



Drawings of the City Transformer  
(Courtesy)

# Shrinking cars

Ben-Gurion graduates and a rally driver redesign the 'folding vehicle'

By Abigail Klein Leichman/ISRAEL21C

If you're looking for the future of urban transportation, take a peek inside a workshop near Rosh Ha'ayin, where a trio of engineers is readying Israel's entry into the folding-car arena.

The City Transformer quadricycle is designed as an electric two-seater that folds down with the press of a button from 1.6 meters to just one meter in width. Its 2.2-meter length matches the size of a motorcycle parking spot.

The entire vehicle will weigh about 400 kg, quite a difference from the 1,543-kg Renault Fluence electric sedan that was sold in Israel through the now-defunct Better Place recharging network.

For now, the City Transformer exists only in virtual space and a wooden model, but the trio is optimistic about securing the \$1 million investment needed to construct a prototype in collaboration with industrial design company Yama Design, Research & Development in Netanya.

CEO Asaf Formoza, who recently earned a PhD in mechanical engineering from Ben-Gurion University with a focus on robotics and mechatronics, says he and his partners are hardly the first inventors to design a foldable vehicle. Sketches were floated as long ago as the 1940s, but only today are the right materials and manufacturing capabilities available.

The Israeli company's website even shares video clips of seven "personal transportation" prototypes – not all of them foldable – in various stages of development at the labs of such places as Honda, Toyota and the Massachusetts Institute of Technology.

"We are not alone out there," Formoza tells ISRAEL21c. And that's fine with him.

"We don't want to compete with anybody. It's a big field, and everyone can play together."

Formoza's confidence comes from more than Israeli-style chutzpah.

City Transformer stands out from other current designs mainly because of the unique way it folds and other safety features, according to Formoza. It is designed for higher-speed driving (up to 90 km. an hour) as well as longer-distance driving than potential competitors in this category.

But even more importantly, Formoza envisions manufacturers building their own models on the City Transformer skeleton, in the same way that various brands of computers all have Intel technology inside.

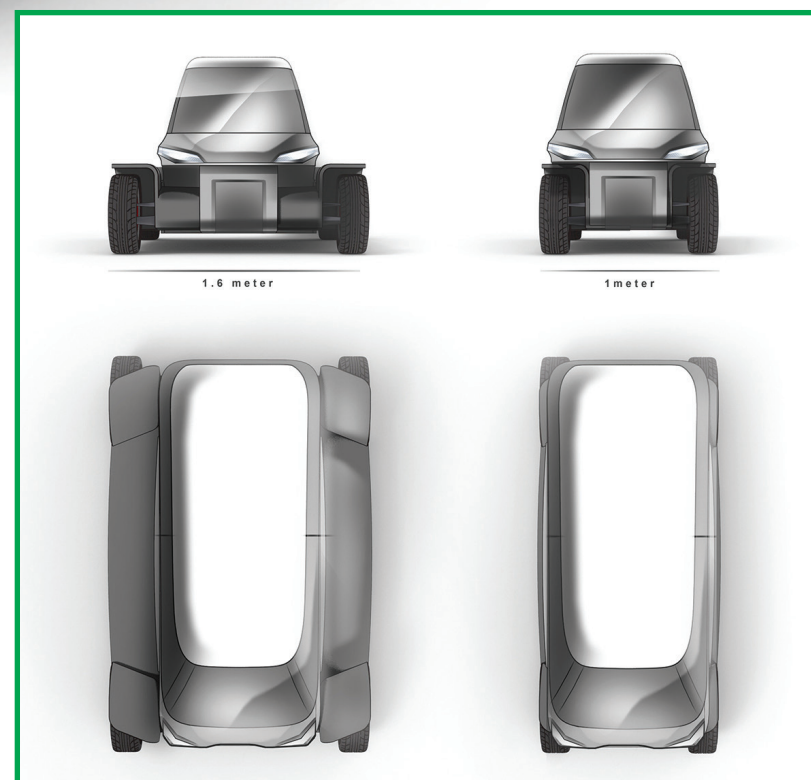
"We can give them the platform and they can build on our chassis. Many cars today have the same chassis," he points out. "This is one of our business models."

Formoza's partners include CTO Gideon Goldwine, a fellow mechanical engineering PhD from Ben-Gurion and co-founder of a student team to build the first Israeli Formula SAE car and CDO Erez Abramov, a practical engineer and rally sport driver experienced in developing motor sport vehicles.

Together, last May they presented City Transformer at EcoMotion, an Israeli government- and industry-sponsored "unconference" aimed at creating a collaborative community from a variety of disciplines to work on alternative smart transportation solutions.

The lightweight quadricycle – a category between two-wheeled vehicles and traditional cars – will have a propulsion system based on an electric engine and battery.

Following the Better Place fiasco, which has left Renault Fluence owners stranded for juice, Formoza stresses that he anticipates no problem with recharging. And because the car will be much smaller, it will eat up less energy and won't need charging as often.



"You will be able to recharge it everywhere – at work, at home and at gas stations," assures Formoza. "Already in Europe there are parking spot chargers."

He does not yet know what type of battery will go into the quadricycle. "Battery technology is developing all the time. We will take the best batteries for our car from off the shelf, and if we work with Honda, for instance, they can put their own battery in the car. We don't see an issue with that."

The City Transformer is expected to sell for NIS 30,000. Reprinted with permission from israel21c.org

## THE SHEKEL

Bank of Israel rates for January 23, 2014

€	\$	£
4.732 ▲	3.490 ▼	5.781 ▲