

Retrofitting Electric Vehicles

Pathway to creating IP



Electron Mk IV



Ross Blade

Blade Electric Vehicles

What, why, where & ...

- BEV is an EV knowledge maker / investor
 - BEV proves up niche products for OEMs.
- BEV retrofits to create IP
 - Retrofitting leaves us to focus on developing EV specific solutions and knowledge.
- Castlemaine in regional Victoria
 - Alternate automotive hub, green and out of sight for developing new product.

BEV fleet grows to 30

- Our fleet enables us to understand consumer behaviour.
- We have identified possible consumer backlash to V2G.
- This enabled us to identify and obtain rights to solutions.



Cycles not Km is the issue

- Cell life is by cycles
 - Lithium polymer (2000 @ 70% DOD)
 - Lithium manganese (3000 @ 70% DOD)
 - Lithium iron phosphate (5000 @ 70% DOD)



‘Inductive’ solution

- At traffic lights
- In strategic stretches of highway
- Under taxi ranks
- Shopping centre car parks
- At home

Services BEV provides to OEMs and aspiring second stage manufacturers

- Secure facility and staff to design and prove concepts
- BMS & computer system design and testing
- Comms developed for preventative maintenance
- EV design services and prototypes built
- IP licensing
- Investment assistance



Help with meeting regulations



Regulations

- DOTARS licence
- VicRoads signatory
- ADRs braking, crash
- ISO 6469 EV safety specifications
- SSM plate
- ESC



New EV specific regulations



○ **ISO 6469 Electrically propelled road vehicles**

Some requirements

- Insulation resistance between battery and chassis
- Crash short circuit protection
- Two step power on procedure
- Driver alerts of battery SOC and power decrease
- Electrical enclosures – switching for occupant protection
- Water protection test. Drive through 500m of 10cm deep water at 20km/h or monitor insulation resistance and implement alert/shut down

Working with BEV

To develop, fund and commercialise



- Electric vehicle IP commercialisation
 - Due diligence and development
 - Investment
 - Contract manufacture
 - Engagement with OEMs



- Electric vehicle implementation
 - Safety requirements
 - Service training
 - Regulations
 - EV trials



- Vehicle design
 - Engineering passenger and commercial vehicles