



Whirlwind Wheelchair Project with CIR in Afghanistan

Center for International Rehabilitation, Afghanistan

Narrator: Despite 25 years of war, the people of Kabul maintain their tenacious spirit. The U.S. Department of State ranks Afghanistan as the most heavily-mined country in the world. As a result, there are an estimated 200,000 people who have lost their limbs to landmines.

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Narrator: And there is a dire need for access to appropriate technology.

Wheelchairs for Afghanistan

Narrator: In June 2005, the Center for International Rehabilitation hosted a four-day workshop in Kabul. The workshop trained local people to assemble and fit wheelchairs for a study to determine their effectiveness for use in the rough terrain of Afghanistan. This project took a wheelchair designed for rugged terrain and tested it with wheelchair users in and around Kabul. One could see firsthand what riders faced while traversing the bustling streets of this dusty city. It wasn't a big surprise to see the rocky and sometimes unpaved streets, open street gutters, and obstacle course-like curves. While this isn't a problem specific only to Afghanistan, what one may be unprepared for here are the houses along incredibly steep sloping hills surrounding the city. How does a person who lives on a hill come down into town? They just don't leave their home, and rely on their family for assistance.

Woman: You have the small wheels because it's easier to turn?

Narrator: As there are currently two types of wheelchairs commonly used in Afghanistan, one of the questions people asked was: why do the Afghan people need another one?

Woman: So it's just practical.

Ralf Hotchkiss: For a smaller turning circle.

Woman: I get the turning circle. Because this is what is available locally.

Narrator: This study tested a new wheelchair design, combining the successful design features of different models with newer innovations to make a wheelchair appropriate for Afghanistan's harsh terrain.

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Ralf Hotchkiss: For that reason we have five axel positions under the chair, so that each person can find their own best position.

Narrator: The result is a durable, adjustable, foldable wheelchair, with a longer and more stable wheelbase made of commonly available parts, adjustable, in a bicycle store.

Ralf Hotchkiss: The ergonomics are much better. Much more power.

Narrator: In the previous year, Worth Trust in India, an organization that employs people with disabilities, built and shipped 100 newly-designed wheelchair kits to Kabul where they were assembled by people trained by CIR.

Bill Armstrong: Rehab. Engineering Specialist

Bill Armstrong: Can we — and this is just hypothetical — can we widen the chair and then raise the height and get the same width?

Narrator: The study became a collaborative effort between the trainers and trainees, with hands-on training and discussion.

Man: So when we release the break it can be entered here.

Narrator: During the workshop, the negotiating skill of our Afghan friends became apparent. Procedures, techniques, process, even teas and lunches were haggled over to get the best possible result. This interaction gave great insight to Ralf and the CIR team in making improvements to the mechanical design. One of the most valuable contributions to this study was immediate and honest feedback from the participants.

Ralf Hotchkiss: I think I just learn a new trick from him!

Narrator: Eventually, the trainees made their way through the materials and practiced assembling the wheelchairs. In the last two days they met with wheelchair riders who were evaluated for and fitted with brand-new CIR Whirlwind wheelchairs. From all parts of Kabul these riders came, with their old beat-up chairs, on walking sticks, or on chairs with no air in the tires. So it wasn't difficult to see their satisfaction with the new chairs. For the next three months the newly-trained physiotherapists and technicians distributed the chairs to these study subjects and met with them for two additional follow-up visits. In the end, the study was an overall success, and the new CIR Whirlwind wheelchair met the needs of the Afghan people. The CIR is looking for inexpensive manufacturers for wheelchair kits and using valuable insights gained from this study. The CIR hopes to provide the people of

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Afghanistan with appropriate wheelchairs for a fraction of their current cost, thus enabling people who live up on the hill to do their shopping in town on their own.

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