



an initiative of the Competitiveness and Innovation Division of the
Inter-American Development Bank  **IDB**

**The i-LAB for in HAITI: developing a micropark for the production of the Leverage
Freedom Chair, creating jobs in Haiti, improving people's lives worldwide**

The Leveraged Freedom Chair is an innovative lever power mobility aid for developing countries



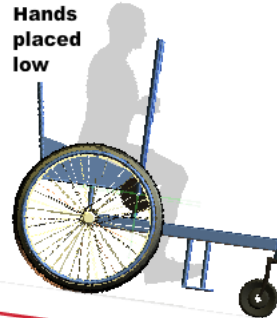
The Leverage Freedom Chair: unparalleled mobility



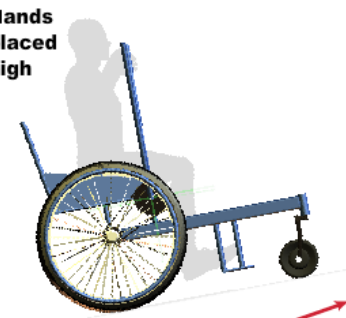
High gear: For smooth terrain or downhill.

Low gear: For rugged terrain or uphill.

Hands placed low



Hands placed high



The Leverage Freedom Chair: unparalleled mobility

An innovative lever powered mobility aid for developing countries, developed by researchers from the [MIT D-LAB](#) with the support of the [IDB's Innovation Lab](#)

- **Main characteristics**

- **75% faster** than a conventional wheelchair.
- **Off-road performance like no other mobility aid** available.
- **Ease of use** provides greater mobility and enhances quality of life.

- **Variable Mechanical Advantage Drivetrain**

The drivetrain allows the rider **to change mechanical advantage by moving his or her hands on the levers**: grabbing high increases torque, allowing users to overcome rough terrain; grabbing low increases wheel speed, allowing the users to move efficiently over long distance.

- **Bicycle Parts and Simple Manufacturing**

All moving parts of the LFC are made from bicycle components. This design feature allows the **LFC to be manufactured and repaired anywhere in the developing world**, empowering small manufacturers and LFC riders.

- **Developing country stakeholders input**

The LFC has been exhaustively field-tested on three continents, including in Guatemala with the support of the Inter-American Development Bank. **The feedback from the riders has resulted in a product that provides unparalleled mobility.**

An LFC micropark in Haiti: creating jobs in Haiti, improving people's life worldwide

Estimated final price of 350 US\$ – The estimated final price is in line with the price of the wheelchairs that are currently being purchased and distributed by NGOs and Institutions working in the field of disability in developing countries.

Wheelchairs that are used in developed countries are often not usable in the developing world; the LFC was designed specifically for users in developing countries keeping into account several challenges faced by users in the developing world (e.g. poorly paved roads).

Produced by local manufactures supervised by the NGO GRIT “Global Research Innovation and Technology” who distributes the LFC – The LFC has been tested with users from all over the world and complies with international guidelines and standards for wheelchairs such as the guidelines of the World Health Organization. The quality of the product will be guaranteed by the NGO GRIT “Global Research Innovation and Technology” who is the distributor of the wheelchair.

Manufactured in Haiti: creating job – The LFC will be produced in a micropark in Haiti financed by the Inter-American Development Bank; the micropark will employ Haitian people that will work as an organized group and that will receive training with the support of the Inter-American Development Bank.

Shipped to other countries – The LFC will be shipped worldwide based on the number of orders received from institutions buyers and NGOs.



You are doing more than just buying a good wheelchair

Competitive price of the LFC

The LFC is a high-tech low cost product

Tested with and approved by users

Assembled by workers in Haiti organized and trained with the support of the IDB

20 million people in developing countries are in need of a wheelchair

If you buy the LFC you are doing more than just buying a good wheelchair: you are creating jobs in Haiti while changing the lives of users with disabilities

More information about the LFC

The Leverage Freedom Chair – overview:

[CLICK HERE](#)

The Leverage Freedom Chair being tested in Guatemala:

[CLICK HERE](#)

Leverage Freedom Chair slideshow:

[CLICK HERE](#)

If your organization is interested in the LFC and in purchasing it in the future, please contact The Innovation Lab

innovation@iadb.org





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The Innovation Lab is an initiative of the **Competitiveness and Innovation Division** of the **Inter-American Development Bank**. It's a one-stop shop where people exchange challenges, ideas and solutions. Through the lab's networks, problems are converted into high impact innovations that can make Latin American and Caribbean firms more competitive. W: www.bidinnovacion.org - E: innovation@iadb.org - T: +12026233681

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