

## Afreecar LLC

Dr. Chris Borroni-Bird

**Afreecar** = Affordable Renewable Electric Car

**Afreecar** = Affordable mobility for those who cannot own a car

**Afreecar** = Inspired by Africa and its challenges (resources and cost)

# ENERGY INNOVATION FORUM

## COMPANY ORIGINS

- Studied at King's College, Cambridge
- Post-Doctoral Research at University of Tokyo
- Emigrated to US in 1992 for Chrysler
- Inducted into Automotive Hall of Fame
- Led GM's advanced vehicles 2000-2012
- Automotive News' Electrifying 100
- Volunteer work in rural Mali (western Africa)
- Qualcomm's VP Strategic Development
- 50 patents
- 2017 MIT Media Lab appointment
- Afreecar LLC founded, [www.afreecar.org](http://www.afreecar.org)
- **Proof-of-concept vehicle developed**
- **Looking for funds to ruggedize and deploy**

5/23/2016 Meet The Father Of The Auto 'Skateboard' Chassis Used By Tesla: Chris Borroni-Bird - Forbes


### Forbes

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**Sam Abuelsamid Contributor**  
*A lifetime in the car business, first engineering, now communicating*  
Options expressed by Forbes Contributors are their own.

**AUTOS** 5/23/2016 @ 8:44AM 14,028 views

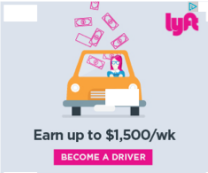
## Meet The Father Of The Auto 'Skateboard' Chassis Used By Tesla: Chris Borroni-Bird



The 2002 GM AUTOnomy skateboard chassis concept (Image © edit: General Motors)

**Elon Musk** absolutely deserves a great deal of credit for popularizing the idea that a battery powered car could be a viable mainstream transportation product. The cult of personality around Musk is in large part the catalyst for Tesla securing 400,000 pre-orders for the Model III well before it goes on sale. Yet as in most industries there are those that work in far more anonymity than Musk while exerting much greater influence on the long-term future of that business. One of those influencers is Dr. Christopher Borroni-Bird, an engineer and researcher who has been helping to shape the future of mobility over the past two decades.

Borroni-Bird is currently vice-president of strategic development for Qualcomm Technologies, a company best known for the



Keychains unlike any you have ever seen

http://www.forbes.com/sites/samuelsamid/2016/05/23/the-father-of-the-skateboard-chassis-dr-chris-borroni-bird/print/



# ENERGY INNOVATION FORUM

## KEY PRODUCTS/TECHNOLOGIES

*Transport, Electricity + Communications = a TEC hub*

- Solar panels
- E-waste
- Local assembly
- Smartphone Brain



**TESTING CURRENTLY OCCURRING AT UNIVERSITY OF MICHIGAN:  
VERIFY ENERGY CONSUMPTION AND SOLAR EFFICIENCY**

# ENERGY INNOVATION FORUM

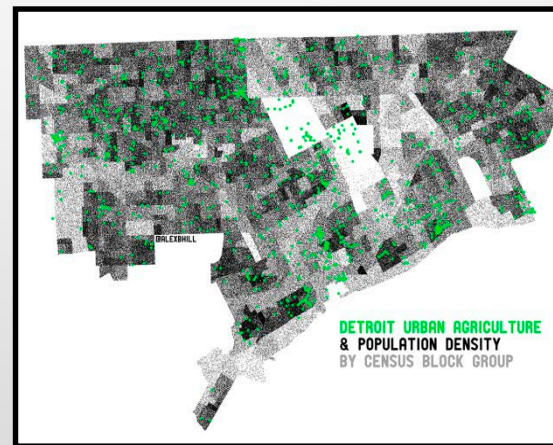
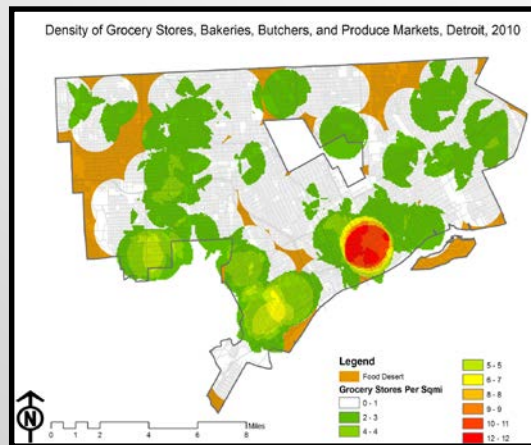
## KEY PRODUCTS/TECHNOLOGIES

### YEAR 1

- Ruggedize the proof-of-concept vehicle
- Replace lead acid batteries with used lithium-ion battery module
- Identify local community needs, challenges and capabilities

### YEAR 2

- Pilot program deployment in a local community
- Understand vehicle requirements and prove the business model



# ENERGY INNOVATION FORUM

## COMMERCIAL IMPACT

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### CONSUMER SIDE

- Improved access to food, healthcare, markets, jobs, etc..
- Increased resilience to natural disasters and power outages
- Increased innovation in delivery of people, goods and services

### PRODUCER SIDE

- Increased employment and autonomy for local communities
- Significant environmental and energy benefits
- Scalable to markets all over the world

# ENERGY INNOVATION FORUM

## NEXT STEPS AND NEEDS

### 2018

- \$150k to ruggedize existing vehicle (Pratt & Miller Engineering)
- \$50k for community research (MIT Media Lab, University of Michigan)
- \$50k to fabricate several prototypes and a spare parts inventory

### 2019

- \$100k for 1 year community pilot program (operation, maintenance,..)
- \$100k for community research and business model development
- \$50k to engage civic and business leaders for commercialization phase



# ENERGY INNOVATION FORUM

## NEXT STEPS AND NEEDS



bicycle with trailer



solar-battery charger



# ENERGY INNOVATION FORUM

## NEXT STEPS AND NEEDS

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