

INVEST IN BIMOTAL INC.

Share

Powering electric vehicles with better motors, batteries, electronics, and software



bimotal.com Berkeley CA

Hardware Transportation Energy Sustainability

OVERVIEW **UPDATES** 3 WHAT PEOPLE SAY 35 ASK A QUESTION 7

Highlights

- 1 Big traction: contract with top bike brand to develop industry-leading ebike system (not guaranteed)
- 2 Investible venture: Over \$2.5MM raised to-date
- 3 Allstar team: Former Tesla Powertrain, Apple, Formula-1, and Aerospace Tech Leads
- 4 Pick-and-shovel play: Better propulsion will elevate the entire electric vehicle industry
- 5 Already shipping: B2C product tooled and in the field with custom-written data logging software
- 6 Rapid scalability: B2B powertrain business model can scale in large steps with each new customer

INVESTMENT TERMS

~~-\$28.5M~~ \$25M valuation cap

Future Equity

Early Bird Bonus: The first \$500K of investments will be in a SAFE with a \$25M valuation cap and 20% discount

Investor Perks: \$250, \$500, \$10K, \$25K, \$50K, \$250K

LEAD INVESTOR



Nancy Bush

I have been involved in finance and operations for major technology companies for 35+ years, supporting companies to scale at every stage. I chose to invest in Bimotal because I immediately saw the promise of their vision and the dedication to their mission of improving the health of people and the planet. Watching the company grow from inception to launch (including the Silicon Valley tradition of starting in a garage!), I've been continuously impressed with their integrity, strategy, and resilience. I know from personal experience as a Technology CFO how much it takes to take a great idea and turn it into something not only profitable at scale but also world changing. Bimotal has all the right people, technology and passion to make that happen. I can't wait to see the team continue to deliver products that delight customers and can be applied across multiple industries and verticals, including bikes, delivery vehicles, scooters, robots, and wheelchairs. And what could be more fun than products that allow everyone to get closer to experiencing Earth outside! I hope you join us on this fantastic ride.

Invested \$25,000 this round & \$30,000 previously

[Learn about Lead Investors](#)

- 7 Massive revenue potential: Multiple programs have a path to \$100MM+ annual revenue (not guaranteed)
 - 8 Adjacent markets: Lightweight folding wheelchair motor concept in development
-

Our Team



Toby Ricco CEO & Founder

Technical Lead on Model 3 Power Conversion System and decade-long Tesla veteran. Built EVs since age 12. Proud Cal alum.



Matt Rounds Associate Director of Engineering

Wrote custom data-logging and CAN software for aerospace startup where he led the custom BMS firmware development team. Team lead of FSAE at Cal Poly SLO.



Ryan Sellers Sr. Mechanical Engineer

Led iPhone display design team at Apple. FSAE team at Duke. BS in Mechanical Engineering.

[SHOW MORE](#)

Page Outline:

1. What does Bimotal do?
2. Our Vision and Mission
3. Why Bimotal?
4. Bimotal's Master Plan
5. The Pitch
6. Product Testimonials
7. Technology and Design Philosophy
8. Founder's Story: Bimotal Started as a Need
9. Links (blog, product, details, etc.)
10. Wrap-up and Conclusions

1. What does Bimotal do?

Bimotal designs and develops custom electric powertrains for small electric vehicles [EVs] weighing 20-50 pounds. A powertrain is the electric motor, gearbox, battery, charger, electronics, and software that makes a vehicle electric. Tesla is pushing the envelope on the technology front for large EVs. But smaller EVs need the same level of technical development and they're not getting it-- that's where we come in. Switching out all gas-powered vehicles for same-sized electric cars is not enough to get us to our global carbon emission targets. We need reliable, safe, compelling, portable, modular, and serviceable small EVs [ebikes, e-scooters, power-assist wheelchairs, and more] to solve the transportation segment of the global climate crisis. Our proven engineering expertise enables us to build the most power-dense, small, and lightweight powertrains on the market.

- Link: [Elevate Product](#) - Web Page
- Link: [Mid-Drive Product](#) - Power Point Deck
- Coming soon: [Wheelchair Product](#) - Power Point Deck [Not yet public!]

Elevate: This is a direct-to-consumer (D2C) product. We have pilot customers in the field, we've built most of the manufacturing tooling we need, and we're ready to ramp up production.



Mid-Drive: This is a business to business (B2B) product. We're currently building Beta prototypes after a successful Alpha design that validated the technology we developed in our novel gearbox. We're approximately 18 months into the 3-year development cycle, with initial funding provided by a top bike brand.





Wheelchair: This is a B2B product. Our aim is to leverage the motor and gear design we're doing for the bike industry and bring lighter, more-economical power-assist solutions to the wheelchair mobility market. About 1% of the population uses a wheelchair (50-80MM people globally). 65% of that market consists of folding wheelchairs, many of those users suffer shoulder injuries from overuse. There is an incredible opportunity for light-weight, removable power-assist solutions optimized for folding wheelchairs: we're setting out to build it.



Investor: Why multiple programs? Shouldn't you focus on one powertrain design?

Bimotal: Doing multiple programs allows us to leverage our engineering efforts across multiple business fronts. Let's take Elevate and wheelchairs as an example. Developing Elevate to the point of a highly-functional prototype took about 1.5 years. Developing a wheelchair motor system to the same place will take approximately 3-6 months, due to all of our applied learnings, common components, and shared suppliers. Doing multiple programs lets us acquire more total resources and go deeper in various technical aspects that are shared across programs. In the end, this will yield a better powertrain in each of our programs.

2. Bimotal's Vision and Mission:

Our vision is to transform the health of humans and the planet. We are achieving this vision through our mission: reducing barriers to car-free mobility.

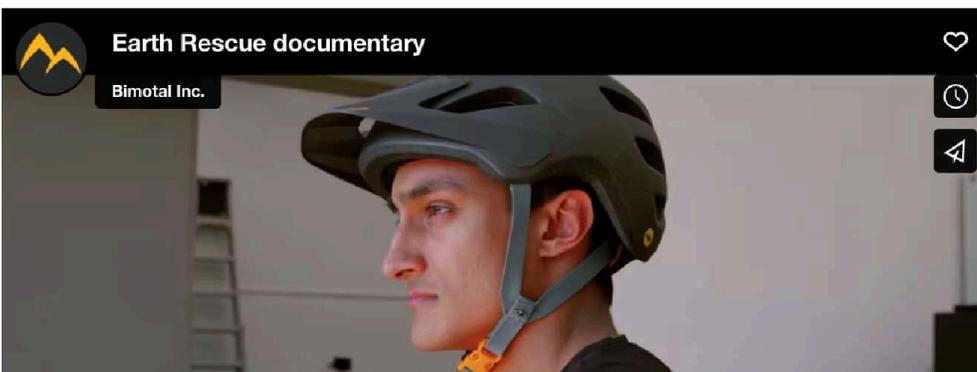
- Link: [How Bimotal got its name](#) - Blog Post

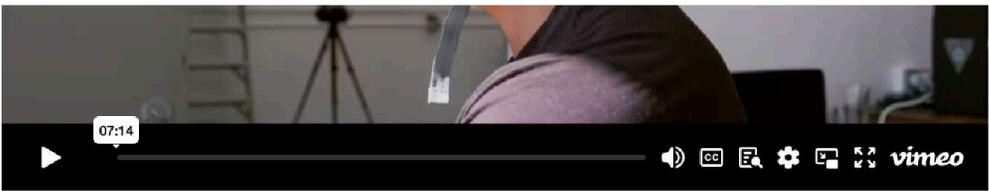


3. Why Bimotal?

We need better light-weight forms of transportation. We need reliable batteries. We need light-weight, portable ebikes with enough torque and power. 100's, maybe 1000's of companies are working on small EVs (Electric Vehicles). Only a few companies have the technical capability to do ground-up powertrain design. Bimotal is creating enabling technology--think *Intel Inside* to computers--to make this happen. We do millions of cloud-based motor simulations and designs to find an optimal handful for each application. We have a brilliant engineering team with an unparalleled bar for packaging and space efficiency. We're here to lift an industry up, to accelerate adoption. Keep reading and help power our vision for a healthier, happier planet.

Bimotal featured in ANSYS Earth Rescue Documentary

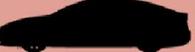




- Link: [Bimotal Global Greenhouse Gas Emissions Deck](#)

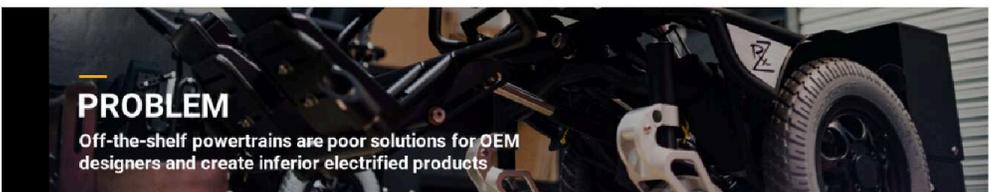
4. Bimotal's Master Plan

1. **Focus on core technology** - Small electric powertrains [Elevate]
2. **Gain Traction** - Expand the business model, scale [Mid-Drive, Wheelchair]
3. **Vertical integration** - Pursue to grow competitive advantages [full vehicle]

bimotal	TESLA
1. Core tech: powertrain for bike frames 	1. Core tech: powertrain for Lotus chassis 
2. Traction: powertrains for top bike brand 	2. Traction: powertrains for Mercedes Benz 
3. Vertical integration: Blank sheet vehicle and dock system 	3. Vertical integration: Model S, charger network 

5. The Pitch

Problem: Small EV serviceability, weight, and design



PROBLEM
Off-the-shelf powertrains are poor solutions for OEM designers and create inferior electrified products

01

Mobility companies must work around solutions that don't fit their needs



02

Powertrain development is too challenging for most to take on



03

Major Risk: fragmented development



3

Solution: fully optimized powertrains for small EVs

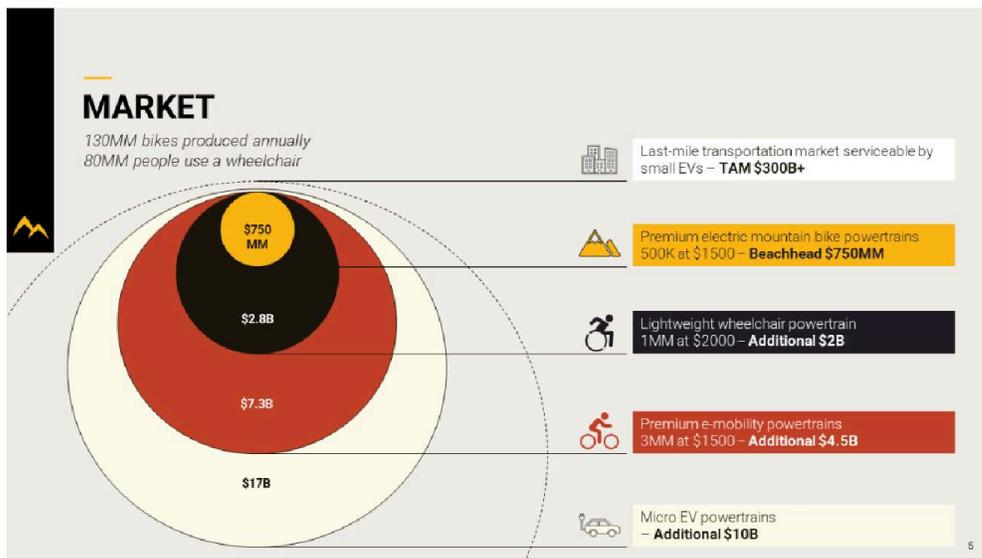
SOLUTION

An electrification ecosystem that creates customized powertrains fully optimized for each application

- 01 Tailored cost function → design metrics
- 02 Millions of cloud-based simulations → pick the best designs
- 03 Bimotal software, electronics, and motor libraries → build the optimal design

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Market: TAM over \$50B and a focused, premium beachhead



Competition: Bimotal is the clear leader in power density

COMPETITION

Bimotal is the clear leader in power density

bimotal
The only company that does full application-specific vehicle integration

BOSCH **SHIMANO**
BAFANG **brose**

FZUR **maxon** **TQ**

MORE POWER



Advantage: Technology, team, speed, and focus

ADVANTAGE

Technology, team, speed of iteration, and focus

- SIMULATION**
 - Finite element code to simulate motors
 - Simulated 85MM motor permutations compared to Tesla's 2MM for the Model 3
- TEAM**
 - Former technical leads responsible for Model 3 architecture and optimization, iPhone display, and aerospace programs
- PERFORMANCE BY DESIGN**
 - We use mathematical models and reduce cost through architecture
 - Focus on speed of iteration
 - Best in class torque and power density via proprietary gearboxes, motors, electronics, and vertical design integration
- LOCATION AND FOCUS**
 - Silicon valley provides unequalled talent pool: creative design, agile engineering, rapid development, immediate scale-up
 - No USA-based powertrain competitors: clear market need
 - Focus on Personal Powertrains, Last-Mile Solutions: enhanced mobility for life, fun, work

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Business Model: Scale with B2B powertrains

BUSINESS MODEL

Supply key technology components to OEMs

01 Sale of powertrain to premium brand for \$1500 to \$2000

03 Bimotal covers service within warranty, charges for service outside of warranty

02 One OEM partner anticipates 10,000 units per year for 3-5 years (up to \$100MM LTV)

04 License deals can be negotiated with appropriate financial incentives

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G2M: Powertrains scale to multiple business verticals

GO TO MARKET

Powertrains that scale to multiple business verticals

Target customers:

Beachhead: Premium electric mountain bike motors



Forward-looking projections cannot be guaranteed.

Revenue: Path to \$100MM+ with conservative market share



Forward looking projections cannot be guaranteed.

Traction: \$5.5MM B2B contract, significant D2C orders

TRACTION

Paths to \$100MM+ revenue

- \$5.5MM development with top bike brand**
 - \$3.3MM non-dilutive engineering fees and \$2.2MM equity investment
 - Bimotal retains powertrain IP and right to manufacture and supply
 - Supply agreement summer of 2023 with \$15MM in annual revenue
- \$400K Elevate ebike system Hub motor**
 - \$400K worth of preorders
 - Production tooling 50% paid for and 75% complete
 - Customer deliveries in Q2, Q3, and Q4 of 2023
- Preliminary development with wheelchair company**
 - Utilizes patent-pending disc brake gear coupling
 - Collaboration partners handle medical compliance
 - Minimal good solutions on market creates key opportunity for impact

- **Est. \$100MM - \$200MM + Annual Revenue**
- **Est. \$30MM - \$50MM + Annual Revenue**
- **Est. \$100MM - \$200MM + Annual Revenue**

Forward looking projections cannot be guaranteed.

Raise: \$3MM to accelerate growth

RAISE \$3MM

Fundraise details

- Bimotal has 18+ months of runway as it hits milestones with current strategic partner
- We will grow our software team to develop deeper products with more opportunities for recurring revenue. With premium hardware installed we have an entrenched user base
- We will scale production of Elevate, our patent-pending hub motor technology, to drive margins up and cost down. This will enable a price point appealing to the commuter market
- We will run additional validation and safety testing on our mid-drive product to have our \$100MM+ revenue opportunity launch smoothly





\$1.5MM Build out Software Team:
Fleet analytics, over-the-air updates, mobile app



\$0.5MM Tooling for Hub Motor:
Scale production line, increase unit margin to 30-50%



\$1MM Mid-Drive:
Accelerate launch and production ramp

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Only \$1.235M of the \$3M will be solicited in this Wefunder offering.

6. Product Testimonials



"Performed as well as many mid-drive bikes"



"Bimotal Is Set to Hijack the E-bike World With Their Elevate Conversion Kit...Amazingly Awesome"

"...an intriguing solution to several problems."

"[The Bimotal Elevate] adds a cleverly designed motor unit to the disc brake mount."







"Bimotal lets you add a little electric assist to any bike, then quickly remove it when it's not needed."

"While the idea of fitting a motor to a standard bike is nothing new, the Bimotal's system takes a different approach."

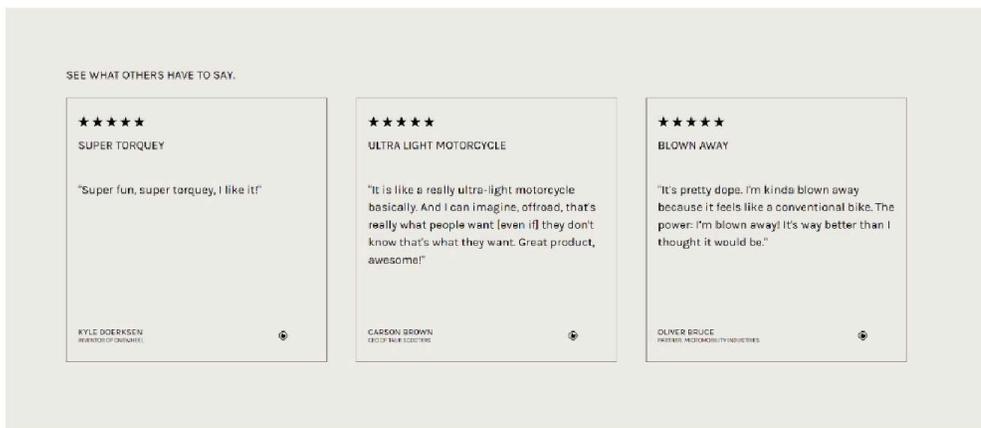
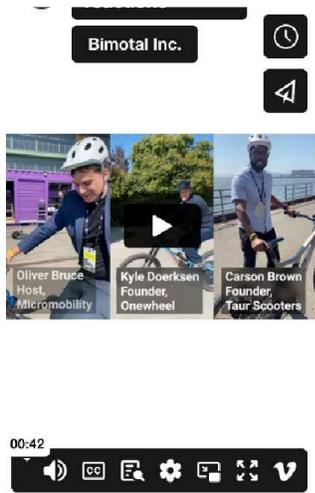






Industry leader reactions





"I have an extreme passion for mountain biking, and I think the "Elevate" product that Bimotal is creating is one of the greatest biking inventions I have ever seen. I was wondering if there was a position available on your team for someone with my skill set?" - Tesla Gigafactory Manufacturing Engineer

7. Technology and Design Philosophy

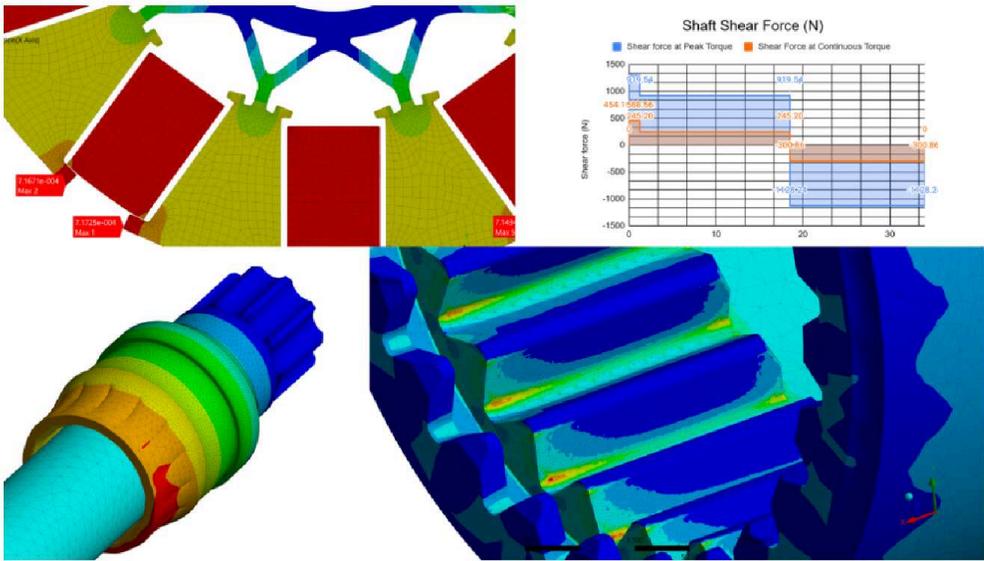
Design philosophy



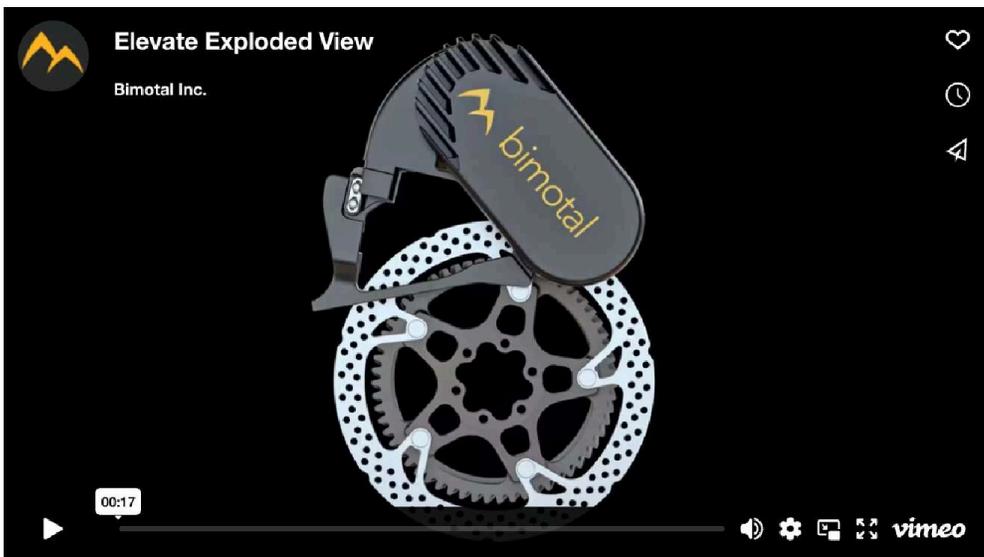


Closed-loop design

We iterate our designs based on thorough analysis of current prototypes in all areas: structural design, thermal simulation, magnetic simulation, and more. We then correlate our computer simulations' predicted performance to real-life performance that is measured in the lab.



Elevate exploded animation - we design everything



- Link: [Website technology page](#) - Web Page

8. Founder's Story: Bimotal Started as a Need

Bimotal started with a ski crash. Founder Toby Ricco suffered a knee injury and

wanted to continue mountain biking, but couldn't manage the steep hills. He looked extensively at ebikes and conversion kits but did not find a solution that was as light, removable, or integrated as he envisioned possible.

"I couldn't find anything that was light, removable, and added the assist I needed to ascend my favorite trails without knee pain. I was stubborn and knew there had to be a better way. I spent months looking at my bike until the concept of Elevate hit me, a way to drive torque through a bike's disc brake. Bimotal transitioned into a B2B powertrain company in the process of pitching Elevate to other companies--OEM's [original equipment manufacturers] loved the team and innovation, but wanted something specifically optimized for their application. Now we're working on a variety of powertrains that will improve the fidelity of our technology (battery, motor, electronics) across all products. And we are still as committed as ever to get Elevate into the world."



9. Link Summary

- [Bimotal website home](#) - Web Page
- [Blog](#) - Web Page
- [Investor Deck](#) - PowerPoint Slides
- [Global Greenhouse Gas Emissions](#) - PowerPoint Slides
- [Elevate Product](#) - Web Page
- [Mid-Drive Product](#) - PowerPoint Slides
- Coming soon: Wheelchair Product - PowerPoint Slides
- [Youtube](#) - Social
- [Instagram](#) - Social
- [Facebook](#) - Social

10. Wrap-up and Conclusions

- This is an opportunity to invest in an incredible team, tackling relevant issues in a very conscious and focused way

- Bimotal has multiple lines of business expected to reach \$100MM+ annual revenue (not guaranteed), with real products in the field and the backing of a major industry player
- Back us to help build amazing products that will transform the health of humans and the planet!



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We're here to fix capitalism.

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