

Convert any gas guzzler into a plug-in hybrid quickly and inexpensively



bluedotmotorworks.com Seattle, WA [in](#) [f](#)

Retail B2C

Highlights

- 1 We can convert a conventional car into a plug-in hybrid in about a day for ~\$6,000
- 2 Our products could prevent 55 billion metric tons of greenhouse gas emissions between now and 2050
- 3 Half of vehicles on the road today are a great fit for our products
- 4 Our products can pay for themselves in under 2 years and save \$50,000 over their lifetime
- 5 We are cornering an untapped, \$4 trillion market between now and 2050
- 6 Repeat founder and MIT engineer with a team bringing decades of tech and business experience
- 7 Multiple product offerings that serves market needs for decades

Featured Investor



Jules Valenti
Syndicate Lead

Follow

Invested \$10,000 [i](#)

"I'm deeply proud to support Blue Dot and its mission to electrify vehicles

worldwide. The magnitude of the challenge—and the market opportunity—are both striking and immense, offering a rare chance to drive meaningful change while building a thriving business. Having worked closely with founder Tom Gurski over the years—as both a colleague and mentee—I’ve witnessed firsthand his exceptional engineering expertise, integrity, and vision. His unwavering commitment to advancing climate technology, coupled with his relentless pursuit of elegant, practical solutions, leaves me confident that the team will succeed and play a pivotal role in reducing our dependence on fossil fuels. Blue Dot’s value proposition is compelling, especially for fleet operators, as lower operating costs and a reduced dependence on charging infrastructure make for a strong return on investment. With virtually no plug-in hybrid options in the pickup, commercial van, and traditional SUV segments—and most such upcoming options priced above \$80K—Blue Dot is well poised to fill a major gap in the market with practical, capital-efficient solutions. There is palpable and continuously growing market demand for capable, cost-effective electrified work vehicles, and few teams are as well-positioned to meet it as Blue Dot. The company’s combination of technical depth, real-world design experience, and disciplined execution gives me full confidence in its ability to lead this critical segment of the mobility transition.”

Our Team



Tom Gurski Founder and CEO

Tom is a two-time entrepreneur and MIT engineer who has brought many impactful technologies to life over a 25 year career. He has made impacts across multiple sectors including alternative energy, medical devices, global sanitation, and e-mobility.



Redwood Stephens Chief Product Officer

Redwood brings decades of product leadership and executive experience to Blue Dot. He was President of Synapse Product Development and Chief Product Officer at Rad Powerbikes.



Suzanne Wernevi Head of Business Development

Suzanne is an entrepreneur with over 20 years of experience in international commerce. She earned an MBA from IMD in Switzerland, and is an advocate with a proven track record in climate, voting rights, and small business affairs.



Isabella Taba Advisor

Isabella has driven success in the startup and high-tech world, first as an engineer and then in several senior management and executive roles. Her career spans over 15 years and she holds an MBA from Cornell University and an MS in aerospace engineering.



David Byng Advisor

David had a 37-year career with the Province of BC, including as Associate Deputy Minister and Chief Operating Officer for the Ministry of Transportation and Infrastructure. He is an honorary consul to Japan and a board member for Royal Rhodes University.

**Solving the Electric Vehicle Gap by
Converting Existing Cars for ~\$6,000**

**Universal Hybrid
Conversion Systems**



The beginning: will this even work?

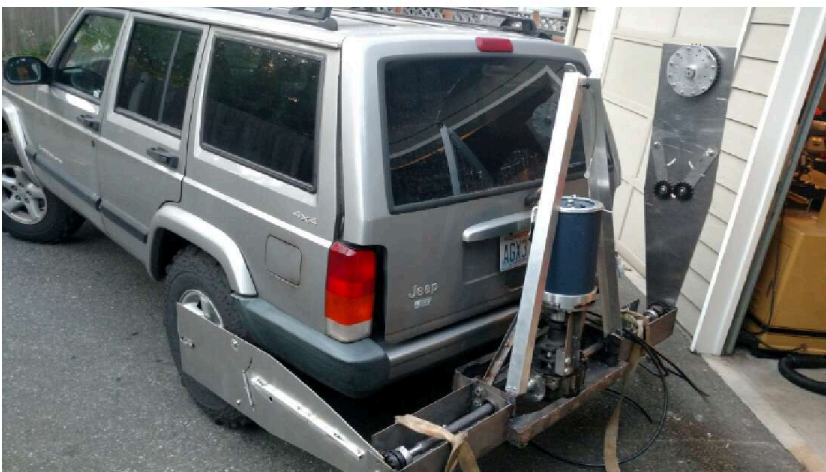
When I first started working on Blue Dot technology, it was largely as product that I would want for myself: a less-expensive, less-wasteful, and less carbon-intensive way to electrify my driving while keeping the car I loved. But I believed that a lot of people would feel the same way. I also had a “gut” feeling that if we relied solely on new vehicle production, by the time enough of the world’s cars were electric, the horse would have already escaped the barn in terms of carbon emissions. I knew that the conventional approach to conversion would never be cost-effective or scalable, so I started thinking about drastically different ways of doing it. Going plug-in hybrid (PHEV) with vehicle-agnostic architectures and a quick and easy installation process were the keys. I designed and built the first Humpback prototype to achieve all three.

A UNIVERSAL, BOLT-ON ELECTRIC DRIVE SYSTEM THAT LEAVES THE ENGINE IN PLACE, COSTS PENNIES ON THE DOLLAR, AND CAN BE INSTALLED IN 1 DAY

I was pretty skeptical that it would work. The numbers looked good, but if I missed something it might have torn my Jeep to shreds. It might have been too difficult to control. Any number of unanticipated issues may have reared their ugly head.

But it just worked.

I laughed out loud the first time I drove it because it felt so normal. At the same time I knew that because there was a viable solution here, I would have to make a major commitment to make it real.



The first prototype

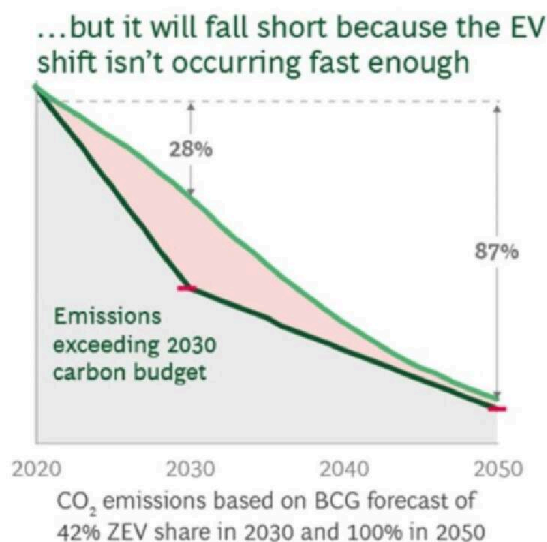
Crap...we're going to miss our climate targets BADLY

At this point I had to go back to that “gut” feel and see how real of a problem there actually was. I found a few sources that suggested that stock turnover

would be slower than people were assuming, even in the US and EU:

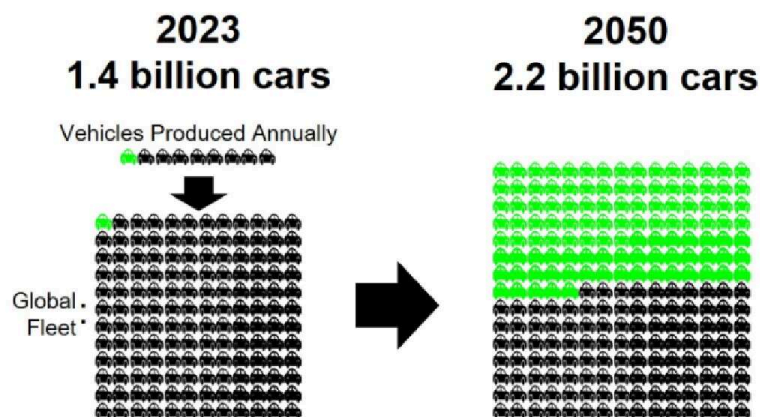


New York Times showing only 50% EVs in 2050



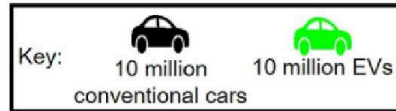
Boston Consulting Group showing vehicle emissions falling too slowly

But none of these analyses looked at the global fleet (a lot of old cars get sold into the global South), or provided scenarios that would lead to success. So I built my own transient model of global vehicle stock and emissions for the rest of this century, and the climate impact of those emissions. It is comprehensive and included the ability to input various EV, plug-in hybrid, and retrofit adoption rates, and to vary the rate at which the electrical supply gets cleaned up.



↓
Vehicles Scrapped Annually
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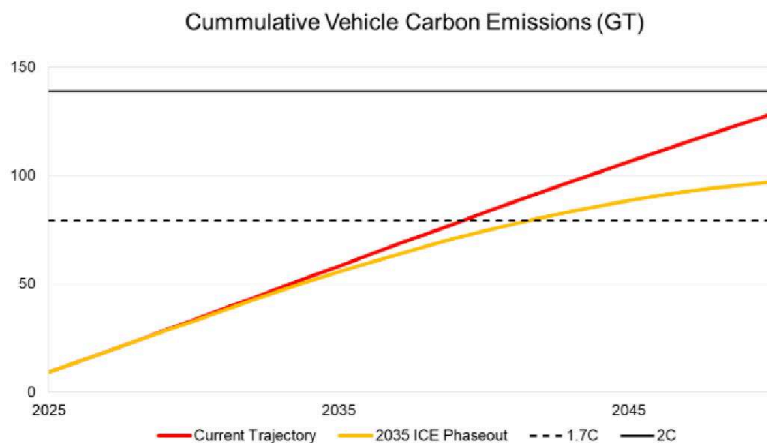
(current policies)



Global vehicle stock with IEA's EV adoption forecast

The average lifespan of a modern car is 21 years, so there is enormous inertia. Additionally, more and more people around the world are achieving car ownership, and we can't deny them that privilege while being equitable. As a result, we only take two cars off the road for every three we produce, further slowing turnover.

When we look at emissions, the results are shocking: in even the most insanely optimistic EV adoption scenarios, we fall well short of our climate goals. In 2018, the IPCC set a target of 1.5 C of warming to limit the worst effect of climate change. Unfortunately, that is all but impossible at this point. Today, ~1.7 C is equivalently aggressive. But even if we phase out sales of conventional cars by 2035, which is unrealistically optimistic, we still dramatically exceed the 1.7 C budget. We'll also eventually exceed 2.0 C, which is catastrophic.



Even the most aggressive EV adoption scenarios fail to achieve our climate goals

In order to keep vehicle emissions aligned with 1.7 C of warming via EV production, we would have to convert all sales to electric in the next 6-8 years. We'd then have to ramp up total vehicle production so that by 2032 we'd be producing 45 million extra cars every year. That sounds hard enough by itself, but there are five major roadblocks to moving anywhere near that fast:

1. Production cost
2. Battery production
3. Charging infrastructure deployment
4. The wealth destroyed scrapping existing cars to make room for the extra EVs
5. The extra carbon emissions from increased production

Any one of these alone is a potential showstopper. Together, they provided all the motivation I could ever need to fully commit to bringing this new solution to bear.

Pivoting our first product

I worked on improving and "productizing" the Humpback as a fully universal platform, making it smaller, lighter, easier to use, and, IMHO, better looking. For a small sedan or crossover, the Humpback will retail for ~\$6,000.

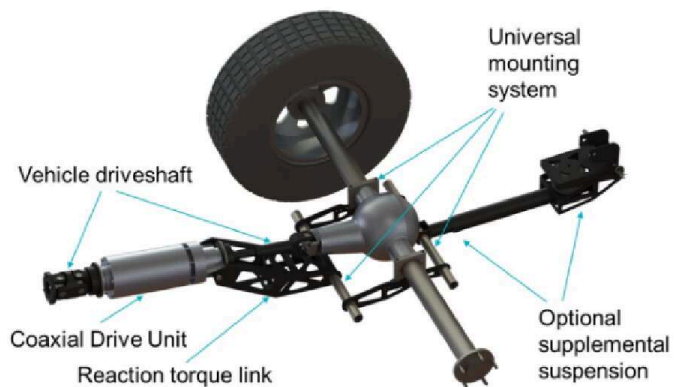


Production version of the Humpback

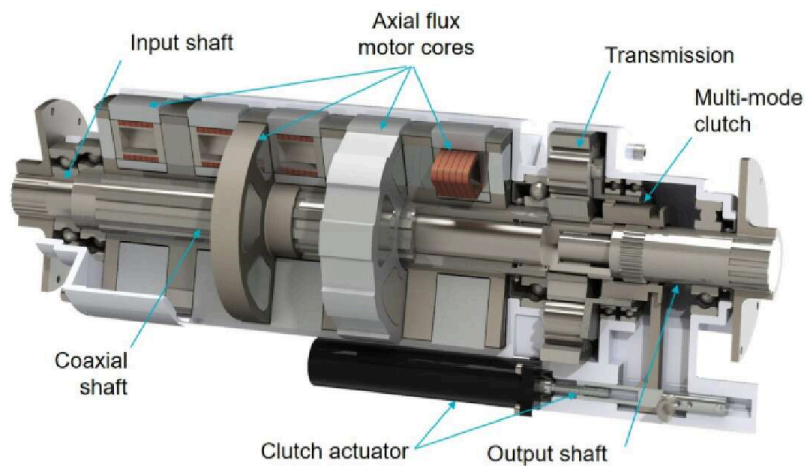
Eventually it occurred to me that there is a massive segment of the market that we could target specifically that would provide some significant advantages. Most pickups, vans, and SUVs have a solid rear axle, and these all look very similar underneath. I went back to the drawing board to come up with a design that would take advantage of this commonality, and The Narwhal was born.



The Narwhal Installed on a Pickup Truck



The Narwhal Powertrain



The "Heart" of the Narwhal: the Coaxial Drive Unit

The Narwhal provides 30-45 miles of all-electric range per charge, which covers 70-80% of driving needs. The engine is available whenever needed, and you can "shift-on-the-fly" between engine and electric power. It also uses the engine and electric motor together to function as a generator, providing power for things like job sites, home backup, camping, or anything else. We are targeting a retail price of \$7K - \$9K, depending on the size of the vehicle.

Imagine being able to do all your commuting and daily errands in your favorite pickup truck without burning a drop of gas. Then on the weekend you can tow your boat or RV to the wilderness without range anxiety, and have a quiet source of power when you get there. This is just one use case, but it demonstrates the flexibility of the technology.

Quick recap: affordable and scalable electrification

Retrofits have long held the potential to complement new vehicles as a major contributor to decarbonization. But they have been held back by very high cost and installations that must be performed in-house... a very difficult business model to scale. We have solved these problems and are poised to bring conversion to the mainstream market with the three pillars of our paradigm-shifting approach:

- Plug-in hybrid instead of full battery-electric
- Vehicle-agnostic (universal)
- Simple, fast, and consistent installation by any mechanic in about a day





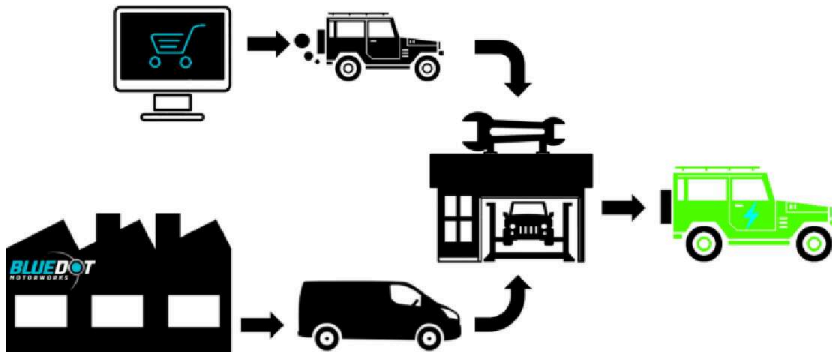
Narwhal Powertrain Proof-of-Concept

For a fleet operator in our home city of Seattle, putting a Narwhal on a pickup truck will:

- Pay for itself in under two years
- Save \$40,000+ over the the product lifespan (can be swapped to another vehicle if the original is retired)
- Reduce emissions by 70%, saving five metric tons of CO2 per year, 48 tons over the lifespan

Our business model is as scalable as the technology

We will use the "Tire Rack" model, wherein customers purchase the units from us and we refer them to a local installer, which may be a local mechanic or a national franchise. They drop their car off in the morning, pick it up in the evening, and immediately start using 70-80% less gas (typically).

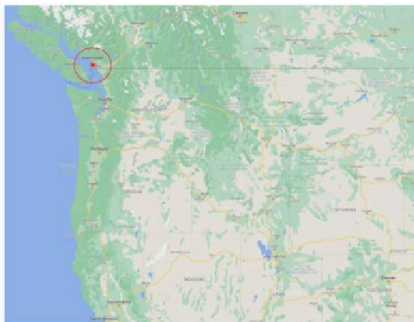


Buy online, install locally

Go to Market Case Study

We are targeting fleets first, with a beachhead of municipalities and campuses. These customers are struggling with emissions requirements that they simply don't have the budget to meet by buying new EV pickup trucks and vans. After that we will expand into commercial fleets, and then the consumer market.

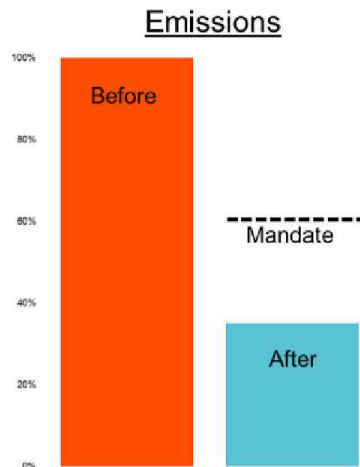
A school district in British Columbia is representative of our first customers. They are required to cut their emissions by 40% by the end of the decade. Like most schools, they don't have the budget to go out and buy F-150 Lightnings and e-Transits to replace their 59 pickups and vans.



Richmond, BC schools are in a bit of pickle

By upfitting these vehicles with the Narwhal, they will cut their emissions by 65%, saving over 2400 metric tons of CO2. They will break even on the investment in under two years, and save over \$100,000 every year after that. All told, they will save over \$1,000,000. Suddenly their liability has become an opportunity.

Less gas, more books.



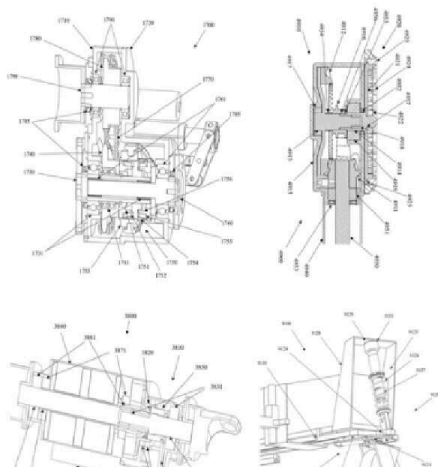
The Narwhal will exceed even the most aggressive emissions targets

We have a major early-mover IP advantage

By taking a different approach and focusing exclusively on universal conversion approaches and intrinsically scalable business models, we have been able to carve out very broad IP protection. This will create a significant moat for others looking to compete on cost. Afterall, there are only so many features that exist on every car that can be used. We also have developed a large number of alternative architectures that can be called upon if we run into technical issues, or just to offer a broader range of options.

Summary of our IP:

- First patent issued in the US and EU
- Second patent issued in the US
- 3rd application published in US and EU
- Multiple alternative architectures for all product lines
- 360 pages of material total





Strong IP and decades of product pipeline

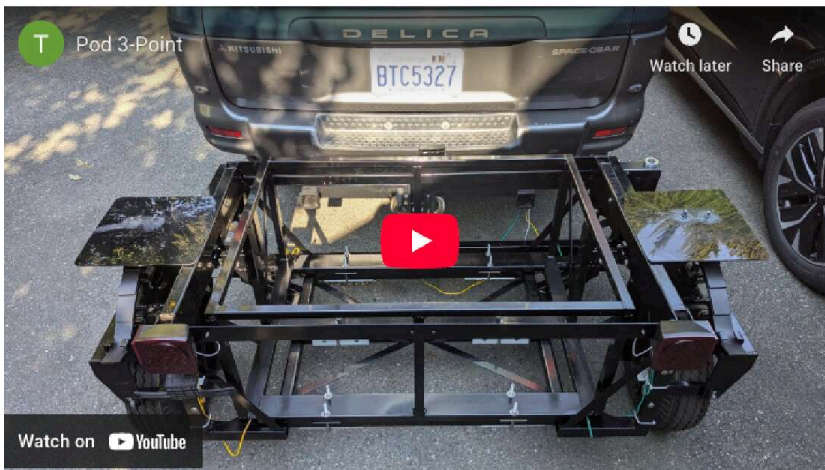
Another smart solution to vehicle emissions...and more

After the Narwhal and Humpback are brought to market, we plan to launch the EscaPod. This is a range-extender for electric cars that is simple to connect and easy to maneuver. It will:

- enable longer road trips to more places
- keep older EVs with degraded batteries on the road
- empower automakers to bring smaller-battery EVs to market, lowering the cost barrier and stretching that precious resource.

We connect to the vehicle's battery system in a way that is transparent to the vehicle's software and ensures that we never over or under charge the battery. Power can be provided by extra batteries, an engine, or even a fuel cell.

The physical platform is a compact, self-steering trailer, which is also great for just hauling stuff around (as the prototype shown below was built for). We envision it being incorporated into modular vehicle designs from the major manufacturers where you can add cargo capacity as needed.



Basically, instead of the whole trailer pivoting when you turn, only the wheels do. You don't need a "tongue" so the trailer can be much shorter. This isn't new...trailers with caster wheels (like the front of a shopping cart) have existed for years. But caster wheels don't support any side forces, which means that all the weight of the trailer would try to pull the back of the vehicle sideways in a corner, and could cause a skid. Our solution is to make the cargo box free to slide side-to-side on the trailer's frame, and then connect it to the caster wheels in a way that transfers all the forces to the trailer's tires. This means it can safely carry much more weight while still being very short and super easy to maneuver, back-up, and park.

Massive, untapped market, desperate for new ideas

Customers in our launch market are struggling with major challenges around electrifying their fleets. OEMs are not making sufficient electric "work trucks" available because it is more profitable to sell high-spec units to consumers, and fleet operators cannot justify those higher prices. We electrify for a fraction of the cost.

In order to "go electric," fleets usually need to upgrade their electrical service

from the utility in order to put in level 2 chargers (operate at 240 Volts and relatively high current). This is expensive can take months or even years, and permitting can be difficult. Because a plug-in hybrid has a built-in "backup plan," it is normal to charge on a level 1 charger (operate at 120 Volts and low current...a standard wall outlet). This means that five Narwhals or Humpbacks can charge on the same circuit as one EV on a level 2 charger, reducing or eliminating the need for upgraded service.

There are few plug-in hybrid pickup trucks on the market in the US. EV pickups and vans don't work well for every use case, such as towing or accessing remote areas. Electric heavy duty pickup trucks cause an additional problem for fleets: because they need such a large battery, they would be so heavy as to require a DOT driver's license. Fleet operators do not want to deal with this because it involves things like drug testing.

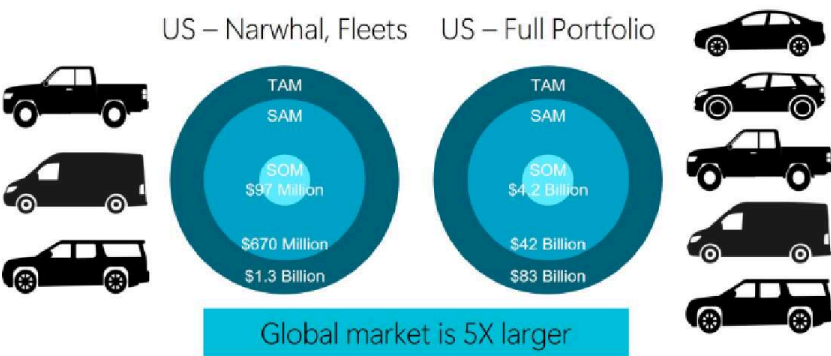
Markets & Pain Points			
Customer Segment	Serviceable Market	Current Pain Points	Future Pain Points
US Fleets (Narwhal for pickups and vans)	\$160 billion (US)	<ul style="list-style-type: none"> Fuel cost ESG targets vs budget EV Availability Electric service upgrades for chargers DOT licenses for heavy vehicles 	<ul style="list-style-type: none"> Rising fuel cost Rising EV cost/limited EV availability Charger overcrowding Devaluation of conventional vehicles
Global Consumer Market (all light-duty vehicles)	\$5.2 trillion (global by 2050)	<ul style="list-style-type: none"> Fuel cost Cost of new/used vehicles Lack of charging infrastructure Embodied carbon and waste 	

Since the market for vehicle conversion today is niche due to the extremely high costs, we frame the Narwhal and Humpback market sizing based on the number of conventional vehicles that will be on the road between now and 2050. The total addressable market (TAM) is based on this number.

To arrive at a serviceable available market (SAM), we look at the number of vehicles that will be good candidates for conversion. We define this as vehicles that

- can be charged at home or at work,
- are beyond their warranty period,
- would realize a positive return on investment with our products, and
- would not be better served with an EV

This works out to almost exactly half of all vehicles: \$670 million in our beachhead and \$42 billion for our entire portfolio in the US.



TAM, SAM, and SOM for beachhead and total US markets




The serviceable obtainable market (SOM) is obviously highly speculative, especially for what is essentially a new market. Using a SOM:SAM ratio of 10%, we obtain a SOM for the US of \$97 million in our beachhead market of light trucks in fleets, and \$4.2 billion for our entire PHEV conversion portfolio. The global market is approximately 5 times larger.

Others try to fill the need, but no one does what we do

If you want to convert a vehicle today, you have a few options if you want to go full electric, but none if you want a plug-in hybrid. You can bring any vehicle to a custom conversion shop, where a basic EV conversion with a modest range will cost about \$40,000. It can easily cost double that. There are also a few outfits that perform conversion for specific vehicles. This provides some economy of scale, but not enough to tool up for mass production. The process is still labor intensive, and also complex enough that they are typically done in-house. This is still a \$30,000+ proposition.

The bottom line is that we believe no one can touch us on price.

By crossing the tipping point whereby our products will actually pay for themselves (and then some), conversions can finally be a mainstream approach. We believe our business model is the first to support the rapid market growth unlocked by the technology.

Competition			
			
	XL Fleet	Maxwell + others	Blue Dot Motorworks
Scalability	Low (bespoke)	Low (bespoke)	High (universal)
Market	New vehicles only	New and secondary	Secondary market vehicles
Installed By	XL Fleet only	Maxwell + 1 partner site	Third party installers
Vehicles	4 models (PHEV)	1 model	Almost every light-duty vehicle
Retail Price	~\$25,000 (PHEV)	\$35K+	\$6-9,000
Operation Mode	Parallel hybrid	EV	PHEV
Exposure	Vulnerable to OEMs	Vulnerable to OEMs	Immune to OEMs

We are poised to move quickly through the next stages of development

We are ready to put the pedal to the metal. Our next step is to make an “alpha” prototype that is identical to the final product from the user’s perspective. This will take 9-12 months and most of this funding round. Then we will raise a 2nd seed round, execute a design spin based on what we learned with the alpha, and build 10-12 “beta” prototypes that will be used for pilot programs with paying customers. These pilots are currently 30% subscribed.

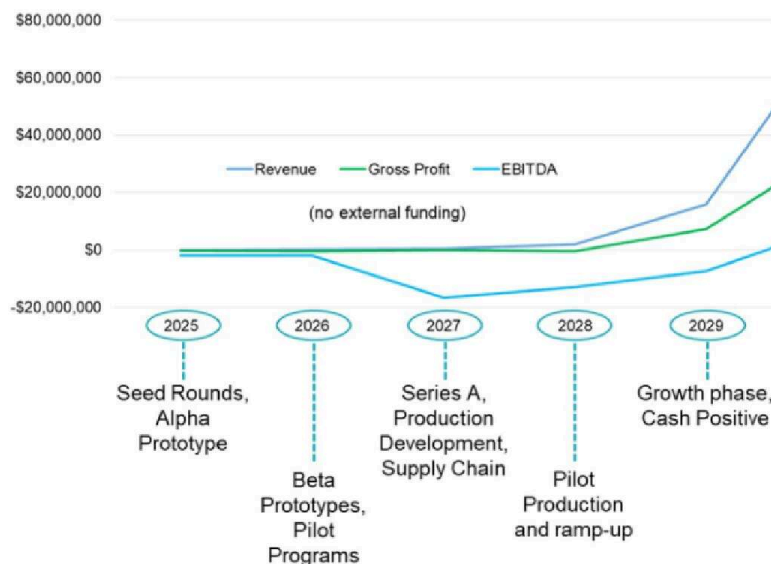
After the pilots, we will raise a Series A which will be used to translate the design into a mass-manufacturable form. We will establish our supply chain, tool-up for high volume production, and bring up an assembly line with a contract manufacturer. We will also begin deploying a network of installation partners, including independent mechanics and regional and national franchises.

Raising: \$3M in two tranches	
Alpha R&D	\$900,000

Alpha Materials	\$200,000
Beta R&D	\$200,000
Beta Materials	\$500,000
Intellectual Property	\$80,000
Salaries & Team Growth	\$1,056,000
SG&A	\$64,000

Use of funds. Note: we are raising \$1.235M of the \$3M on Wefunder.

After the pilots, we will raise a Series A which will be used to translate the design into a mass-manufacturable form. We will establish our supply chain, tool-up for high volume production, and bring up an assembly line with a contract manufacturer. We will also begin deploying a network of installation partners, including independent mechanics and regional and national franchises.



Forward-looking projections cannot be guaranteed.

A world class team of experienced builders

We have kept our team lean to maximize our use of founder investment. I'm Tom by the way...an MIT Engineer and 2-time entrepreneur with 25 years of experience turning new and impactful technologies into products. I've innovated in alternative energy, medical devices, global sanitation, and e-mobility. I'm also as big a car nut and climate nerd as you're likely to find.

Redwood is a seasoned executive and product leader. He was previously President of Synapse Product Development and Chief Product Officer at Rad Powerbikes. He brings a 25-year track record of driving strategic growth to Blue Dot.

Suzanne is an entrepreneur and MBA with decades of experience in international commerce. She is a guru of marketing, branding, sales, and communication. She is also an accomplished advocate in advancing legislation for climate, voting rights, and small businesses.

Our advisors, Isabella and David, have decades of hardware startup and government experience between them.

Blue Dot Leadership





Tom Gurski, *Founder & CEO*

- Mechanical engineering degree from MIT
- 25 years turning new and impactful technologies into products
- Previous founder of engineering and product development consultancy



Redwood Stephens, *CFO*

- Previous Chief Product Officer at Rad Power Bikes
- Previous President of Synapse Product Development
- 25 years of leadership and executive experience



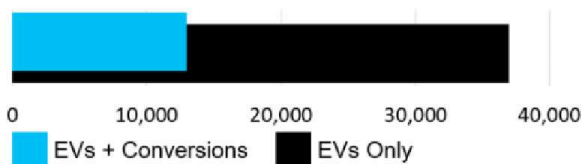
Suzanne Wernevi, *Biz Dev*

- MBA from IMD in Switzerland
- Founder with over 20 years in international e-commerce
- Advocate for climate and voting right with successful legislation record

We are at a crossroads of electrification

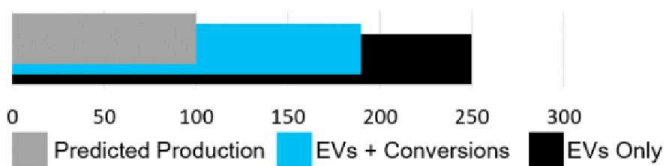
EVs are great. But remember those five roadblocks to deploying them fast enough? Let's take a closer look at those and what plug-in hybrid conversions can do to address them.

The first is the production cost of producing solutions. We would need to produce many more vehicles per year than we do today, which would run up a \$37 trillion bill. Our technology can save the global economy 24 trillion dollars of additional production cost alone.



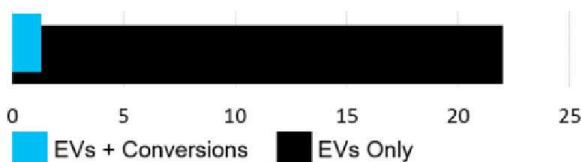
Production cost, billions of dollars

The next problem is battery production. Any way you slice it, we need to produce far more batteries than what is forecasted. Because our systems provide 70-80% of the benefit of an EV using 20% of the battery, that resource is stretched much further.



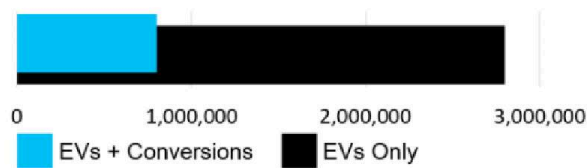
Required battery production, % of predicted

Production is a dirty business, and building something as material-intensive as an EV requires a lot of energy. Avoiding that penalty alone by keeping cars on the road will save over 20 billion metric tons of CO2 by 2050.



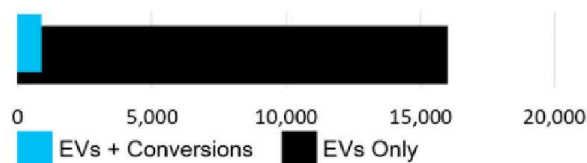
Embodied carbon from production, gigatonnes

Even though we're only scratching the surface of electrification today, public charging infrastructure is already a major bottleneck. By being able to rely on the engine for the occasional longer trip, our products reduce the number of extra chargers required if we're to accelerate the pace of EV deployment.



Extra chargers required (above baseline)

Lastly, to make room for extra EVs, existing cars need to be scrapped prematurely. That's not too bad when we're only doing a little bit because it targets vehicles near the end of their lives. But to do it at the scale required means throwing away trillions of dollars of valuable cars...more wealth than the US lost in the 2008 financial crisis. We preserve all that embodied value.



Wealth destroyed by premature scrapping

All told, plug-in hybrid conversions from Blue Dot Motorworks can prevent 55 billion metric tons of greenhouse gas emissions by 2050. And they can do it without waiting for charging infrastructure, while preserving wealth and maximizing precious resource utilization, and maintaining the freedom of movement we enjoy today.



Join us on our journey to revolutionize clean mobility!

