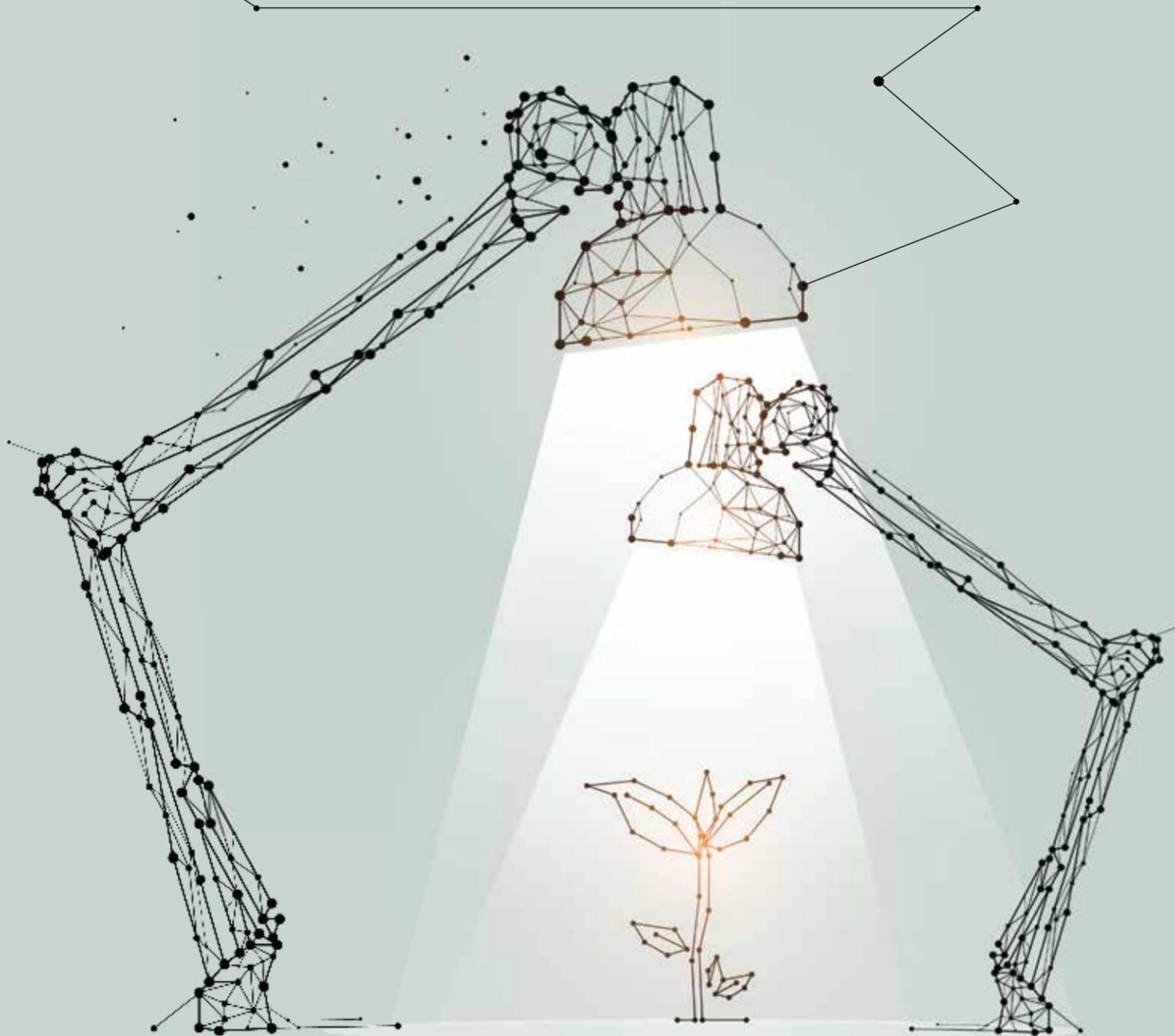


LEAD WITH YOUR HEART, HYPER INNOVATE, AND MAKE A DIFFERENCE



[An interview with Steve Johanns.](#)

Steve Johanns, founder and former Chairman of Veriown Global, is now taking smart villages into Sub-Saharan Africa through his company Villedge Solutions. He talks about his entrepreneurial journey in the world of hyper innovation and the secrets found in last mile empowerment.

What made you want to become an entrepreneur?

Since a young age, I have been driven by innovative thinking and inspired by entrepreneurs and inventors such as Thomas Edison, Henry Ford, J.P. Morgan, and George Westinghouse. In the world of business, entrepreneurialism, and infrastructure, they literally delivered solutions that the world would engineer into the fabric of operating economies. I found it fascinating how a few inspired individuals can have impact at such a large scale. And why is it that some people, despite having great ideas, go nowhere, while others become huge successes? What are the dynamics that make them different?

I was passionate about computers at a young age and went on to study computer engineering. But in the 1990s, no one was hiring in the computer industry, including big companies like Texas Instruments and IBM. I ended up joining Westinghouse Electric as it was the only job offer I got. At Westinghouse, and later at Eaton Corporation, I learned about energy infrastructure and power management. Although I was successful at a young age, I felt I did not fit in. I was not inspired by the career trajectory and jobs offered. Even the idea of becoming a corporate executive and making lots of money just did not motivate me.

So in the late 90s, when the dotcom world was really booming, I decided to jump in and do something of my own. I cashed out my limited 401(k), sold our house, and moved with my wife and 18-month-old son into

an apartment, which was only four doors away from the apartment I had lived when I was just out of college.

How was your first attempt at setting up your own venture?

I planned to start a dotcom company that would monetise people's time and attention spent on listening to, or reading, a company's marketing campaigns. There were others who were interested in my idea, but they wanted to wait until I had raised enough money and got the venture going. But months later, they changed their minds as they did not want to risk their investments.

It was very disheartening because I had spent all this time, energy, and family members' money on the venture and I could no longer sustain it on my own. My grand plans had come to nothing. Or so I thought. I felt like I failed. It took me some time to realise that failure is part of a process of learning as an entrepreneur. Looking back, it was a tremendous learning experience and an eye-opener to what an entrepreneurial journey entailed, and it became instrumental in my future initiatives.

I then joined a company that was doing a secret project code-named 'Xbox' with Microsoft. Before anyone even knew that Microsoft was going into gaming, I got to be a part of the team that was involved in developing the product. This gave me an opportunity to interact with some key people at Microsoft.

Then in 2008, Eaton asked if I would come back as it was looking for a person with an entrepreneurial skillset to accelerate the development of its energy business. At that time, the new energy business was just starting to flourish with initiatives around developing solar panels, electric vehicles, and wind turbines. I was asked to start up an advanced energy business unit at the company.

What led to your second try at being an entrepreneur, and the launch of Veriown?

Being a large corporation, Eaton had a tough time getting its head around the new energy business, as it was markedly different from its other core businesses in how it went to market. It was not moving at the speed I wanted. So in 2012, I made the decision to jump again. This time around, my children were in high school.

With some of the early distributed solar companies going public, I saw that distributed energy and microgrids were coming next and it was just a matter of time before electricity would work more like the Internet. Because of my experience in computer engineering and power management, I could see that change was inevitable in the energy industry and it would strategically transform how the world would work.

I took everything I owned and launched Veriown Americas, a solar energy company. It was a U.S.-centric business, with plans to undertake solar energy installations on commercial buildings and set up micro- and mini-grids across the country. Sensing a great opportunity, I hired top talent, but soon we ran into challenges from the slow-moving regulatory bodies, given the lack of incentives for adoption in the United States. Everyone in the market had easy and adequate access to electricity; it was not like they needed more of it. We were trying to convince them to use a different form of electricity, which seemed to work against the conventional energy industry that was so well established in the country.

At that time, a friend was a lead person at J.P. Morgan, running the Europe, Middle East, and Africa offices. While he was interested in my vision about distributed energy, he had a comment that set me thinking. He thought I was wasting my time and passion on people who already had everything. He suggested I go fix problems for the people who need help in Africa and Southeast Asia. I realised then that I had fallen into the same trap that the majority of entrepreneurs fall into: engineering things for people who have it all and keep giving them more.

A few weeks later, I accompanied some business partners and friends to Sierra Leone in Africa to help them secure a large solar street lighting project. It was my first trip to Africa and the biggest revelation that I had ever experienced. In Sierra Leone, I saw abject poverty in its worst form. With Ebola having run amok across the country, people were dying in large numbers, and the poor, especially in rural villages, were bereft of the most basic services and infrastructure. Everything I had done until then hit me in the face. In that

instant, I knew that my purpose in life was to focus on developing these areas with innovation and heart. This decision was not made out of charity, but the knowledge that I could actually make a sustainable difference here.

I returned home and told my team and investors that I planned to focus on developing places like Africa and India, instead of the United States. One by one, my core start-up team members left, until it was just me and a couple of young people. We had to start from scratch again and Veriown Americas became Veriown Global. I spent the next year visiting these developing economies to learn about them. I went to Ghana, Sierra Leone, and Côte d'Ivoire, and spent a fair amount of time in India as well. In India, I met a talented entrepreneur in Delhi who worked with the government to bring solar-based solutions such as streetlights to villages. Our shared vision led us to collaborate, bringing together my technology and innovation with his installation platform to enable easy access and implementation in the energy-deprived areas of the country.

What made you decide to focus on bringing electricity to the unconnected, rural, and hyperlocal economies? And how did you select the poor 'invisible' women as your core clientele?

In my opinion, only four or five networks make the world work. First is the electricity network. Not only is it fundamental to our lives, it also lays the foundation for other networks. Once a region has access to electricity, other important services such as transportation, communication, and financial services can be made available too. All these other networks will not run well if there is no electricity. Google and Facebook are phenomenal companies with turnover worth billions of dollars. But if you turn the power off, they will not work.

I asked myself, "If I were looking for a person with zero fear and pride, who would be standing in front of me?" And the answer I got was, "The poorest person on the planet, and often it's a woman who goes unnoticed." And that led

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to the concept of the 'invisible' woman standing at the end of the last mile.

Village women have proven to be the best credit risk in the whole world. And it is on their shoulders that the globally successful microfinance institutions (MFIs) stand. Because not only will they pay you back, but they will also make sure that all their friends pay you back too. If you ask me whom I want to lend a dollar to, I will lend it to a village woman. She will do something good with it by helping her family and community, and she will give it back to me along with interest. She would also thank me for it. I believe that if we engage with and listen to her, we can engineer and build a better world.

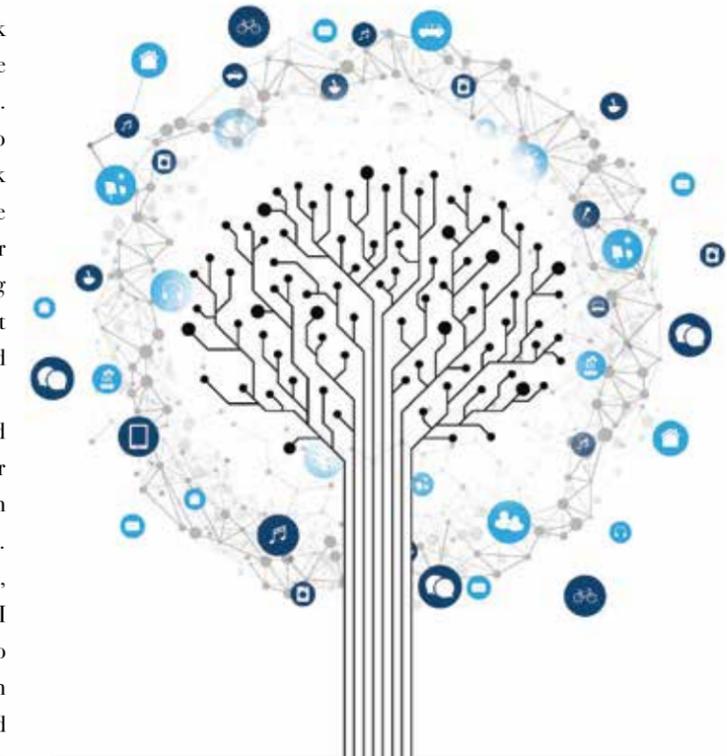
I began engineering solutions for people like her. I realised that with the technology available, we could install a solar panel on her small hut. If we also put in a battery along with the solar panel, we would be able to make electricity flow.

I then widened my goal to include connectivity, commerce, and other cloud-based services. With electricity flowing, I thought I could put in an IoT (Internet of Things) device so that she could connect to the Internet as well. Then with Internet access, I could help her get an e-bank account. And as long as she is connected to the cloud, why not turn on the other services as well, such as e-education and e-healthcare?

The 'invisible' woman was showing me that there were endless possibilities. Historically, networks were built independent of one another with centralised systems and large capital, which put money in the hands of very few people. Instead, when we begin with the village woman, these networks emerge from her hands. The network, however, needs to be broken down into very small units and made available at marginal costs so that she can easily afford them.

From a strategic perspective, if I can solve the problem of the 'invisible' village woman, I can solve the world's problems. Because if it works for her, it will work for everybody.

Also, if you look at any of the smart city master plans in the world—London, Tokyo, Shanghai—they look like an aggregation of villages with renewable energy and walkable environments. A smart city to me is fundamentally a bunch of smart villages that are connected. Does it then not make sense to develop the village first and use the hyper innovation solutions to spur smart city development? With Covid-19, the reality that we all live in villages and are stuck in our little communities has become further reinforced. Therefore, we are like the 'invisible' woman now sitting in our own local village homes and neighbourhoods.



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Her knowledge needs to become our knowledge. When that happens, we will not be building a system like that of J.P. Morgan's, George Westinghouse's, or Henry Ford's. We would have built a system that looks more like hers, which can unlock the secrets of the 'invisible woman', leading to a better-built planet.

How has the Covid-19 pandemic affected the need to connect Bottom of the Pyramid (BoP) consumers?

Covid-19 has accelerated the need to connect and bring onboard the millions of people who have been left behind. Everything I had been saying about BoP has come true. There is a growing realisation that the world is only as strong as its weakest link.

Earlier, there had not been a driving force to rectify this because we did not know how much it was costing us,

and we did not care enough. Today, because of the pandemic, every country knows the hefty cost of having close to three billion people without connectivity and healthcare. It is absurd that in this day and age, with the technological progress humanity has made, e-healthcare is not available to a sick villager. Millions of people are going to die just because we do not use the tools available to us like sunlight, Internet connectivity, and electricity to reach these people.

This unique time in human history compels us to understand the perspectives of the residents of the last mile and learn to innovate from the bottom up. This will not only generate tremendous revenues and create some of the greatest companies, but also do so much good for the world.

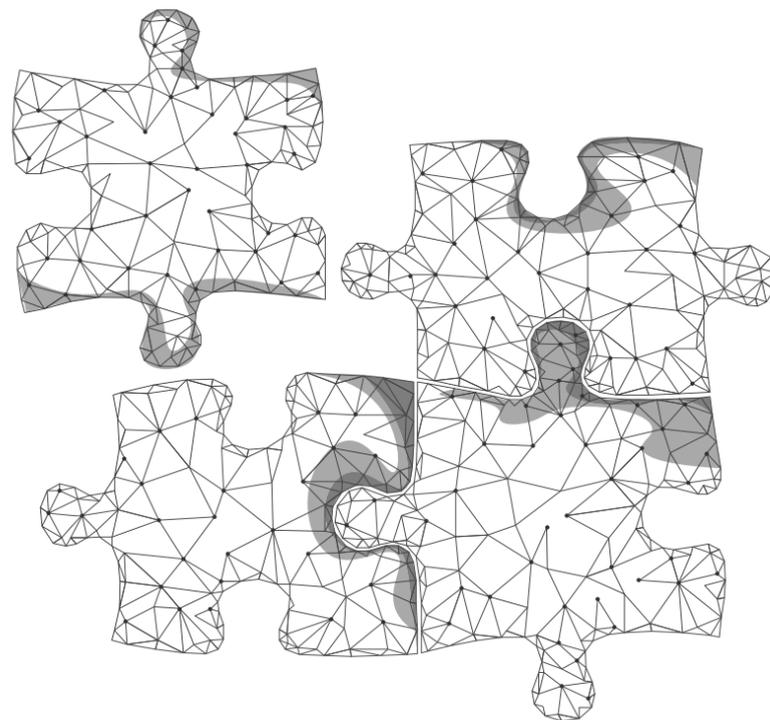
How did you achieve the goals you set for yourself, especially in Sub-Saharan Africa?

Rural Africa is like a large white canvas. It lacks the infrastructure and development that Europe, Asia, and North America have. I got an opportunity in 2018 to spend time in Ethiopia when I was invited to visit by its former ambassador to the United States. I really liked the Ethiopian people and felt there was something unique about them. The election of Ethiopian Prime Minister Abiy Ahmed was the tipping point for me, because he was such a breath of fresh air as a leader. Amongst the youngest prime ministers in Africa, the Nobel Peace Prize winner had a great vision for his country.

He planned to rebuild it, bring in foreign investors, and more importantly, he understood the significance of technology in providing the big push. I decided to go all-in in Ethiopia, and rope in the U.S. government by making my pitch that there is a different way to build infrastructure in the developing world, and the U.S. should lead the effort. I discussed with the U.S. EXIM Bank, the U.S. Trade and Development Agency (USTDA), and the U.S. International Development Finance Corporation about how the U.S. could be a leader in infrastructure development in developing economies. I emphasised that the top-down approach of throwing huge amounts of money at big projects was not going to work.

I pitched the idea of what I called bottom-up hyper innovation infrastructure smart development, which would lead to smart villages. I explained that it is based on renewable energy and starts in the rural villages. With satellite communication, smart affordable building construction methods, and off-grid water pumping purification systems, we can build hyper-innovative off-grid systems in the form of smart villages. USTDA got behind me and brought in a group of people. Over a year, we developed a full-scale 100-page proposal on a pilot study and a feasibility programme for Ethiopia. I have teamed up with the Amhara Development Association, a non-governmental organisation (NGO) in Ethiopia with 4.4 million paying members who are primarily smallholder farmers.

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USTDA is funding the feasibility project, while we have some commercial partners onboard as well. Organisations such as Microsoft, SES Satellite, and Société Générale are also onboard and will help us think about how to deploy capital, make the business model financeable, and undertake impact investing to support the commercial rollout following the study.

Then when Iowa State University, my alma mater, set up an innovation centre, I advised them to leverage this opportunity by recruiting students from the developing markets, teaching and learning from them, developing companies with them, and then helping them return to their communities and implement their learnings. This inspired the university to collaborate with us and launch the Last Mile Project, a new approach to education and economic development. By getting more universities involved in the last mile vision, I think it will be possible to develop this into a global thought process.

What advice do you have for young and aspiring entrepreneurs?

No matter who is in front of you, always be present and pay attention because it is an opportunity to learn. I am just a regular guy from Cedar Rapids, Iowa. I was born in a small town of 3,000 people but over the course of my entrepreneurial journey, I have met people from all walks of life from presidents and ambassadors to rural village families. But no matter whom I am speaking to—a young village child, the president of a country, or an ambassador—I am always present and ready to learn. In fact, I have learned more from the villagers than I ever have from powerful people with big titles.

Second, if you look at successful entrepreneurs like Elon Musk and Bill Gates, they do not hedge against their vision. They commit themselves fully. They are ready to plant their flag and announce to the world where they are headed. If I see an entrepreneur hedge, that is not a person I would support. I would rather have them plant the flag, even though they may eventually not achieve their goal. When I approached the U.S. government, I planted my flag firmly and painted the picture of my vision so clearly because of my conviction. That is why the government got involved. It was convinced of my proposal and knew that I was going to see it through and even if I missed a little, I would have advanced and accelerated the opportunity for the country.

Third, be selfless. One of the biggest problems with entrepreneurs is ego. Ego kills ideas and companies.

Most importantly, lead with your heart and operate as a servant leader. When you do this, you put a lot of time and effort into learning and listening. I find this desire to learn and acquire knowledge from all people to be a consistent trait among successful entrepreneurs.