

Replace your standard four with an electric drive - one for one





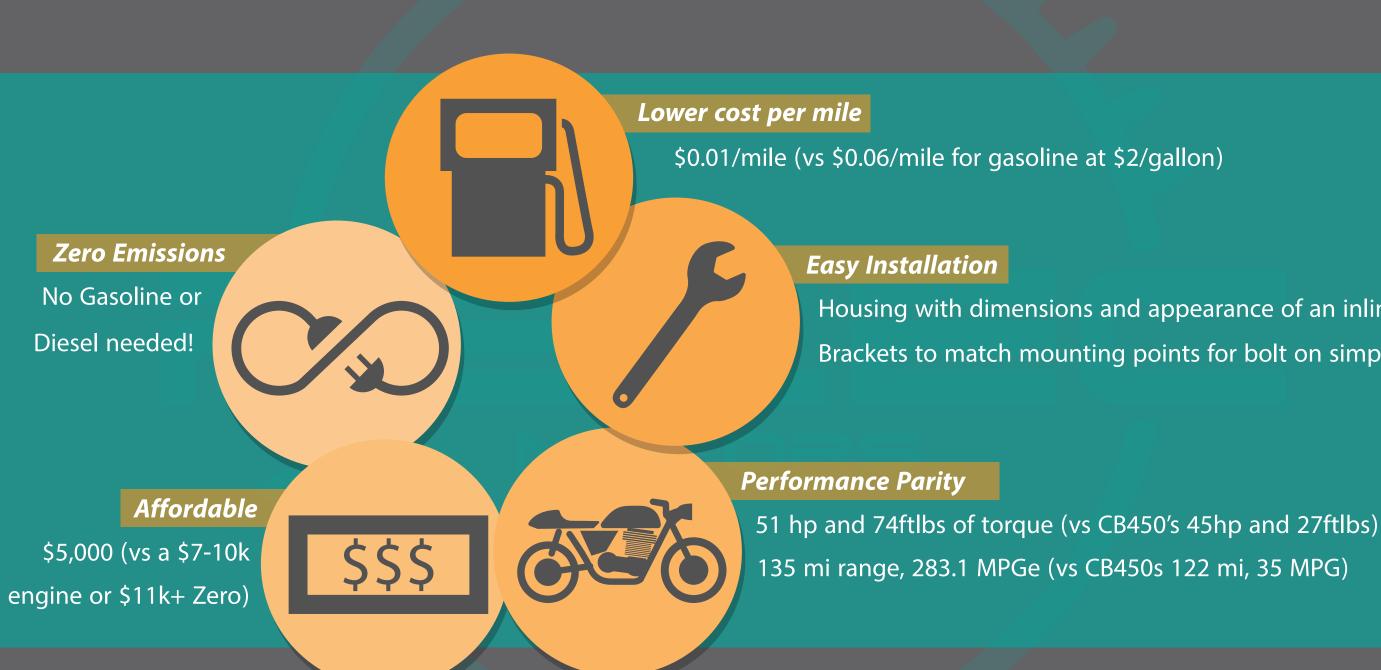
# *Electric vehicles are experiencing an explosive growth,* especially for more affordable motorcycles and e-bikes

– 36% growth in electric plug-in vehicles sales in the US in 2016 – 38% growth in Zero Motorcycles' sales in 2016 - Consistently strong demand for 'modern classic' motorcycles Ex: Honda CB1100, Triumph Bonneville, Harley-Davidson 883 – Electric motors can match the performance of 'classics', especially for restoration or refurbish projects

# Mission Statement: Retro-fit standard motorcycles with an electric drivetrain

Retro-Electric Motors (RELEC) will produce and market a pre-engineered electric drive kit that can replace an inline four cylinder motorcycle engine – one for one, using existing mounting points, similar dimensions, and delivering similar performance.





Housing with dimensions and appearance of an inline four. Brackets to match mounting points for bolt on simplicity.

### Manufacture and sell pre-engineered electric drive kits:

### **Source Components**

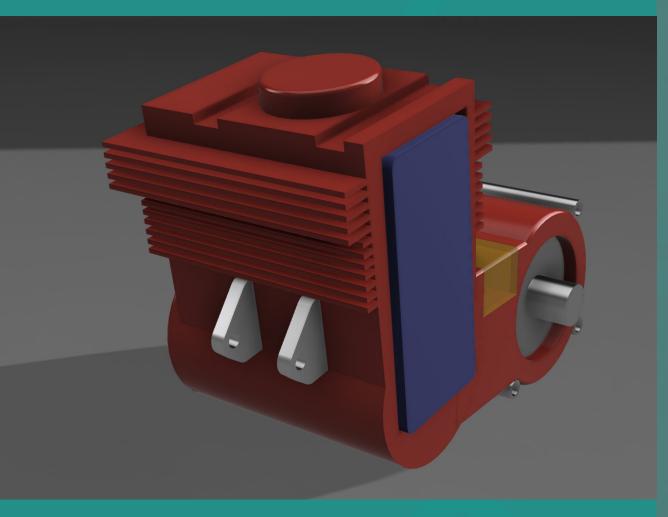
– Motor, Batteries, Controllers

### **Fabricate the Assembly**

– Housing, Wiring, Brackets and Mounts

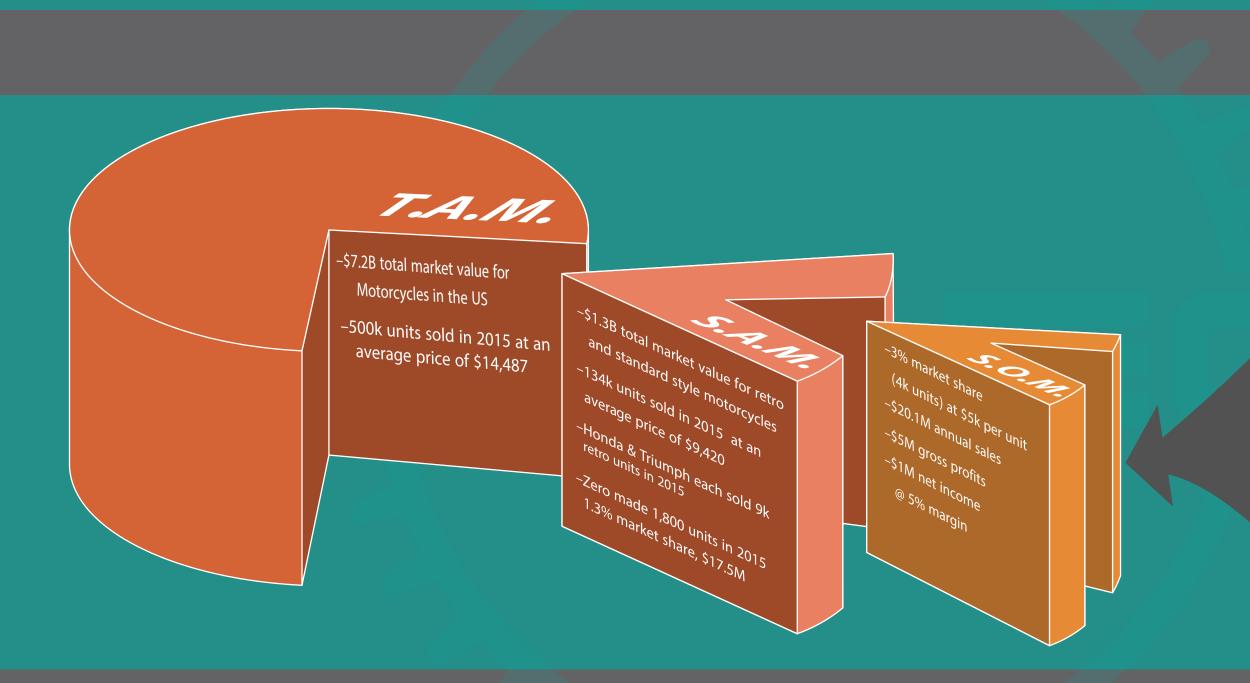
### Market digitally and sell directly to builders and DIY mechanics

– Website, Facebook, eBay



### **RELEC Drive 1.0**

- Lightweight Aluminum and Composite Case with OEM mounts (25lbs)
- Stainless Steel Mounting Brackets and Hardware (Honda CB450 and other models as requested)
- 51hp motor (PMAC 15kW Cont. / 38kW Pk. Liquid Cooled Motor Drive System 72/84V 550A) (35lbs)
- 135 mile range (GBS 84V 100Ah Li-Ion Battery Pack with EMUS BMS and Charger) (28lbs)



### (Marketing Strategy)



Opportunity / Mission / Value Proposition / Revenue Model / Product / Market Value / **Beachhead Customers** / Pricing Strategy / Timeline / Unit Economics / P&L Pro-Forma / 6 Year Projection / Company Background / Funding

- Honda CB owners in the Philadelphia Metro area

- DIY environmentally conscious motorcycle riders who prefer classic styling **Custom bike builders interested in offering the same** 

# *Initially low volume with pricing at the upper end of the competition,* decrease price with increasing volume

– \$5-7k for Triumph crate engines

– \$4-10k for Harley crate engines

– \$4-9k Engine Rebuild on average

Year	0	1	2	
Retail Price	\$ - \$	6,499 \$	6,499 \$	5,4
Unit Cost	\$ 12,380 \$	8,180 \$	6,752 \$	4,6
Per Unit Profit/Loss	\$ (12,380) \$	(1,681) \$	(253) \$	
Gross Margin	-	-25.9%	-3.9%	1

,495 \$ .690 \$ 805 \$ 14.6%

4 4,995 3,624 1,371 27.4%

Year 0: **Prototype** 

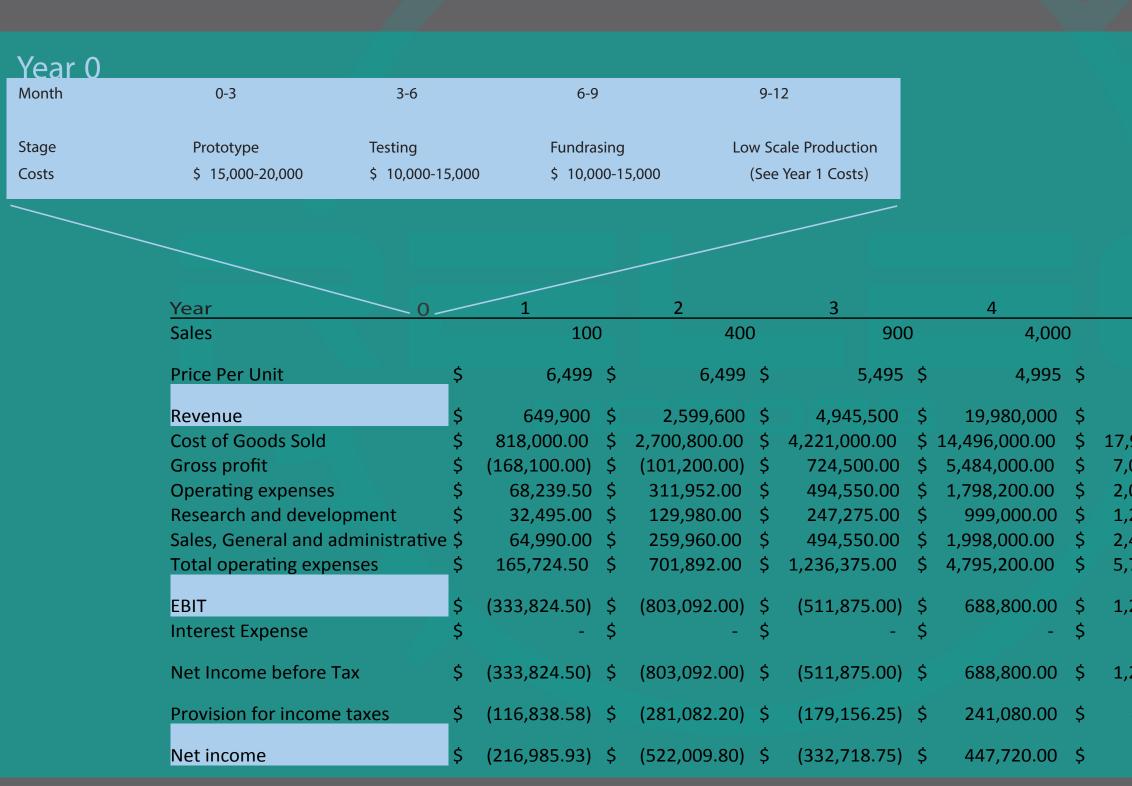
Year 1: *Low Volume* 

Year 2 & 3: Increase volume and reduce costs

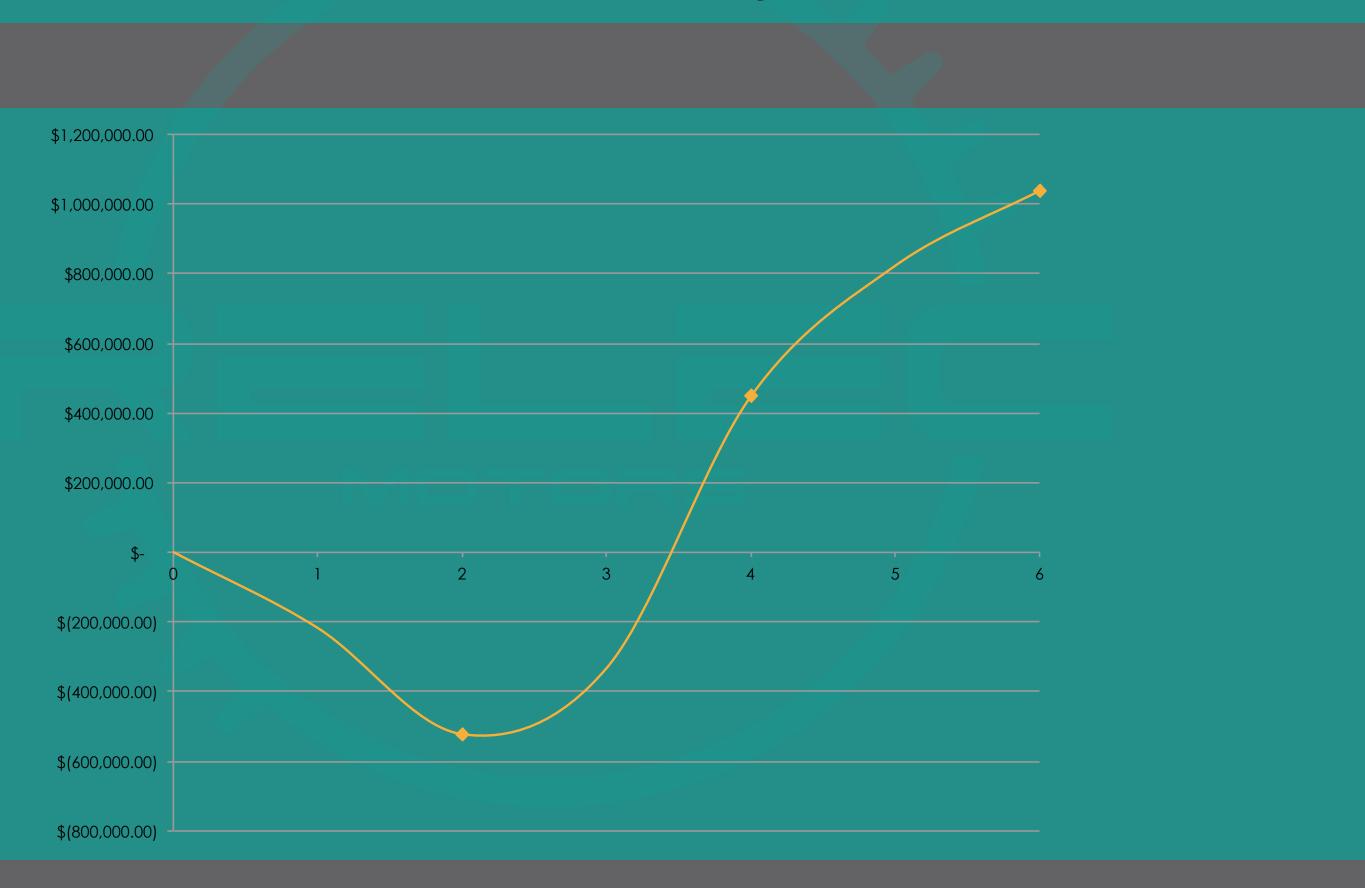
Year 4: Full scale production

Year 5: Develop OEM production, possible sale to major manufacturer

Production Year	Р	0 rototype 1 Unit	L	1 .ow Volume 100 Units	٦	2 Med Volume 400 Units	ŀ	3 High Volume 900 Units	4 Il Production 4,000 Units
Motor	\$	3,200	\$	2,000	\$	1,500	\$	1,000	\$ 750
Controller	\$	500	\$	500	\$	450	\$	350	\$ 250
Motor Drive Kit	\$	3,700	\$	2,500	\$	1,950	\$	1,350	\$ 1,000
Batteries	\$	5,000	\$	4,000	\$	3,500	\$	2,500	\$ 2,000
Battery Management System	\$	1,000	\$	575	\$	575	\$	350	\$ 250
Charger	\$	500	\$	300	\$	250	\$	150	\$ 100
Battery Package	\$	6,500	\$	4,875	\$	4,325	\$	3,000	\$ 2,350
Total off the shelf materials	\$	10,200	\$	7,375	\$	6,275	\$	4,350	\$ 3,350



5		6				
5,000	)	5,500				
4,995	\$	4,996				
24,975,000	\$	27,478,000				
,940,000.00	\$	19,756,000.00				
,035,000.00	\$	7,722,000.00				
,022,975.00	\$	2,003,146.20				
,248,750.00	\$	1,373,900.00				
,497,500.00	\$	2,747,800.00				
,769,225.00	\$	6,124,846.20				
,265,775.00 -	\$ \$	1,597,153.80 -				
,265,775.00	\$	1,597,153.80				
443,021.25	\$	559,003.83				
822,753.75	\$	1,038,149.97				



Two brothers with a passion for refurbished classic vehicles see a market where builders mix modern technology with classic styling. An opportunity to bring together retro styled motorcycles and modern electric drive technology.

– Founders –

Charlie Hatton: Aerospace Engineer and MBA Keith Hatton: Industrial Designer and master fabricator

### Year 0 (Seed): **\$30-40k to launch**

## Year 1 (VC): **\$1.1M for COGS while increasing production**

## Year 2 (Bank): **\$1.5M for tooling to scale for full production**

# Year 5 (IPO/Sale): **\$5M to develop OEM products**





For more information please visit www.relecmoto

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