# An Innovative Learning Tool to Bridge the Digital Divide

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**World Possible partners with Cisco to bring the world's knowledge to offline learners.**

Around the world, tremendous efforts are underway to connect the unconnected. But deeply rooted challenges remain, and, for many people, high-speed broadband or wireless remains a distant dream, at least for now.

That's where World Possible comes in.

With a mission statement of "Connecting offline learners to the world's knowledge," the non-profit, which was co-founded by a group of Cisco employees in 2008, is committed to sharing open-source, digital content in places where Internet connectivity is not available.

At the heart of World Possible sits a small, innovative device called RACHEL. Designed by the original Cisco employee-founders, it acts as a miniature internet, with built-in servers and Wi-Fi routers. To date, World Possible has shared RACHELs in 61 countries, from sub-Saharan Africa and Latin America to the Pacific Islands and Southeast Asia. In additional, RACHELs have been installed in 315 prisons around the world.

In an interview, World Possible CEO Jeremy Schwartz shared some of his organization's innovative approaches and on-the-ground successes in helping to close the digital

divide.

**Q. Thank you, Jeremy! Perhaps we could start how you first joined World Possible.**

A. I graduated from college in 2008, and I had a friend who started work at Cisco. She introduced me to a team of Cisco volunteers who had started this group, World Possible. And they were making copies of open-source websites so that people could share educational content on computers, flash drives, storage drives — whatever was available at the time — and then deploy those to communities that might have had computers, but were years away from getting broadband. I joined World Possible as a volunteer in 2009, and in 2014 became the first paid employee and chief executive.

**Q. Many organizations are committed to bringing high-speed broadband and wireless to disconnected regions in the world. And for Cisco, it's core to our overall purpose, creating an inclusive future. But you found a real-world solution for communities that won't realistically see broadband in the immediate future, despite such efforts. Tell us about RACHEL.**

A. The rate of internet adoption is actually slowing. And a lot of that is around affordability for infrastructure. But it's not just the lack of cables and hardware; it's also a lack of literacy. RACHEL, which stands for remote area hotspot for education and learning, is a low-cost entry point to digital content and digital education. The idea behind it at the beginning was that we could make copies of educational websites on storage drives, to be accessed over any existing One Laptop Per Child device.

**Q. And RACHEL is an evolution of that initial strategy?**

A. Yes, the RACHEL device is battery operated and has a couple of Wi-Fi routers inside. It can support up to 50 connections at one time. And it provides core STEM learning, access to encyclopedias, literacy training, content on job training, resume building, and a lot more.

Today, RACHEL uses a wide collection of content that is customized for each country. We make copies of about 160 open-source websites. So, we aren't deploying a copy of CNN, but we are deploying things like Wikipedia, TED Talks, and Khan Academy. And Cisco has donated servers that allow us to download more content at much higher speeds into each RACHEL.

**Q. Can users create and share their own content?**

A. We really do consider RACHEL to be a small version of the internet for communities that may be seven to 10 hours away from a real data connection. RACHEL has a server, and there are features to let you upload or create your own content. We see that happening in a lot of our deployments, like in the Mayan communities in Guatemala. They have done projects using their RACHEL to catalog their native language. And it's just a wonderful central community spot to store digital files. We do some work in the prison systems here in California and other states in the US, where there are folks who, for public safety reasons, aren't allowed on the Internet. It allows the inmates to create their own newsletters and journals — RACHEL becomes their own version of the internet.

**Q. What are some other success stories that you can share? Communities where RACHEL is having a true impact?**

A. We see lots of success stories, in places across the world, from Kenya, Myanmar, Honduras, and Mexico to name just a few. But we are especially proud of the big communities in Guatemala. We had a few deployments back in 2016, and after two years one of the kids got to the International Math Olympiad. He did something like 700 exercises on the Khan Academy for math. And the community really celebrated him. It was very unusual for someone from his region to compete internationally. But then the next year they sent four kids. It really does create momentum when people see the opportunity that's provided here.

**Q. Partnerships are so important for initiatives like this. Who are some of the most impactful partners that are helping you reach more people around the world?**

A. The founding partners like Cisco and the Gates Foundation are a big deal for us. And the Chicago Bears football team have also been a big supporter. The family that owns the team has been involved in Ethiopia and the Peace Corps for many years. But we also work with other nonprofits. We have shipped RACHELs to 162 other nonprofit organizations that are already on the ground in these communities building libraries or schools. In some ways, we are really a kind of technology distribution center to other nonprofit organizations.

**Q. What excites you about the future?**

A. We have finally reached critical mass with about 5,000 of these devices deployed into the 61 countries. And we're excited about new technologies like Data Post, which enables emails to be sent to a RACHEL device. The emails are stored in the cloud. Then, someone with an Android phone in a connected area can download them and later share them once they travel to a rural village, for example, in Ethiopia, the Himalayas, or in Guatemala. Once there, they can pick up outgoing emails to take back to an internet connection. We're turning RACHEL into something that's more and more like a real connected device.

**Q. In a perfect world, we wouldn't need RACHELs. But it looks like your mission won't be going away just yet.**

A. In 2010, everyone said that in 10 years, the globe would be totally connected. That hasn't happened. So, it's still kind of a quirky mission that we're on trying to solve this. But I love doing it.

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