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Engineers give a helping hand

OLIVER BERTIN

It started as a pie-in-the-sky idea among a couple of junior engineers with no money, no people and no resources.

Three years later, Engineers Without Borders is evolving into one of the key development aid organizations in Canada.

It still has no money – or not much anyway – but it has 2,500 members on 20 university campuses, 500 active volunteers and 38 people working on 18 different projects overseas.

It also has a blue-chip list of advisers, including John Ralston Saul, husband of Governor-General Adrienne Clarkson; Donald Johnston, secretary-general of the Organization for Economic Co-operation and Development (OECD); and Jean Monty, former head of BCE Inc.

"They are doing very well, our experience has been quite good," said Gillian Davis, vice-president with CARE Canada, one of Canada's prime development agencies.

CARE has worked with Engineers Without Borders on two projects in Zambian refugee camps. "Their people are quite young. They don't have the same level of experience as the people we normally send, but they are eager."

Claire Dansereau, executive director of CUSO, which has been active in international development for more than 40 years, also serves on the board.

"We like what they are doing and their approach," said Ian McKinley, CUSO's director of external affairs. "They are enthusiastic, young and well connected in the engineering community. We are exploring ways they can help us with our projects."

The idea for Engineers Without Borders - - EWB -- was based on the experience of the French medical organization, Doctors

Without Borders, or, more properly, Medecins Sans Frontieres.

That group won a Nobel Prize in 1999 for sending about 2,500 medical professionals a year to work in the poorest and most dangerous countries of the world.

George Roter and EWB co-founder Parker Mitchell heard about the prize and saw a parallel in their own field. At the time, Mr. Roter was a biomedical engineer designing artificial hip joints for his master's degree and Mr. Mitchell was going to Cambridge University for post-graduate studies in African development.

It seemed to them that they were headed for careers making trivial consumer products for a rich Western society, and they didn't like where they were going.

"There's got to be a better way for me to apply my skills, my energy, my knowledge, toward helping people," Mr. Roter said at the time. "I figured there must be other people that have a similar feeling and want to use their skills in a similar way."

Mr. Roter and Mr. Mitchell chatted with their fellow students about their idea for an organization that would send young engineering graduates to developing countries.

"I started talking to a few interested people -- and the idea really skyrocketed," said Mr. Roter, now 26. "I immediately got interest from students and professional engineers."

Then, he started talking to potential partners and sponsors. Established aid organizations such as CARE Canada, CUSO and Canadian International Development Agency (CIDA) offered to help, and engineering companies offered their time and their technical assistance.

"CUSO sees us as a very good strategic partner," he said, adding that CUSO has moved into community development, leaving engineering projects open to organizations such as EWB.

CIDA provided EWB's first grant -- for projects in Bolivia and India -- while BCE was the largest donor in 2001, with a grant of more than \$25,000.

It wasn't long before money started to dribble in. In 2001, EWB had a budget of \$60,000. This year, funding will rise to \$250,000 with \$1-million in the offing.

"We've got the recognition," he said. "We've got the critical mass of volunteers. Now we're harnessing the funds to make this viable."

Mr. Roter attributes much of his success to thinking big, right from the start. "We organized nationally right from the beginning," he said, adding that he wanted to harness engineering talent across Canada.

Part of the secret to EWB's success is the simplicity with which it operates. The volunteers tend to be engineering students fresh out of school with little experience but lots of energy, and retired engineers who have lots of experience, a pension to pay their living costs and lots of time on their hands.

Mr. Roter sends them to developing countries for placements of four months to a year with a specific project in mind at the invitation of the local authorities.

The volunteers get little more than a return airline ticket, health insurance, local accommodation and a stipend that gives them enough to live on with no luxuries. In Cameroon, that translates into the grand sum of \$7 a day.

Mr. Roter said he would like to turn EWB into a career. But for the time being, he's a volunteer without a salary. He is living on his savings from his first job and he lives at home with his parents.

"That's the advantage of being young," he said.

When picking projects, Mr. Roter treads a delicate path. The projects have to be doable by a young graduate engineer, in a reasonable time, on a reasonable budget. More important in many ways, they have to work within the cultural milieu of the village.

"They don't want white people telling them what to do," Mr. Roter said. "We're not going somewhere where we're not invited."

"We try to identify what people need, we make sure it will still be there five or 10 years from now, and we make sure we go with an attitude that we can learn as much from them as they can from us."

"We learn humility."

Not all the projects have gone as planned, but Mr. Roter believes he has made a difference.

Several of his volunteers are working on water purification projects, one of the most valuable jobs they can do in the developing world. One team is providing safe drinking water in a refugee camp in Zambia, while another is in Bolivia.

Two women are volunteering for a similar project in Cameroon. But in this case, they are looking years ahead. They have already trained people in 18 villages to purify their water for themselves and they have trained teachers to carry on their work.

"We've got a sustainable project," Mr. Roter said. "We're training them to train others."