely bravo. You are just one incredible human being. Your journey, your story is quite remarkable. We are very proud to be your partners in this project, one of many partners. And, you know, I salute my dad and my family, we've spent time with you there and I want to just say it's just been a privilege and a pleasure to work with you and just to see the extraordinary work that you are doing. And I'm just wondering if you could just share with the audience, if they wanted to make contact with you, and if anybody wanted to make a donation, or make a contribution or partner with you in this extraordinary project, tell us how they do that.

- Wendy, first and foremost, thank you. And I would like to say to the audience that the Kirsch Foundation, last year during the coronavirus, where everybody else was not there, you, Wendy, and your family, came through, came with us, helped, continued, understood... you understood the urgency of this situation, and for that we are forever thankful. You literally saved so many people, and we really, really would like to say thank you, Wendy.

- We saved, not us, we.

- We. We are the one that execute and implement, but people like yourself and others that understand that during difficult and challenging times, that's the time to step up and help, and the Kirsch Foundation was one of our partners. And so for those who would like to come, please, we will appreciate that because there are just too many people. We didn't promise them that we will be back, but they are hoping and I'm hoping that we will be able to go and drill and pump water and help people that are truly in need. So, we can either join us... I can now maybe text you our website or my email and my phone number, and I'm available to speak with anyone at any time, who wishes to come and join us. We'll be really grateful.

- Okay, thank you, thank you, thank you very much, Carly. And we'll send those details out as well. So, Sivan, onwards and upwards, we've got a big job to do. As you say, it's an absolute privilege, pleasure, and obligation to help each other and mankind, for those of us who can, we do. Thank you for that outstanding presentation and I too look forward to seeing you soon in person. And Carly, as always, thank you very, very much, and to Shauna and to the team behind the scenes, we're a family, this is a group effort, together we make it happen. Thank you to everybody for joining us tonight and I'm sure my parents are there, I just want to say from a very snowy, cold New York, just, we miss you.

- Thank you Wendy, thank you everyone. Thank you Carly. Appreciate it.

- Night, night.