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Blockchain Technology for
Clean Vehicle Industry

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ElektrikCar – Elektrikka Co-Founder and President

ElektrikCar - Elektrikka Project Whitepaper

Security Token Offering
to Scale-Up World Wide EV and
Hydrogen Fuel Cell EV Manufacturing

Tokenized Security Offering to Scale-Up World Wide EV and Hydrogen Fuel Cell EV Manufacturing

Abstract

As a new electric vehicle company, ElektrikCar-Elektrikka builds electric vehicles and their associated technologies from scratch since 2012. So far, ElektrikCar has revenues from vehicle developments, consulting, battery promotions and in-kind supports. ElektrikCar-Elektrikka vehicle product lines are sports electric vehicle (EV), fuel cell electric buses (FCEB) and lithium ion battery applications and sales. The company is also developing electric three wheeler and motorcycles as green EV concepts. These products are on sale in Alibaba website attracting many interests and inquiries who are asking all of our products. Our electric sports coupe Tucuxi was popular around 2012 in Indonesia. We continue working on it now with an addition of the New Tucuxi T18 EV. We manufacture clean energy vehicles in Shenzhen, China by converting conventional buses into hydrogen fuel cell electric vehicles (FCEV). Hydrogen fuel cell power module produces electricity to be stored in vehicle battery packs and thus increase electric vehicle driving range. The fuel cell electric buses can be charged as normal battery EV and can be safely refueled with pure 99.99% hydrogen gas. Our partner's Lithium Ion battery cells, manufactured by Thunder Sky Winston Battery (CHANGTAI) Ltd, are also our promoted products in North America and the USA. We are the North American representative of Thunder Sky Winston batteries. We have delivered significant number of batteries for emergency UPS, solar-battery power plant projects, electric boats, private electric vehicle applications and etc and just completed a project to power several cities using solar cells in remote islands of Alaska, USA.

However, as the need to manufacture EVs and FCEVs worldwide increases, tokenized security/share fundraising using blockchain technologies is introduced. Elektrikka Inc. introduces FCV cryptocurrency tokens into its operation with objectives to develop Decentralized Applications (DAPP) and/or our blockchain network to expand our decentralized manufacturing plants, streamlining supply-chains, manufacturing processes, computer simulations, payrolls as well as vehicle sales, marketing, after sales service and maintenance. Using Securities Token Offering (STO) as fundraising tools, we integrate blockchain technologies to manage our operations. Elektrikka is offering tokens to the public as securities (not only as utility tokens as normally offered by other ICOs) to comply with the US Securities and Exchange Commission (SEC) exempt offering of Regulation D, 506(c). The current STO token buyers will have rights and obligations as Elektrikka Inc shareholders. We strive for fairness for our investors so that when investors invest their hard earned cash, they should own the company as well. The immediate phase of Elektrikka growth is to leverage blockchain platform or to develop (tentatively) Elektrikka owned blockchain platform/network which will serve as company's computational core and most importantly to allow its customer creating payments/credits from the time of vehicle purchase to after sales service/maintenance. EVs and FCEVs will be enabled as mining nodes as well with rewards applied to reduce lease/purchase price.

Table of Contents

List of Figure

1. Problem Definition and Introduction

While we are writing this whitepaper, we have to modify our whitepaper to reflect the latest research findings. The United Nations Three Working Groups of the Intergovernmental Panel on Climate Change (IPCC) issued a dire warning that unless current rate of CO_2 and other green house gases are reduced, global warming temperature will increase by 1.5°C between 2030 and 2052[1]. And if mitigating efforts are not in place, we will have instead 2°C increase since pre-industrial era. The year 2030 is just 11 years from now and the increased temperature by 1.5°C or 2°C doesn't seem to be high but its impacts on nature and human have already been observed. Extreme weather, massive hurricanes, large forest fires, crop production reductions, species extinction, coral bleaching/deaths are only a few examples of impacts on ecosystems by the global warming.

Based on several IPCC reports, greenhouse gas emissions due to human activities have increased since the pre-industrial era and are most likely to be the dominant cause of the observed warming since the mid-20th century. Warming of the climate system is very significant (see Figure 1). Since the 1950s, many of the observed changes are unprecedented over decades to millennia. The major impacts are the warming of the atmosphere and ocean, the diminished amounts of snow and ice, and the rise of sea level (see Figure 1) as stated by the report. The climate change can be seen as increased occurrence of natural hazards (extreme weather such as wider dry regions and more frequency of hurricanes) and ocean acidification that threatens the life of sea creatures and coral reefs. Extinction risks threaten large fractions of various flora and fauna species due to their inability to move or adapt to the diminished level of oxygen, food scarcity or increased temperature level in their habitats as in the case of polar regions. Global food security is projected to be undermined by the diminished marine life due to redistribution or extinction and negative impacts of wheat, rice and maize production, while at the same time the demands for these crops increase. Reduction of renewable surface and ground water resources in dry subtropical regions poses also as another risk.

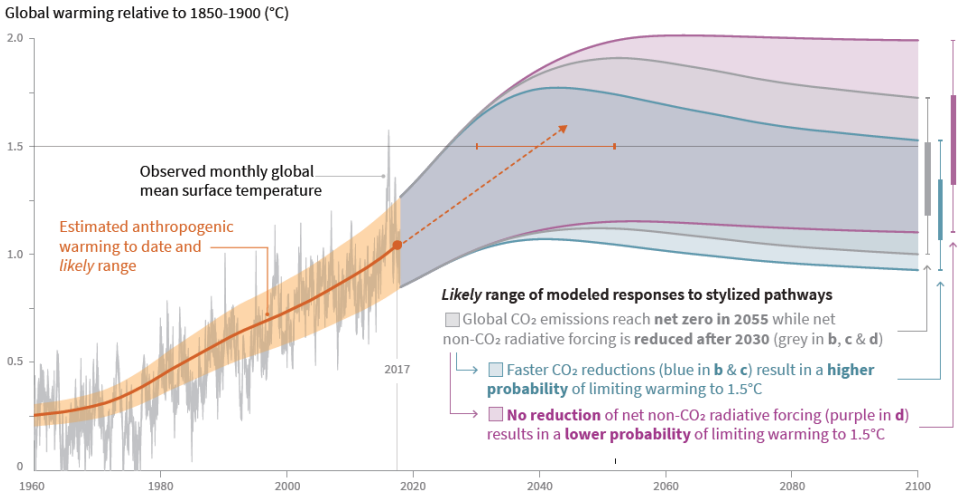


Figure 1. Observed monthly global mean surface temperature (GMST) change.

[1] http://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

The grey line up to 2017, from the HadCRUT4, GISTEMP, Cowtan–Way, and NOAA datasets) and estimated anthropogenic global warming (solid orange line up to 2017, with orange shading indicating assessed likely range). Orange dashed arrow and horizontal orange error bar show respectively central estimate and likely range of the time at which 1.5°C is reached if the current rate of warming continues. The grey plume on the right shows the likely range of warming responses, computed with a simple climate model, to a stylized pathway (hypothetical future) in which net CO2 emissions decline in a straight line from 2020 to reach net zero in 2055 and net non-CO2 radiative forcing increases to 2030 and then declines. (Courtesy to IPCC Report)

Based on IPCC previous report in 2014[2], Carbon dioxide (CO_2) is one of the main green house gases, followed by methane, nitrous oxide and fluorinated gases. The atmospheric content of carbon dioxide in 2005 is by far above the natural range over the last 650,000 years (180 to 300 ppm) as identified from ice cores sampling results. **The main source of increased atmospheric CO_2 concentration, since the pre-industrial period, is from fossil fuel usage**. Land-use change is also providing another significant but smaller contribution. As in the United States, the transportation sector gives the largest share of greenhouse gas emissions (28.5% of the 2016 GHG)[3]. The green house gases emissions come mainly from burning fossil fuel for our cars, trucks, ships, trains, and planes. More than 90% of the fuel used for transportation is petroleum based, which includes gasoline and diesel. Other sectors, electric generations (28.4%), industry (22%) and commercial/industrials (11%), contribute to the next largest shares of green house gas emissions as these sectors also performed by burning fossil fuels.

Various impacts of climate change will still continue for centuries even if greenhouse gases emissions are stopped. The risks of abrupt or irreversible changes increase as the magnitude of the warming increases. Integrated policies of adaptation and mitigation are the best strategies for reducing and managing the risks of climate change. As stated by the IPCC reports[2], substantial emissions reductions over the next few decades can reduce climate risks in the 21st century and beyond, increase prospects for effective adaptation, reduce the costs and challenges of mitigation in the longer term and contribute to climate-resilient pathways for sustainable development.

Mitigation limiting to 1.5°C increase should be as follows:

- **Home & industrial electricity reduction at around 55–75% in 2050 (compared with reduction at only 50–70% in 2050 for 2°C global warming).**
- **For the transportation sector, the use of low/zero emission vehicles would rise from less than 5% in 2020 to about 35–65% in 2050 (compared with 25–45% EV/HEV use for 2°C global warming)**.

Economic, institutional and socio-cultural barriers may inhibit these urban and infrastructure system transitions, depending on national, regional and local circumstances, capabilities and the availability of capital. Therefore, from now on, we need to increase the deployment of renewable clean energy resources for building/industrial application and zero emission vehicles.

ElektrikCar-Elektrikka and its partner Thunder Sky Winston Battery (CHANGTAI) Ltd since the last decade have been working to mitigate the main sources of GHG emissions from transportation, electric generation, industry/factory and commercial-industrial sectors. We perform research and development on the deployment and marketing of electric vehicles (EV), hydrogen fuel cell electric vehicles (FCEV), and the adaptation of lithium ion battery for solar-battery power plants. While our partner Thunder Sky Winston Battery, a well known battery

2 https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf
3 https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions

manufacturer in China, has conducted R&D, sales and marketing of lithium iron phosphate (LiFePO4) battery for transportation (EVs & FCEVs), clean power plants and factories to reduce industrial-commercial GHG emissions. Thunder Sky batteries are well known in the US, Europe and Asia and have been deployed in various electric vehicles, boats, solar-battery power plants and emergency uninterruptible power system (UPS).

These are our pain points so far on our need to reduce GHG emissions by developing various EVs and FCEVs in different part of the world and proliferating the use of clean renewable energy sources for building and industrial applications. We realize that automotive industries are not only technologically intensive but are also very capital intensive undertakings. The capital intensive nature of auto industries have failed so many new EV companies such as Faraday Futures, Fisker, Aptera and many others. Even Tesla Motor Inc. has so far never been able to log any net profit while at the same time has taken in several billions USD. All of these companies, except Faraday Future, have received also low interest manufacturing loans in tens to hundreds millions USD from the US government to get them off the ground even with mixed results. **Our approach is unique however. We never received any loans or debts since our operation in 2012 while at the same time we have revenues from our vehicle sales, vehicle developments and consulting.** Instead of building a giant corporation with several activities, our scaling-up approach is more on empowering communities (small part manufacturers, boutique suppliers, workshop owners etc.) who work with us in building multi-national companies together. Thus, this is where the blockchain technology comes in. As always in our case, we rely on effective and nimble teams with the focus on increasing supporters and shareholder values.

2. Problem Solution and Why Joining our STO

Elektrikka Incorporated is set-up by ElektrikCar, LLC, an automotive start-up to conduct R&D and manufacturing of electric and fuel cell electric vehicles. Both companies are registered in West Bloomfield, Michigan, USA in 2008 for ElektrikCar LLC and 2018 for Elektrikka Inc. Elektrikka Inc. will be the legal entity to introduce cryptocurrency tokens into its operation with objectives to streamline our supply-chain, production/manufacturing process, computer simulation, payrolls as well as vehicle sales, marketing, after sales service and maintenance**. In our Security Token Offering (STO) or Initial Coin Offering (ICO), we are offering tokens as securities in addition as utility tokens complying with the US Securities and Exchange Commission (SEC) exempt offerings of Regulation D, Rule 506(c).** Therefore, our current ICO will be considered by the US SEC as securities offering as our token buyers will have rights and obligations as shareholders in Elektrikka Inc. The funds raised by our ICO will be used for the following plans :

- To leverage and develop our own blockchain[4] applications which will serve as the company computational core and most importantly to allow our customer creating payments from the time of purchase up to after sales service/maintenance and etc.
- To scale-up our world wide manufacturing and marketing of our current and future electric vehicles as well as our fuel cell electric vehicles.
- In a joint project with Thunder Sky Winston Battery (CHANGTAI) Ltd, to proliferate the use of solar-battery power plants around the world.

[4] https://bitcoin.org/bitcoin.pdf

Figure 2. Products of ElektrikCar-Elektrikka Project

As a new electric vehicles company, that builds vehicles from scratch started in 2012, ElektrikCar-Elektrikka now has operations in Indonesia, China and USA. Our current product lines consist of the following types :

> **electric passenger/sports cars, hydrogen fuel cell electric buses, electric three wheeler, electric motor cycles and lithium ion battery sales.**

These products are on sale in Alibaba[5] website attracting many interests and inquiries asking all of our products (as seen on Figure 2). Our electric sports coupe Tucuxi[6,7,8] (in red color) was popular in Indonesia around 2012. We continue working on it with an addition of the New Tucuxi T18 vehicle (the blue colored coupe). Tucuxi is still popular in Indonesia till now but the sad

5 https://elektrikcar.trustpass.alibaba.com/?spm=a2700.icbuShop.0.0.3243211dOSJMy2
6 https://www.youtube.com/watch?v=4YkuvOr0KNY
7 https://www.youtube.com/watch?v=53t4yyUcFr0
8 https://www.youtube.com/watch?v=0S3-yJ7c6vs

story was that the first owner (a high ranking Indonesian cabinet minister) crashed the first vehicle intentionally on a mountain[9] in 2013. Tucuxi performed excellent (as it was designed based on the US National Highway Safety Administration, NHTSA) protecting vehicle passengers from impact without fire hazards.

The year after, we manufactured clean energy vehicles in Shenzhen, China by converting conventional buses into hydrogen fuel cell electric vehicles[10]. Hydrogen fuel cell power module produces electricity to be stored in vehicle battery packs and thus increase electric vehicle driving range[11]. The fuel cell electric buses can be charged as normal battery electric vehicles and also safely refueled with pure 99.99% hydrogen gas.

Our partner's Lithium Ion battery cells, manufactured by Thunder Sky Winston Battery (CHANGTAI) Ltd, are also our promoted products in North America and the US especially. We are the North American representative of Thunder Sky Winston batteries. Mr. Winston Chung is the chairman of the Thunder Sky Winston Battery (CHANGTAI) Ltd and is our dearest friend and business partner. We have delivered significant number of batteries for emergency UPS, solar-battery power plant projects, electric boats, private electric vehicle applications and etc. **We just completed a project to power several cities using solar cells in remote islands of Alaska.**

Additionally, we have two concepts electric vehicles which are ready for production too now. Our electric three-wheelers, R3EV, will be marketed in countries located mainly in east Asia, southeast Asia, and Europe where motorcycles are the main transportation vehicles. Based on our observation in Indonesia especially, motorcycles are loaded to breaking points to carry three to four persons (two adults and two children) for daily commutes. It is very unsafe in terms of crash impact and especially when riding on uneven roads with potholes. This is the reason why we develop air conditioned - with protective structural enclosure - electric three wheeler (seen in blue color)[12]. The intention is to manufacture affordable and safe electric vehicles where a young family of four could ride in safety and comfort around town.

Additionally, we also build the electric motorcycle concept for daily rides, fun and racing performance. The Murai motorcycles can be customized and tweaked around to modify its motor power and battery pack capacity so that these Murais can used as racing, sports or average normal bikes. The following Figure 3, summarizes our products compared with competitors.

9 https://www.youtube.com/watch?v=jCwybzCCcpY
10 https://www.youtube.com/watch?v=pD-Qg6K2S9s
11 https://www.youtube.com/watch?v=evhUwjpYjMw
12 https://elektrikcar.com/r3ev.html

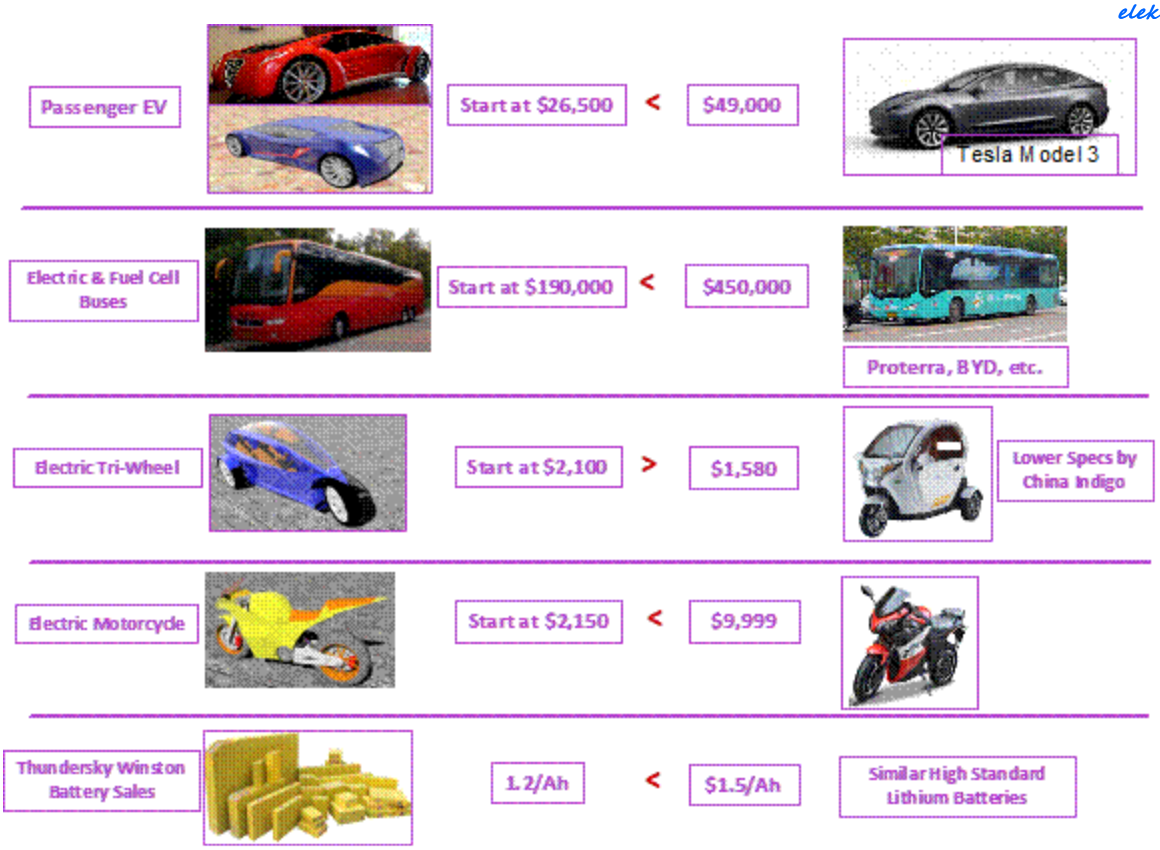


Figure 3. *eletrikka* Products Competitiveness

As ElektrikCar listed in Alibaba[13], we have attracted so many inquiries to purchase our products. Currently, we are accepting orders to build fuel cell electric buses, battery electric buses version, Tucuxi EV and lithium ion batteries. The new Tucuxi T18, R3EV three wheeler and Murai electric motorcycles still need more verification to be ready for productions. Tucuxi EV needs to get verification from European Community Whole Vehicle Type Approval (ECWVTA). We also obtain various interests from networking contacts and companies who would like to be our agents, dealers or assembly workshops in China, Taiwan, USA, Mexico, Germany, Poland, United Kingdom, UAE, Jordan, Australia, India, Egypt, Brazil, Turkey, Bulgaria and Saudi Arabia.

For our EV and FCEV products, **our strength** and **competitiveness** can be summarized as follows:

- **We offer more value and performance with competitive pricing, as seen in Fig. 3.**
- **Our products styling and design are futuristic as well as eye catching**
- **The use of state of the art computational aided design and engineering (CAD and CAE**)
- **We have zero debt and expands based on our demands or sales**

13 https://elektrikcar.trustpass.alibaba.com/?spm=a2700.icbuShop.0.0.3243211dOSJMy2

Compared with other conventional automotive companies, our manufacturing and business strategies are unique and already geared towards decentralization (see Figure 4). Instead of building one or several large complexes of assembly plants, our companies are to develop many decentralized small size assembly plants (dAPs) in different countries and continents. These are small/medium sized workshops which are converted into vehicle final assembly points. dAPs are not complicated assembly plants as we know it today of any conventional automotive factories. In our case, all of the modular/sub-modular assemblies are processed and integrated in the suppliers facilities.

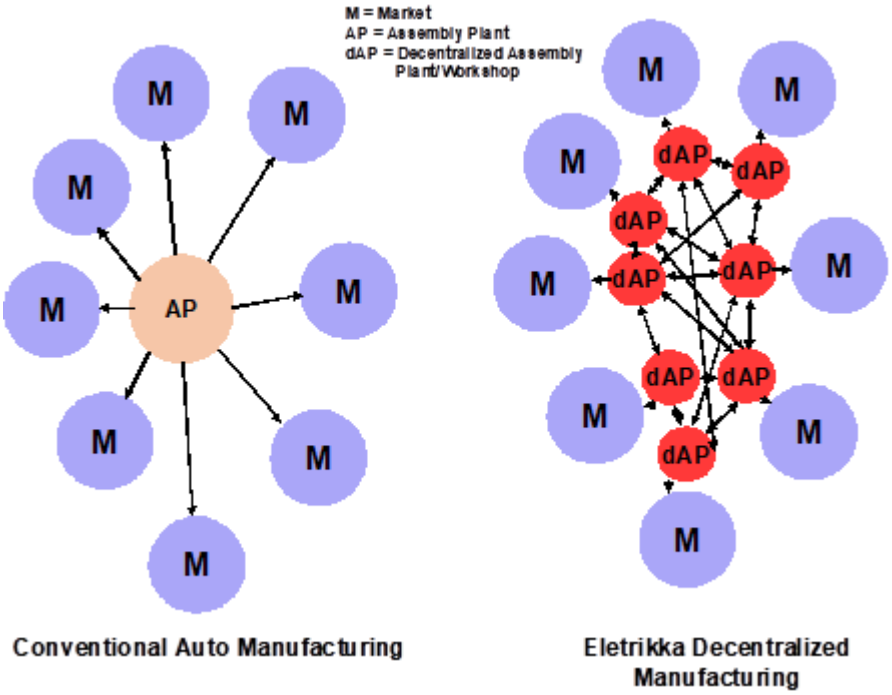


Figure 4. Elektrikka Decentralized Assembly System

Elektrikka workshops then assemble the final integration stage before delivering complete vehicles to customers. dAPs could be sometimes not owned by Elektrikka either. It could be managed under licensing agreement or jointly operated with other companies. Thus, Elektrikka operations encourage outside participations to work with us in proliferating clean energy vehicles. This strategy allows us to send parts or modular parts directly from supplier facilities to dAPs around the world closed to any markets. The local dAPs can always be treated as local companies by any countries where they operate. dAps could get preferential tax and tariffs from the host countries as dAPs are registered locally as well. All of these processes obviously are managed by Ethereum blockchain employing various decentralized applications (DAPPs), smart contracts and democratic autonomous organization (DAO).

In the first step, we leverage **Ethereum ERC-1404, a modified ERC-20 smart contract that is tailored for security rules by the US SEC, to manage our STO** and later to organize supply chains between suppliers, suppliers-dAPs, dAPs-dAPs and dAPs-markets. In the next level of our decentralized operations, we will develop our own blockchain core and dAPs nodes. Thus not only Elektrikka deploy the core nodes but also dAPs (owned or partly owned by others) will also replicate our nodes as well. Discussions on the deployment of blockchain technologies into

our operations are discussed in Section 4. As a summary the following list details the advantage of adopting decentralized assembly plants (dAPs) strategy for our operation :

- Less workshop/plants complexities, costs and setting-up process
- More environmentally friendly carbon footprints for smaller plants powered by clean energy sources.
- Engage more communities and public manufacturing participation. Basically, franchising manufacturing process. This is our ultimate goals for not only reducing GHG (green house gases) but most importantly reducing income inequalities between societies and thus will help reduce world poverty.
- Better tax and tariffs on local dAPs as dAPs are considered as local/native companies anywhere
- Less complexities for parts modules/sub-modules shipments and deliveries
- Easier to be managed as DAOs (decentralized autonomous organizations) using Ethereum or later using our own blockchain network

Basically, we intend to build not just a cleaner environmentally friendly decentralized electric or fuel cell electric vehicles but most importantly, we would like to encourage more participation of the public or communities around the world. We would like to build the first world wide community of decentralized companies. Our ideals are to promote co-operations among communities in the world and perhaps by doing it we could stop the worsening effect of terrible climate change, promote world peace and make our planet better for the next generations. And also perhaps by doing these activities, we could help eliminate world poverty.

3. Detailed Product Description

Our vehicle development integrates the application of advance computer technology for design (Computer Aided Design/CAD), engineering (Computer Aided Engineering/CAE) and testing (CAT). State of the art technology enables us to develop vehicles and change vehicle models rapidly. It also allows the project to reduce costs since accurate virtual design allows the first vehicle to be built without trial and error. It means that physical prototype vehicles can be minimized. To further reduce costs and minimize design issues, we utilize off-the-shelf parts from our suppliers which have been tested and used by various automakers and EV enthusiasts. These components are the Lithium Ion batteries, motor and controllers, steering and suspension systems, brake systems, heating and cooling systems, electronics, seat systems, safety systems, wheel and tires, windshields and etc. Components or sub-components which are unique to our cars are vehicle styling and architecture, aluminum space frame configurations, vehicle control units (VCU) software, carbon fiber bodies and lighting systems.

3.a. Electric Passenger/Sports Cars [14]

The first ElektrikCar product is the electric sports coupes, named Tucuxi (as seen in Figures 5-7) intended for the US, Europe and Asia. The name Tucuxi (pronounced, *too-koo-she*) is selected to raise awareness for dolphins preservation[15]. Tucuxis are endangered fresh water

[14] https://www.elektrikcar.com/tucuxi.html
[15] https://www.worldwildlife.org/stories/freshwater-dolphin-species-and-facts

dolphins found throughout the Amazon and Orinoco river basins which are under threats in their habitat due to hydropower dam developments and scarcity of migratory fish as their food source. Our limited edition Tucuxi looks similar to the endangered dolphin species Tucuxi. The Tucuxi styling can be seen in Figures 5, 6 and 7. Tear drop styling is implemented in order to reduce vehicle drag.

Figure 5. Tucuxi – ElektrikCar Limited Edition Model

Tucuxi body skins are made of high strength carbon fiber composite being attached to high strength stainless steel space frames. This car is basically hand made in terms of its physical shape, moulds and accessories. The computer models were downloaded and stylists started to create physical clay mock-up plotted from 1:1 scale print out. Its performance is impressive as an electric sports car that can accelerate from 0-60mph in less than 5 seconds, powered by 200KW (268Hp) or 250KW (335Hp) permanent magnet AC motor. Tucuxi's battery packs can be customized based on three models, Model A for 22KWh, Model B for 51KWh and Model C for 71KWh that will translate into 85, 200 and 250-300 miles driving range respectively on one single charge. Three Tucuxi models are also optioned for pricing with Model A being offered at $25,800, Model B for $36,000 and Model C for $45,000 as their base prices. All of these models will be able to use the DC fast charger option to allow for a very short charging time. Basically, these pricings are lower than our competitors right now. Our objective is to offer the same three models at much lowered price once we sustain higher volume order. We target to offer all Tucuxis at the highest price at around $30,000 (the high end model) and around $20,000 (for the lower model). This is one of our basic objectives that is to proliferate more clean energy vehicles to the public with the assistance from our current STO.

Figure 6. Tucuxi EV Interior

Figure 7. Tucuxi with Opened Vertical Door

The Following information are Tucuxi technical specifications. Tucuxi EV brochure can be downloaded from our site here[16]

Technical Specifications
Battery : Lithium Iron Phosphate or Lithium NMC
Range : 85-300 miles per charge depending on battery capacities
Charging Time : Depends on Battery Configuration 1-3 hours
Passenger Capacity: 2 (+2) or 4 passengers
Maximum Speed: 180mph
Bodies : Carbon Fiber or Aramid Carbon Fiber
Power : 250KW Permanent Magnet AC Motor

Battery Pack, Driving Range and Base Price
Model A: 22KWH, 85 mile, $25,800

16 https://www.elektrikcar.com/uploads/3/4/0/7/34070527/tucuxi_elektrikcar_brochure.pdf

Model B: 51KWH, 200 mile, $36,000
Model C: 71KWH, 250-300 mile, $45,000

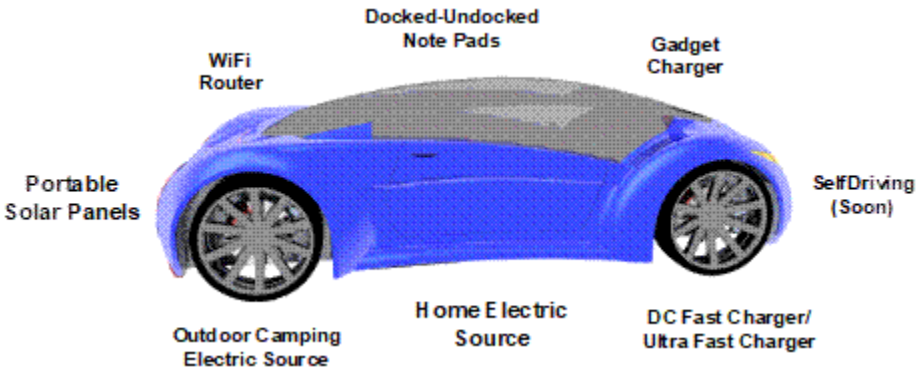
Dimensions
Length: 4426.9mm / 174.3 inch
Width: 1930.7mm / 76.0 inch
Height: 1282.7mm / 50.5 inch
Wheel Base: 3118.0mm / 122.8 inch
Track: 1606.5mm / 63.2 inch
Ground Clearance: 150.9mm / 5.9 inch
Curb Weight: 1112.1Kg / 2500lbs

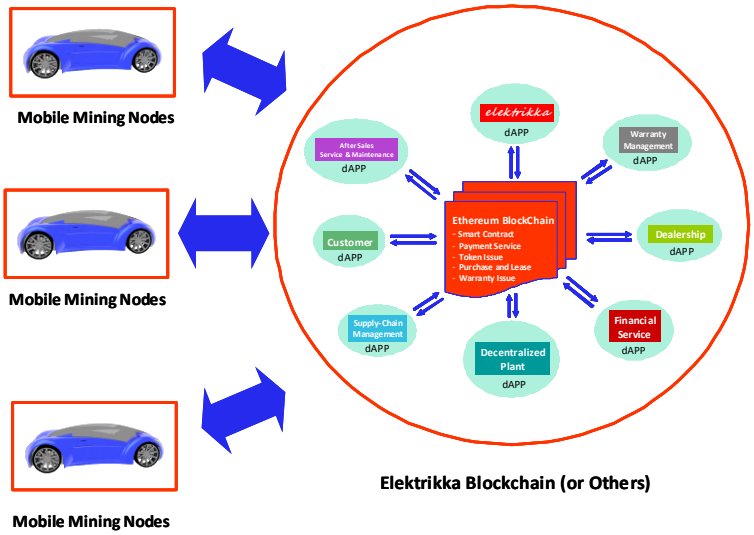
As the primary electric storage cells, Lithium-Ion, Lithium Iron Phosphate (LiFePO4) or Lithium NMC are being used for our battery pack.

Our Tucuxi EV is designed as mobile platform at home or during traveling and in that regards, we develop our electric cars not just to be a transportation means. In addition to the normal entertainment and safety package, your Tucuxi is equipped with the following advance features:

- WiFi based Note pads that can be docked or undocked, so that you continue your works
- WiFi router for your internet access at home, during travel and away
- Electrical charging sources for all of your gadgets
- Electrical power source for your home needs. You could **power your home from your car.**
- Electrical power source for your outdoor adventure
- Portable solar panel for any charging needs. This is a real solar panel of 480-800Watt total power
- DC fast charger or ultra fast charger
- SelfDriving mode capable soon
- **Tucuxi and our EVs could be used as mining nodes with rewards/tokens will be applied to reduce vehicle lease & purchase price.**

The following Figure 8 summarizes the Tucuxi mobile platform capabilities which are unique in our industry.





Elektrikka EVs and FCEVs as Mining Nodes

Figure 8. Tucuxi Advance On-Board Features in Addition to Standard Entertainment (Speaker, Comfort, GPS and etc.) and Safety Packages.

3.b. The New Tucuxi T18

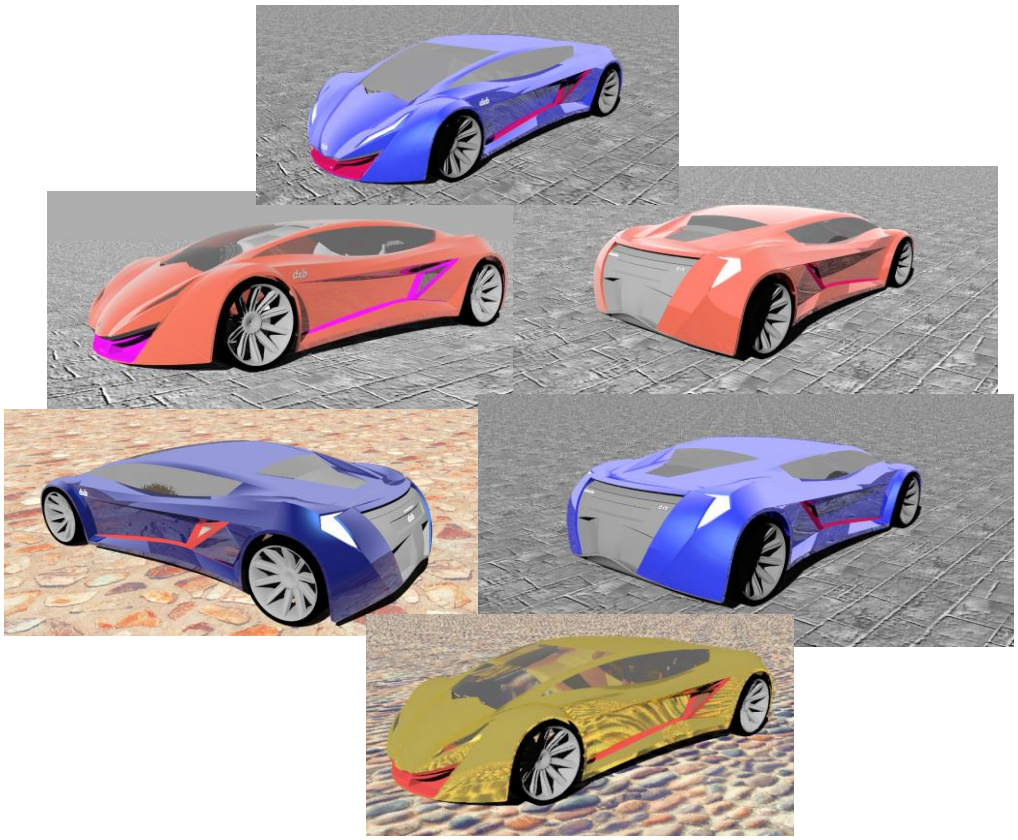


Figure 9. Computer Design Rendering of the New Tucuxi T18

The Tucuxi next generation vehicles, called Tucuxi T18, will have a much longer driving range than the current models. As our design targets, Tucuxi T18 can have at least 600 miles of driving range per single charge. This capability can be obtained by three strategies :

- Using the very high density battery cells. We are studying several battery vendors who could supply us with lithium ion cells with energy density of at least 215Wh/Kg (Tesla latest Model 3 cars have battery cells with only 207Wh/Kg).
- Reduce vehicle gross weight or usually called as the light-weighting program. With reduced vehicle weight, there will be less energy needed to propel vehicles.
- Incorporate vehicle range extender, in our case we will be using fuel cell power module. For the new Tucuxi T18, we plan to use 10KW-20KW fuel cells.

The new Tucuxi T18 will have similar skin material made of high strength carbon fiber composite joined together into high strength stainless steel space frames. It should be able to accelerate from 0-60mph in less than 3 seconds and powered by 250KW (335Hp) or 300KW (402Hp) highly efficient permanent magnet AC motor. Its battery pack will have capacity of 100KWh for a driving range of 400 miles on a single charge on electric mode only. With an addition of 10 KW or 20KW hydrogen fuel cell power module, T18 could reach 600 mile of driving range total. Tucuxi T18 pricing estimate will be around $40,000-$70,000 with several variants to be offered as well. All of these models will use, not only, the DC fast charger to allow for a very short charging time but also the latest ultra fast charging options. We will maintain that the new Tucuxi T18 pricings are lower than our competitors and optioned with hydrogen fuel cells and a much longer driving range. Our objective is still to offer the more advance EVs or FCEV at much lowered prices once we sustain higher volume order. Hydrogen fuel cell characteristics and performance will be discussed in the following electric bus chapter

3.c. Hydrogen Fuel Cell Electric Buses (HFCEB)

Figure 10. Hydrogen Fuel Cell Electric Bus, the China Dream

We learned that the most effective way to reduce vehicle gas emissions is to reduce green house gases (GHG) from public transport emissions. The highest polluting vehicles in all fleets are public buses. This can be both from inter-city or local transit buses. We have

two options in building hydrogen fuel cell buses, started from scratch like Tucuxis in which the vehicle body was built from ground up, or converting it from a conventional platform. The latter was selected, with considerations to reduce complexities of vehicle body build-up. The selected platform is Volvo 9700 coach. It is an intercity bus with the length of 14.4 m long. A very robust and sophisticated bus. The work was started in Michigan in 2013. The bus was partially completed in California a year later and shipped to China in November 2014. More development stages are conducted in China as plans for the bus were changed considerably. The electric bus is called the China Dream as seen in Figure 10.

The original plan for China Dream is to be an electric luxury inter-city bus that can travel for more than 1000km in a single charge. The charging time should be limited to only 1 hour or less. However, in early 2015, the plan was modified. It is no longer a full electric platform. Now, it is upgraded to a state of the art system, hydrogen fuel cell electric bus (FCEB) (see Figure 8). In the dual fuel cell and electric system, the electric storage capacity is added by direct electric charging and by hydrogen fuel cell. The hydrogen fuel cell systems (two fuel cell power modules/FCPM of 33KW each) charge the battery and thus extend the vehicle range. As the range is extended, the battery storage capacity is reduced and directly makes the vehicle much lighter. This is the benefit of the fuel cell electric system. A diagram showing the two systems is shown in Figure 11.

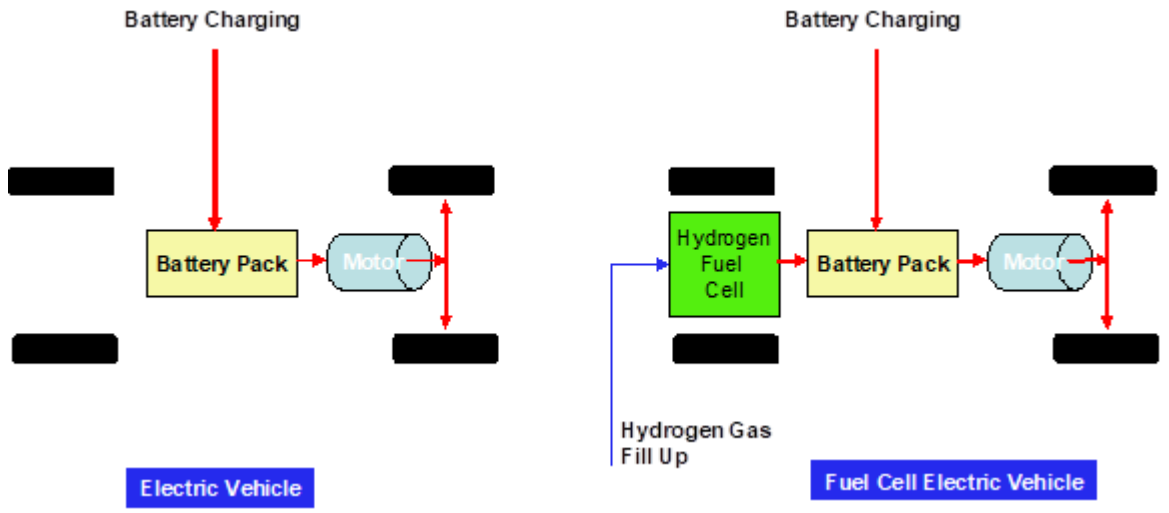


Figure 11. Diagram of Electric Vehicle (Left) Vs. Hydrogen Fuel Cell Electric Vehicle (Right)

As shown in the diagram, the hydrogen fuel cell task is to charge the battery storage system only. The fuel cell modules are not directly connected to the electric drive system to provide motor with driving torque, even though such architecture is possible. It is a less complicated system compared with fuel cell modules connected directly to the electric drive systems.

Compared with a much simpler development of battery electric vehicle, FCEB developments are quadrupled in its complexities. First, hydrogen gas should be kept at 99.99% purity level. The hydrogen delivery system should be safe enough to fill-up the vehicle with highly pressurized hydrogen gas. Hydrogen is a very common gas that exists in our atmosphere. It is non-toxic

and not considered as ozone depleting gas. It is a renewable energy source as hydrogen can be made from the water electrolysis process. The issue with hydrogen is its flammable characteristics. In a closed enclosure or space, the high concentration of hydrogen and fire is not a good mix. Explosion can be generated. However, in open space where the hydrogen leak or dispersion is dissipated right away, nothing will happen. Another issue with hydrogen is its asphyxiated nature. In a closed enclosure, people will be difficult to breathe when there is high concentration of hydrogen gas. Again it will be safe in an open enclosure.

So how does hydrogen fuel cell work? The basic principle of the hydrogen fuel cell is the chemical reaction of hydrogen gas with oxygen where electrolyte membranes separate hydrogen proton and electron. Electron will travel to the cathode/positive pole and creates voltage difference to generate electricity. The proton will be reacting with oxygen and generates water. Thus, basically these chemical reactions produce electricity and water. No toxic emissions are generated.

Developing fuel cell electric vehicles require the works on more systems than battery electric only vehicles. There are high pressure gas storage tanks, high pressure tubing system, pressure relief device, pressure regulator and so many others. There are more than 20 vehicle systems added to our electric drive. All of these systems should be in-synched with each other without producing any fine gas leaks. This is the major concern that we spent a lot of time checking and testing.

So what are the benefits with all of these troubles. First, China is in dire need to reduce their smog producing vehicles. Chinese major cities like, Beijing, Shanghai, Shenzhen and others suffer terrible smog clouds which have paralyzed these cities. One day when we arrived in China, Beijing was completely shut down due to paralyzing smog. Thus, many Chinese cities need zero emission vehicles with no range anxiety issues. Electric vehicles suffer from travel range limitation. Also, EVs charging time is still taking too long. We can not fill up our vehicles in several minutes while we buy snacks in our gasoline stores. Fuel cell electric vehicles alleviate these limitations. We could obviously fill-up our vehicles with hydrogen gas similar to gasoline. No mess, no smell and fast enough. The current issue on deploying FCEBs is to offer them at an affordable price. However, this is an issue that can be solved by using increased production volume. The more interests on fuel cell power modules, the cheaper they will be. This is the objective of our FCEB development work right now.

Figure 12. Some of Our Hydrogen Fuel Cell Electric Buses (Red, Green and Brown Buses). Elektrikka Founder, Danet Suryatama (Light Blue Polo Shirt) and Thundersky Winston CEO Zhong Xuhang (White Shirt) are in Front of the Red Bus

3.d. Smart Grid and Un-Interruptible Power Systems (UPS)

This is another project that we are working on at the moment. Our partner is the most sought after battery manufacturer in China, Thunder Sky Winston Battery (Changtai) Ltd. The company - located in the City of Zhangzhou, Fujian province China - is one of the best Lithium-Ion Iron Phosphate (LiFePO4) manufacturer in the world and owns the largest full automatic production factory for rare earth lithium-ion power battery. The Thunder Sky Winston batteries have been exported to all over the world, mainly to Europe, North America, India and many other countries. Mr. Winston Chung is the chairman of the Thunder Sky Winston Battery and is our dearest friend and business partner. ElektrikCar and Elektrikka are the North American representative for Winston batteries. Our objectives, beside promoting Winston Batteries in the US and Indonesia (see Figure 13)[17], are to offer integrated solar power – battery storage system to residential customers around the world and other applications. We have delivered Winston batteries in the US for boat, electric vehicles, solar-battery power plants and even defense applications recently.

[17] http://en.thundersky-winston.com/article/detail/93.html

Figure 13. Danet Suryatama (middle, number three from Right) Representing Thunder Sky Winston Battery during Battery Show in Novi Michigan, USA, 2015

A modularized and integrated photo-voltaic (PV)-battery storage power plants are focused product for Winston batteries. This smart grid electric generation is based on decentralized networks of power plants located on residential/small business units with each plant is interconnected to the main electric grids (smart grid). Each residential/small business plant consists of PV panels, lithium iron phosphate battery storage system, regulators, converters/inverters and etc. Interconnection between the main grid and decentralized power plants will be designed to ensure continuous and safe load sharing mechanism taking into account electricity usage fluctuation/variation. Winston lithium iron phosphate batteries based on Yttrium anodes, with high charge and discharge rates, are used to contain high fluctuation load cycles during operation. Our objectives are to market decentralized power plant efficiencies and load sharing mechanism. The application of blockchain technologies into our smart grids in terms of smart contract management between solar-battery powered houses is needed in a decentralized power sharing system.

The uniqueness of our integrated photo-voltaic (PV)-battery power plants is in its decentralized networks located on residential/small business customers. Using this approach the difficulties related to design and maintaining electronic protection units are still low for each power plant system. The size and capacity of system regulators and inverters will be kept at minimum while still able to take into account electricity power/usage fluctuations during the day and night. Load sharing power mechanism is practically negligible since the system only operates on PV charging and battery storage charging/discharging.

The load response communication protocol will be based on power demand related to the battery depth of discharge (DoD) or state of charge (SoC). Practically, PV panels will charge batteries to its full capacity (0% DoD/100% SoC) and at the same time, the battery could be discharged to provide electricity for the house. PV panels then, can also directly re-route

electricity to the main grid should the 100% SoC is achieved. In a different load cycle, the battery system will be charged during low usage period directly from the main grid. With these three loading mechanisms the home power plant system will be kept to be operating continuously regardless of the power fluctuation. The first priority of electricity drawing will always be from the battery systems and hence, since the batteries can handle high charging/discharging rates, the system will be immune to power usage fluctuation.

Our current proposed smart grid project will be designed to install 8-15KW of PV panels on each customer's homes for a total of 300KW of the entire networks of power plants. The capacity of the battery storage system will be similar to the PV panels capacity and thus a house with 8KW of PV panels will be equipped with 8KWH of battery storage system. For such battery capacities, each power plant only needs 16 cells of 3.2V-160AH Winston batteries with a total dimension of 0.06m3.

Our lithium iron phosphate batteries are supplied by Thunder Sky Winston Battery (CHANGTAI) Ltd. As one of our team member, Winston Batteries is a Hong Kong capital enterprise and registered in Hong Kong special administrative region. The group company is mainly engaged in research and application of clean energy. The group has invested in building the rare earth lithium power battery production base in Shenzhen, China. The rare earth lithium-iron power batteries produced by the company are exported to all over the world.

Thunder Sky Winston Group has set up scientific research base for battery material and battery application in University of Texas at Austin, University of California Riverside, University of California Davis and Silicon Valley. The " Winston Global Energy Center" in University of California Riverside has conducted world first-class experimental research in battery technologies. Currently, the Winston Energy Group has been supporting the University of California, Riverside to build the first – in the nation/world – a Sustainable Integrated Grid Initiative (SIGI) (see Figure 14 and 15). The purpose of the initiative is to research the integration of: intermittent renewable energy, such as photovoltaic solar panels; energy storage, such as batteries; and all types of electric and hybrid electric vehicles. It is the largest renewable energy project of its kind in California.

Figure 14. Sustainable Integrated Grid Initiative (Courtesy of UC Riverside)

Thunder Sky Winston Battery (CHANGTAI) Ltd is the main supporter of this project donating million of dollars in battery technology research and the batteries for the UC Riverside Sustainable Integrated Grid Initiative (SIGI) Project.

Figure 15. Solar Cells Functioned as Parking Roof at the University of California, Riverside, USA, SIGI Project (Courtesy of UC Riverside)

3.e. Three Wheeler Electric Vehicle, R3EV [18]

There are things in this world that you wish to do to help so many unfortunate people and we hope that this is one of those. To see babies or young children sitting on their parents lap on a motorcycle and there are four or more of them on a bike, is a disheartening sight. To see them all in an accident is worse. This is the reason why we build these electric vehicles. Based on our observation in Indonesia and China especially, motorcycles are loaded to breaking points to carry three to five persons (two adults and three children) for a ride. This is their only main transportation even though it's very unsafe in crash or impact and especially when riding on uneven roads with potholes. It is so common to ride motorcycles with more than two people in China, southeast Asia all the way to Indonesia. This is our main reason why we develop air conditioned electric three wheeler[19] with structural cage enclosure. Our intention is to manufacture affordable and safe electric vehicles where a young family of four could ride in safety and comfort around town. Our electric three-wheelers, R3EV (pronounced as "*reef*"), will be marketed mainly in Asia (especially east and southeast Asia) as well as Europe where motorcycles are one of the main transportation tool.

18 http://www.elektrikcar.com/r3ev.html
19 http://elektrikcar.com/r3ev.html

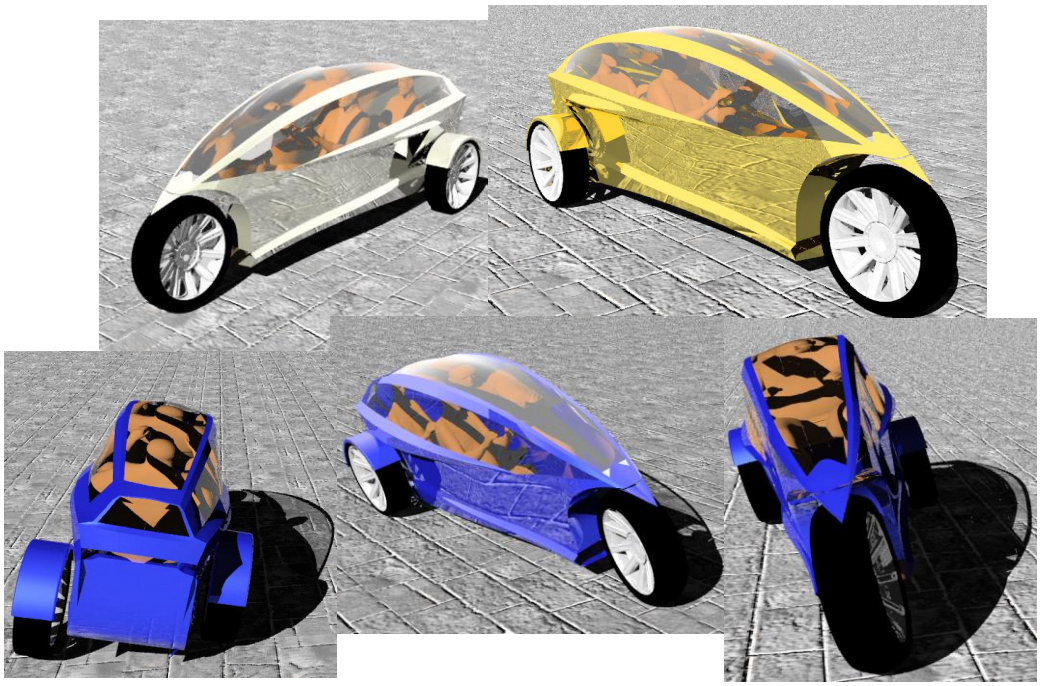


Figure 16. Three Wheel Electric Vehicle (R3EV) and Leaning Condition when Turning

SPECIFICATIONS :

- Range : 70-120km
- Battery Pack : 2000Wh – 4000Wh of LFP or LiNCM
- Motor : 2 x 5KW = 10KW or
  2 x 10KW = 20KW
- Speed : 90km/h or higher
- Body : Composite Metal Alloy
- Charge Time : 0.5-2 hours (depending on charger).
- AC System : electric air conditioned

WHY OWNING IT :

- Clean environmentally friendly vehicle
- Perfect for congested city drive
- Perfect for hip city dwellers
- Drive like a fighter plane
- Joystick control possible
- 2 passengers seats
- Fast charging and can use DC Fast Charge

R3EV electric three wheeler will have skin material made of low strength carbon fiber joined with high strength stainless steel space frames with the above specifications. R3EV will have a price range at around $2,100-$3,500 USD with several variants to being offered. We will make our best effort to reduce these pricings lower once volume of orders have been sustained. **Our main objective to build these vehicles is to offer them as many as possible that people will be more protected on the road instead of riding on motorcycles for their daily used.**

The unique characteristic of R3EV is on its ability to lean or tilt when turning to compensate centrifugal forces. The leaning feature can be seen on the lower parts of Figure 15. This feature is performed using electric gyroscope installed on the vehicle to send signal to vehicle control

unit to start leaning. Another feature that support tilting is on the front wheel centering. The front wheel will always turn to true forward automatically after the steering is being turned. We are considering to put joy-sticks as the vehicle main steering control.

3.f. Murai Electric Motorcycle [20]

Another concept that we build is Murai (pronounced as "*moo-ray*") electric motorcycles designed for motorcycle enthusiasts and hobbyists. The Murai motorcycles can be customized and tweak around to modify its motor power and battery pack capacity so that these Murais can used as racing, sports or average normal bikes. Murais can be seen in the following Figure 17.

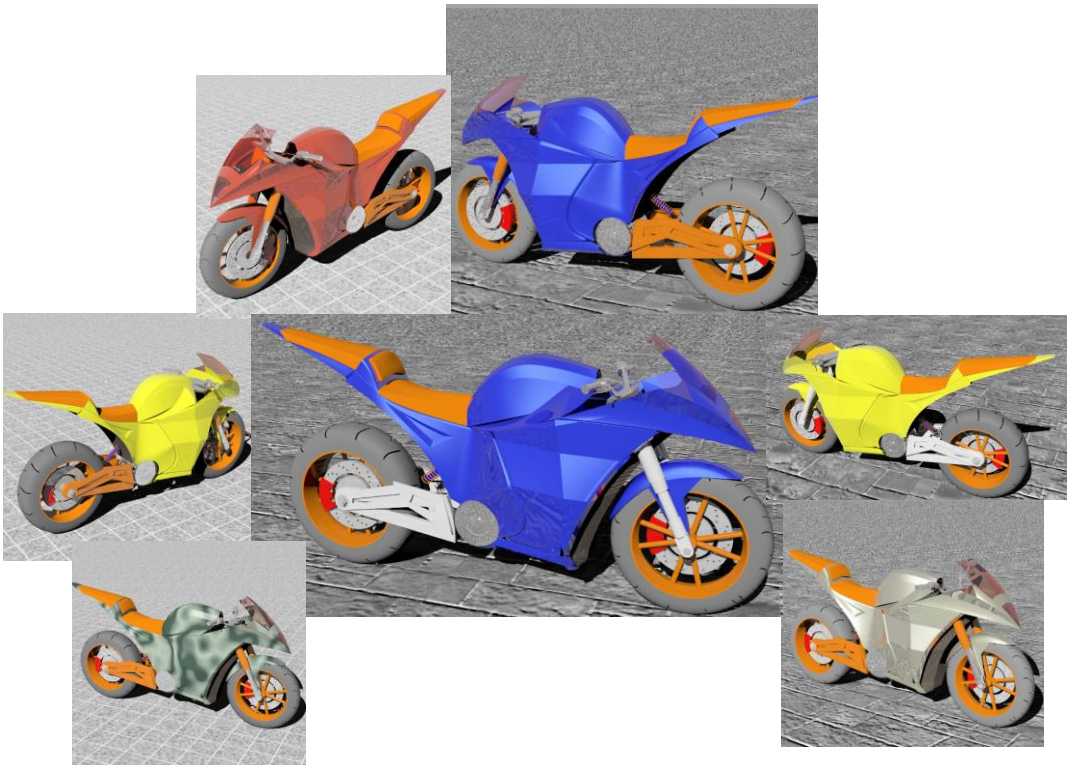


Figure 17. Computer Design Rendering of Murai Electric Motorcycles

Murai electric motorcycles will have body structures made of carbon fiber and high strength stainless steel space frames. Its baseline motor will be powered by 2000W to 20,000W (20KW) based on selected options. Its battery pack capacities can be set between 1440-6000Wh for a driving range of 70-200km. With a fast charger or a decent 3000W charger the vehicle can be charged in around one hour. Murai will have a pricing range at around $2,150-3,500 USD with several variants to being offered. As with the R3EV, we are doing our best to reduce these pricings once volume of orders have been sustained. These are the summaries of Murai electric motorcycle.

[20] http://www.elektrikcar.com/murai-electric-bike.html

SPECIFICATIONS :
- Range : 70 mile(113km) – 125 mile (200km)
- Battery Pack : 1440Wh-6000Wh of LFP or NCM Battery
- Motor : 2000W-20,000W
- Speed : 150km/h (96mph)
- Body : Composite Metal Alloy
- Charging time : 0.5-2 hours (depending on charger).

WHY OWNING IT :
- Clean & environmentally friendly bike
- Perfect for racing with a larger motor
- Perfect for city commute
- Quite and fast
- Economical and reliable
- Fast charging and can use DC Fast Charge

4. Electric Vehicle Market Size

As reported by Bloomberg NEF[21], total battery electric and plug-in electric vehicles on the road had just reached 4 millions by the end of August 2018. This milestone is higher if electric buses are included as well. The 4 million vehicle total has been reached by July 2018 if electric buses are counted in the tally. It is expected that the total electric vehicle sale will reach 5 million vehicles by mid 2019, as seen in Figure 18. China plays significant roles, for this sales volume, with 37% of world electric vehicles deployed since 2011 and with 99% of electric buses. However, based on the total percentage of a specific market, Norway has been leading by far with 40% of electric vehicles[22] from its total market in 2017 (see Figure 19). This number is significant as it shows electric vehicles adoption level in Norway. **The EV market size is around $106.5 billion at 2018 with an estimated growth of $356.5 billion by 2023**[23].

For the electric motorcycles and three wheelers, there are 250 million two-wheel electric motorcycles on the road in 2017 driven by mostly China's demand (as reported by Global EV Outlook[24]). This increasing volume is also sustained by annual sales of 30 millions of electric motorcycles. Ninety five percent (95%) of Chinese motorcycles are electric. There are also 50 million electric three wheelers in China as of 2017. Current market size of two-wheelers (motorcycles) is $19.3 billion to grow by 7.8% in 2018[25].

By 2030, it is predicted that there will be 125 million electric light-duty vehicles on the road. Should the EV30@30 campaign be successful, there will be 228 million (100 million more) electric light-duty vehicles on the road (excluding two- and three-wheelers), as EV30@30 campaign's objective is to get a 30% electric vehicle total percentage by 2030. Two- and three wheelers will be at 455 million by 2030 or 585 million in the EV30@30 scenario.

21 https://about.bnef.com/blog/cumulative-global-ev-sales-hit-4-million/
22 https://www.iea.org/gevo2018/
23 https://globenewswire.com/news-release/2018/09/06/1566275/0/en/Electric-Vehicle-EV-Market-Revenue-USD-356-5-Bn-by-2023-at-18-96-CAGR-Opportunities-in-Emerging-Economies-to-Drive-Sales-of-Electric-Vehicles.html
24 https://activatecp.com/wp-content/uploads/2018/06/global_ev_outlook_2018.pdf
25 http://www.digitaljournal.com/pr/3680534

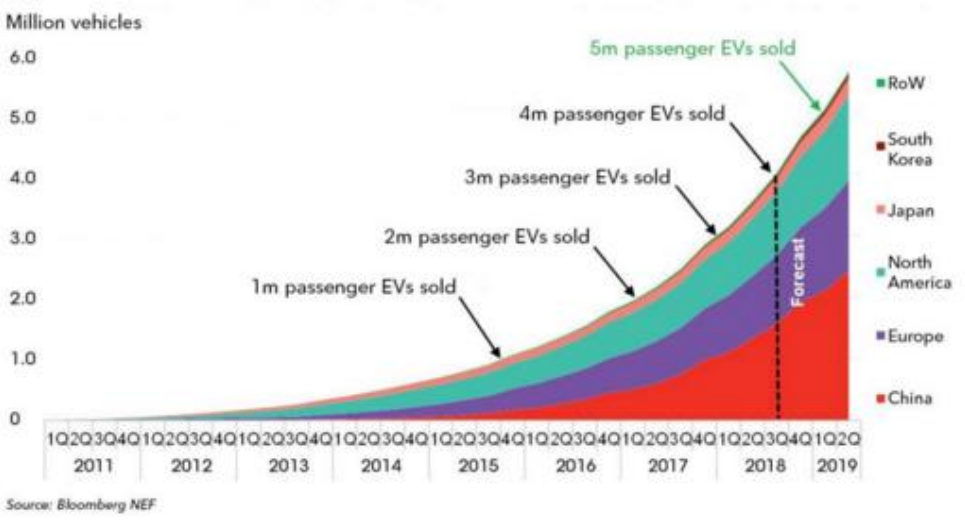


Figure 18. Total Cumulative Electric Vehicle Milestones (Courtesy of Bloomberg NEF)

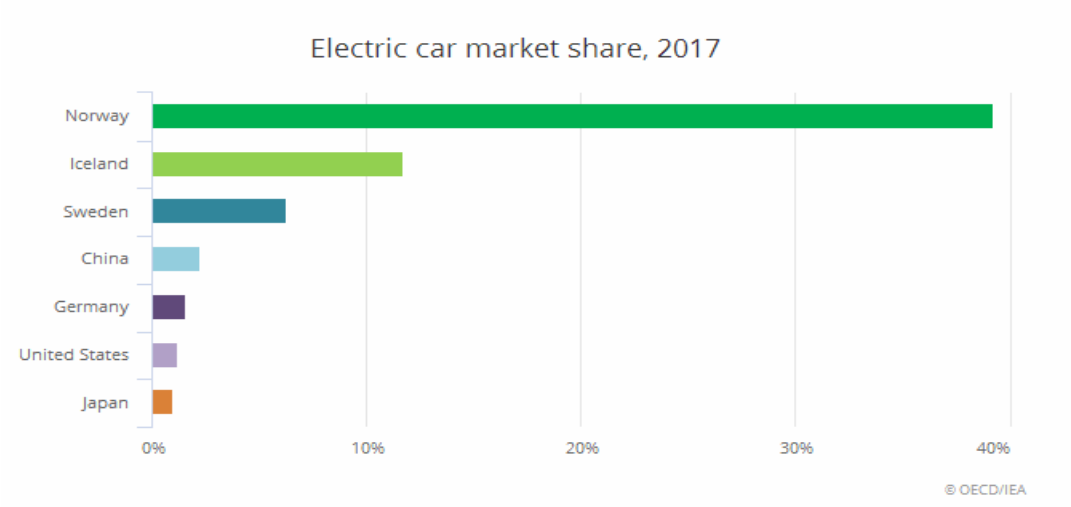


Figure 19. Electric Vehicle Market Share in Specific Local Market (Courtesy of OECD/IEA)

5. Blockchain[26] Technologies

The inherent nature of automotive industries is the perfect example of blockchain technologies application (see Figure 20). An automotive company on - a day to day basis - has to deal with various menial tasks distributed among company departments that take so much man-power such as, supply-chain management, warranty claims, manufacturing plant activities, dealerships, after sales service, maintenance, design and production, vehicle testing, high power computations (HPC), HPC maintenance/management, and many others. Some of these works really labor intensive however most activities could be automated using blockchain smart contracts and the use of decentralized applications (dAPPS). As for an electric vehicle company, there are even more activities that need to be managed such as, charging, charging

26 https://bitcoin.org/bitcoin.pdf

supports, battery pack monitoring and maintenance and the novel approach of using **vehicles as mining nodes**.

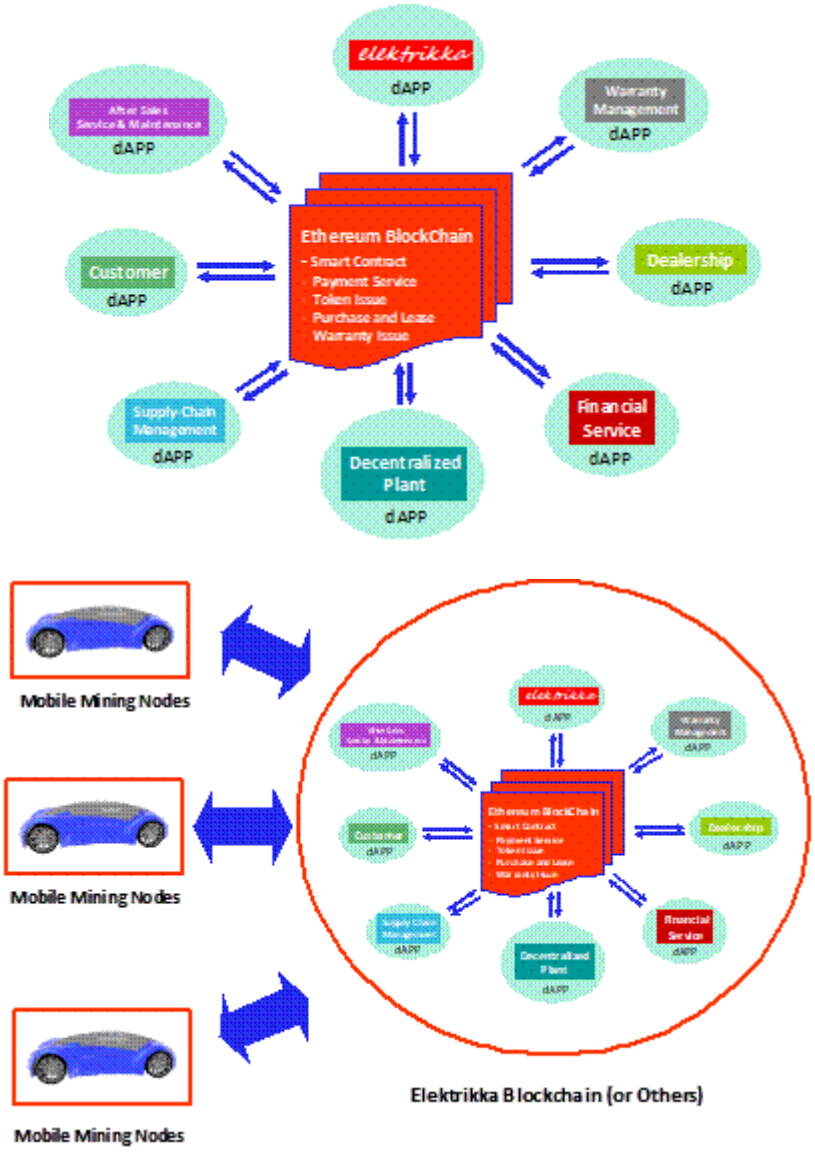


Figure 20. Some Processes (not All) to be Conducted using Blockchain Technology (or Ethereum Blockchain). Please Note on the Use of EVs & FCEVs as Mining Nodes

The Elektrikka blockchain project adopts the integration of advanced blockchain technology into our EV and FCEV manufacturing process and operation. We are setting-up a streamlined system using a digital cryptocurrency for processes as seen in Figure 20. **Decentralized Applications (dAPP) will be developed to create e-wallets, processes, contracts, agreements and payments between all units of Elektrikka Inc.** These dAPPs will serve as the gateway/portal and currency wallets to send or harvest various transactions over Ethereum blockchain network. As of now, our concentration is to create Elektrikka dAPPs to interface and streamline our process with the Ethereum network. In the future and if our needs arise, we will develop our own Elektrikka Blockchain core nodes as well and the use of **Elektrikka electric vehicles as mining nodes.**

The Elektrikka FCV security and utility token will be an ERC-1404 smart contract – a modified ERC-20 contract - compliant with regulations set by the US SEC. Our tokens offering - to be classified as securities - will follow the US SEC exempt offering of Regulation D, Rule 506(c). The SEC regulations require our FCV tokens to be securities (thereby buyers own stakes in Elektrikka Inc.) which then also function as utility tokens to access our platform.

6. Token Economics

Our FCV Token will be priced at $10 per token (1 FCV = $10). The tokens can be paid in Bitcoin, Ether (ETH) or fiat currencies. Our ERC-1404 Tokens are considered shares in Elektrikka Inc. as tokens sales are considered sales of securities by the US SEC exempt offering of Regulation D, Rule 506(c)[27]. Regulation D sales are restricted only for Accredited Investors (for the US and non-US persons) as stated in the following SEC documentation[28]. Accredited investors are investment companies, hedge funds or banks or individual who has household income of more than $200,000 USD per year or net worth of more than $1,000,000 USD.

To protect investors, especially from ICO frauds and pumping-and-dumping practices, the US SEC requires that securities being sold are classified as restricted securities as stated in the US SEC Rule 144[29]. Restricted security means FCV tokens can not be traded for one (1) year after the purchase date for non reporting company. Elektrikka Inc. will adhere to the SEC Rule 144(a) regarding selling restricted securities after the minimum holding period of 12 months after the effective purchased dates. However, as utility tokens, FCV tokens can be used toward the purchase of our vehicles without minimum holding period elapses. Thereby, early buyers/adopters will enjoy increased FCV token values as we sell at discount during early STO sales days. Please also consult the following SEC document[30] for purchasing and selling restricted and control securities.

Once our tokens restriction relapses, we will list our tokens into reputable token exchanges. Our share breakdowns can be seen as follows :

27 https://www.sec.gov/smallbusiness/exemptofferings/rule506c
28 https://www.sec.gov/files/ib_accreditedinvestors.pdf
29 https://www.sec.gov/reportspubs/investor-publications/investorpubsrule144htm.html
30 https://www.sec.gov/reportspubs/investor-publications/investorpubsrule144htm.html

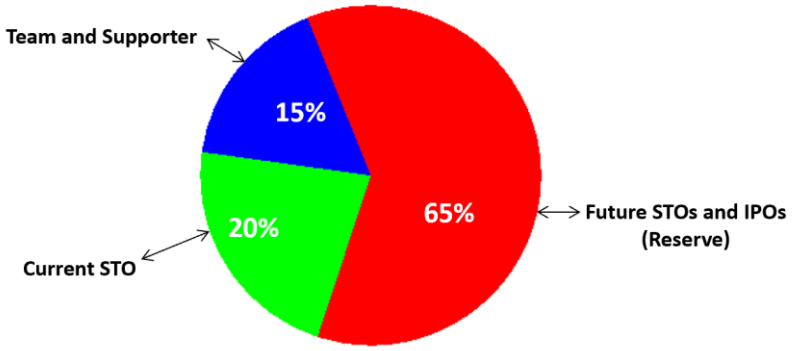


Figure 21. Elektrikka Inc. FCV Token breakdowns

Our current STO buyers will get 20% of Elektrikka Inc. share for the total of 7,000,000 FCV tokens. We will reserve the 65% Elektrikka shares for the next round of initial public offerings (IPOs) or STOs based on Elektrikka Inc. new valuations. Detailed FCV token characteristics are as follows.

FCV Token Economics	
FCV Token Price :	1 FCV = $10 USD
Current STO Token Supply :	7,000,000 FCV Tokens
Token Type	ERC-1404, ERC-20
Soft Cap/Minimum Total Subscription	$ 200,0000 USD Minimum Total Subscription, otherwise all funds will be returned
Mid Cap :	$ 20,000,000 USD
Hard Cap :	$ 70,000,000 USD
Minimum Subscription per Person :	$ 10 USD
Token Share	**Total Sale of 7,000,000 FCV Tokens Corresponds to 20% Stake in Elektrikka Inc.**
Token Minimum Holding Period	**One Year** after Purchase (US SEC Rule 144) **No Minimum Holding Period for Tokens being used to Purchase Elektrikka Vehicles**
KYC (Know Your Customer)	Yes. Please send these two Documents: - W-2 Form (for American) or Tax Return (cross-out, redact or cover your Social Security or Other Personal Numbers) OR Copy of Bank or Investment Statement (first page only showing net worth) - Copy of Passport First Page (cross-out, redact or cover birth date or other important dates/number)
AML (Anti Money Laundering)	Yes
Token Discounts :	25% : Until End of June 2020 15% : During 1 July - 31 August 2020 5% : During 1 September - 30 November 2020 No Discount after November 2020

In addition as securities tokens (shares) in Elektrikka Inc., FCV tokens can also be used as utility tokens to purchase our vehicles and other services (after sales, maintenance, insurance, financial and etc.). At our current STO, we will issue tokens in the sum of 7,000,000 FCV tokens that amount to 20% of stakes in Elektrikka Inc.

As required by the US SEC, we will verify our token buyers to comply with rules set by the US SEC and FINRA (Financial Industry Regulatory Authority) against Anti Money Laundering (AML) practices as set in this document[31]. We will also verify our customer using KYC (Know Your Customer) rules set by FINRA[32]

7. Elektrikka Inc. Strategies and Time Table

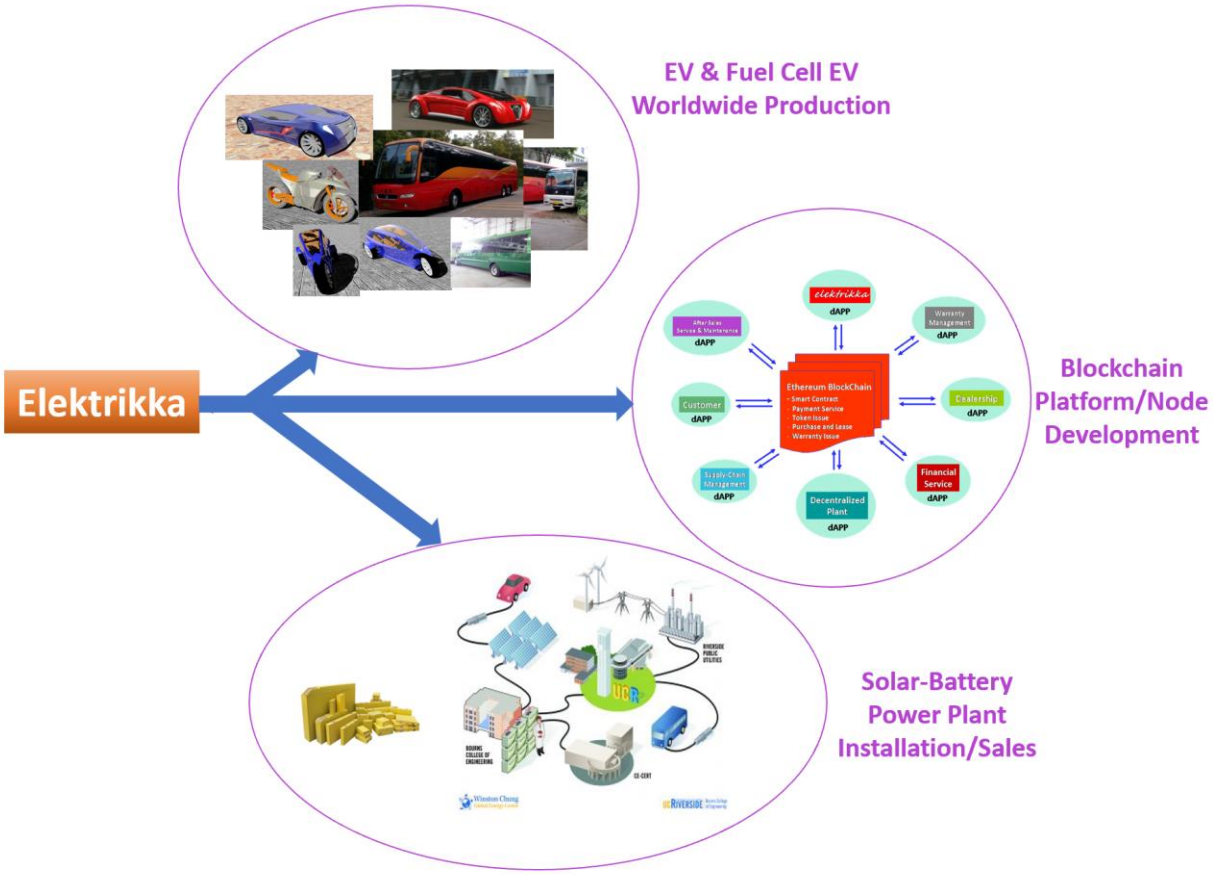


Figure 22. Elektrikka Three Main Strategic Activities

31 http://www.finra.org/industry/anti-money-laundering
32 https://www.investopedia.com/terms/k/knowyourclient.asp

As stated before and as seen in Figure 22, there are three main activities that we are undertaking and will pursue. Two main activities have been conducted by ElektrikCar LLC and thus will be expanded worldwide to create more impacts for the public.

a. Blockchain Technology Development

These activities will be started by building decentralized applications (DAPPs) that will run on existing blockchain platforms (Ethereum, Bitcoin, Stablecoins etc.). Our first efforts will be to streamline company payment and other financial activities using blockchain cryptocurrencies. We will account for current crypto volatilities by incorporating stablecoins. The need to build our own blockchain network will be studied during these development efforts.

b. Electric and Fuel Cell Electric Vehicles Manufacturing

These activities have been started by ElektrikCar, LLC and will be continued considerably by both ElektrikCar and Elektrikka. We build several electric vehicles and fuel cell buses so far. Our strategies are to proliferate these vehicles and manufacture them all over the world. So far, only buses are being equipped with hydrogen fuel cell electric propulsion systems. However, we will offer the fuel cell electric systems for passenger vehicles as well. On top of these efforts, our electric three wheelers and motorcycles will be offered worldwide as well.

c. Solar Battery Power Plants Installation and Sales

These activities have been conducted by ElektrikCar and Thunder Sky Winston Battery (CHANGTAI) Ltd in the last several years. Thundersky Winston Batteries have been marketed all over the world and ElektrikCar LLC is the North America representative of Thundersky Winston Group. Our main objectives are not only to market batteries but most importantly to develop Solar-Battery Power Plants to allow our customers to be completely independent from the grids for electricity.

The main vehicle manufactured products will be marketed to specific markets first. Our passenger cars will be concentrated for sales in Norway, Sweden, Germany, USA and China. Our buses will be for China, Indonesia and USA, while our three-wheelers and electric motorcycles will be mainly for China, Southern Europe (Spain, France and Italy) as well as Indonesia (Southeast Asia). These first activities are shown in the following Figure.

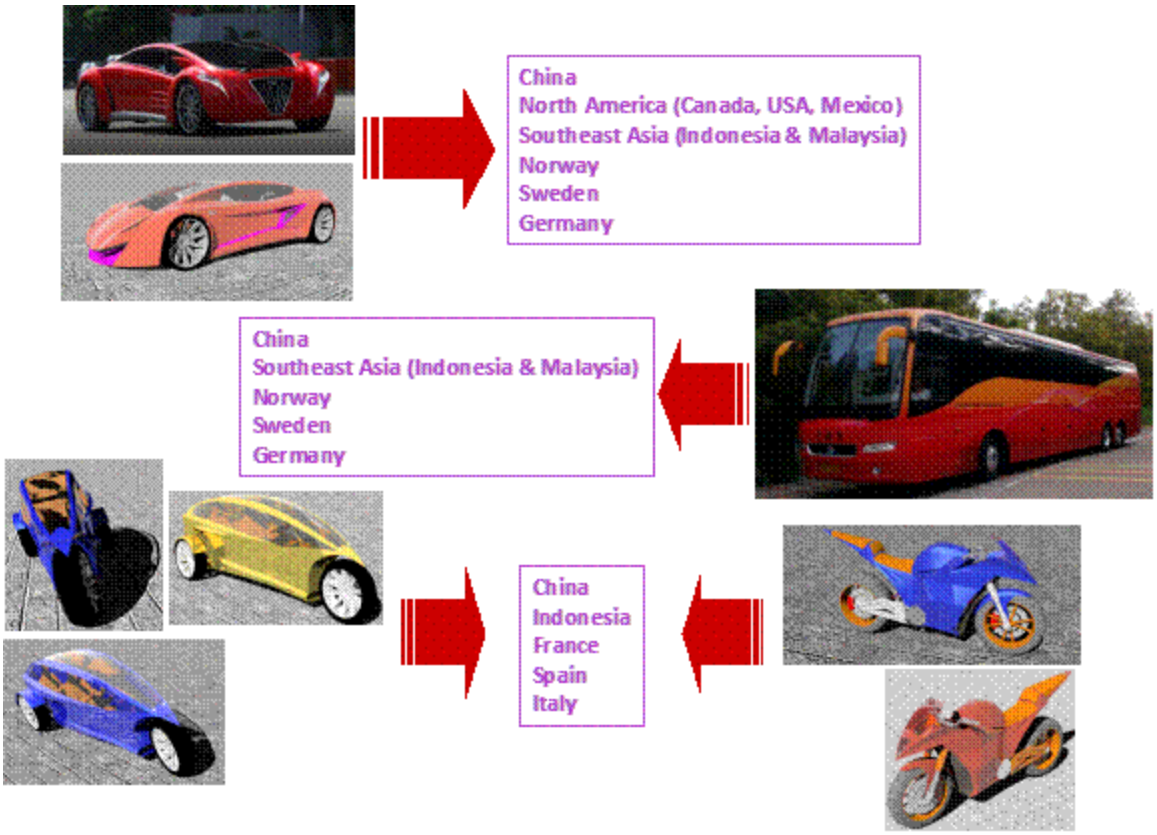


Figure 23. Elektrikka Target Markets for Electric and Fuel Cell Electric Vehicles

As for our project schedules, the following picture shows the time table of our efforts.

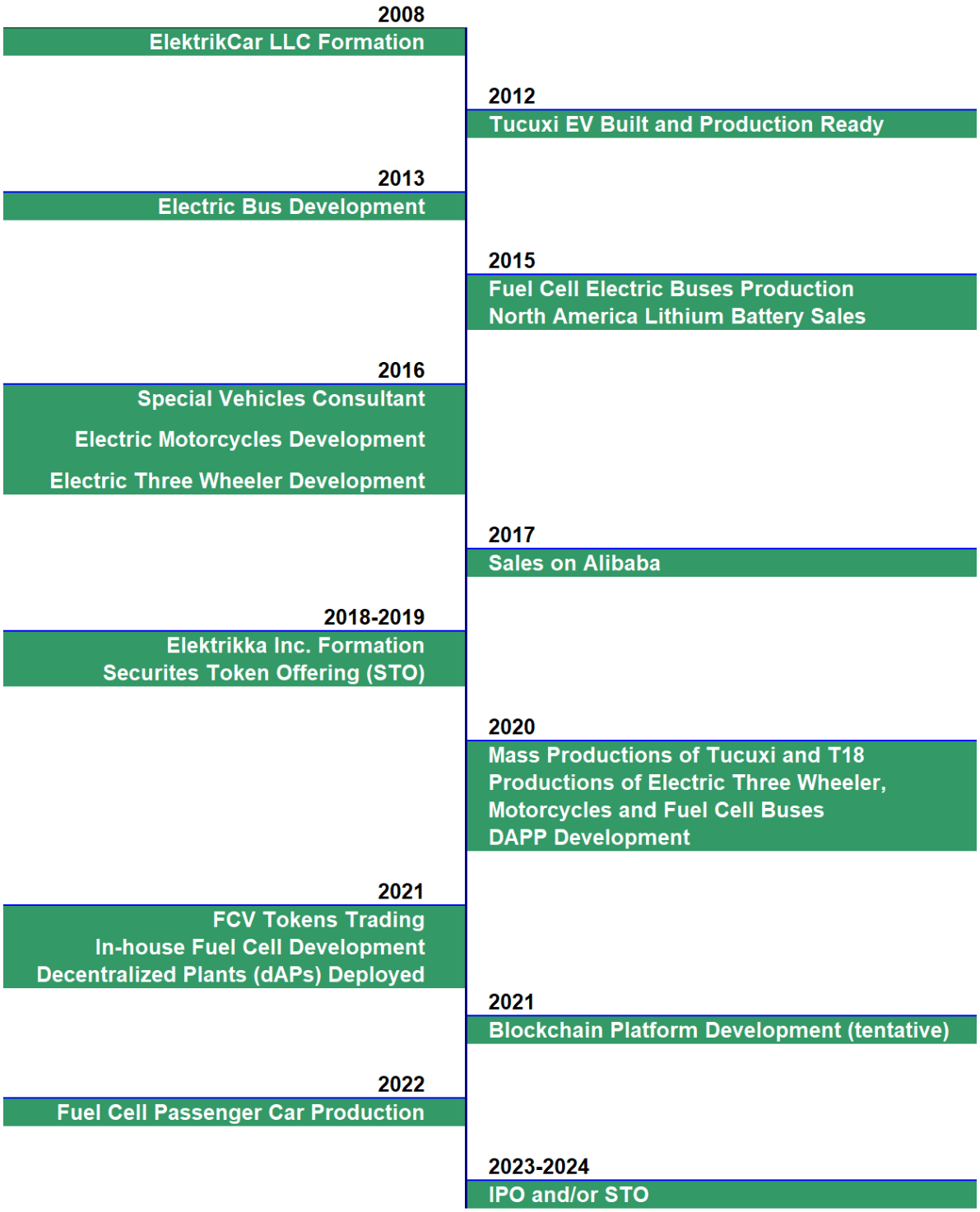


Figure 24. ElektrikCar-Elektrikka Project Time Tables

FCV tokens raised for Elektrikka, Inc. will be deployed to do the following activities as listed in Table 1 below.

Tucuxi Working Capital & Development	$2,000,000
T18 Working Capital & Development	$2,500,000
Electric R3EV Three-Wheeler	$2,000,000
Electric Murai Motorcycles	$2,000,000
Electric and Fuel Cell Buses	$1,500,000
Equipment Lease & Purchase	$500,000
Decentralized Plants Lease or Purchase	$2,500,000
Fuel Cell Technology Development	$3,000,000
Vehicle Tests and Certifications	$1,750,000
Blockchain Technology Development	$7,000,000
Legal Fees	$1,000,000
Marketing	$500,000
Reserve Funds & Merger-Acquisitions	$23,750,000
	$50,000,000

Table 1. Fund Allocation Raised during our STO

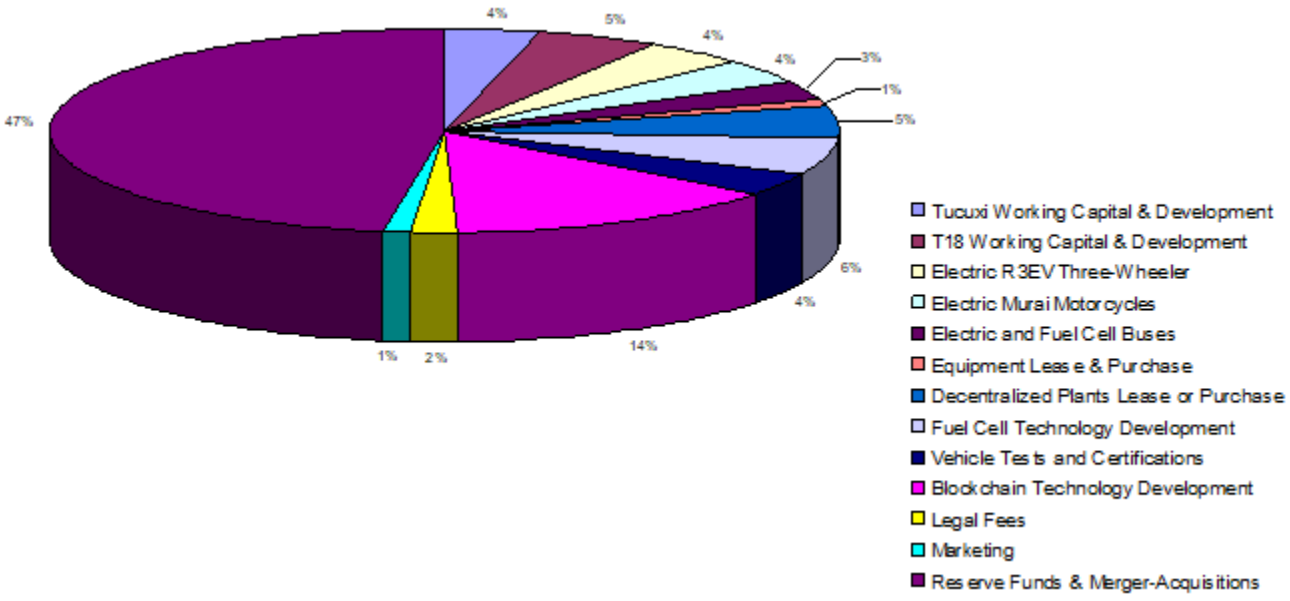


Figure 25. Fund Allocation of Total Project Value (in Percentage)

Assuming that we raise $50 millions, Table 2 explains that the number of vehicles in a period of Year 1 to 5. Blockchain dAPPs, e-wallet, and blockchain technology developments are not included here in the Table. The original quick manufacturing objectives are as follows:

- Five (5) Murai electric motorcycles
- Five (5) R3EV electric three-wheelers
- Three (3) Tucuxi limited edition version
- Two (2) Tucuxi T18
- Two (2) electric full size buses

This is our conservative estimate building a total 17 vehicles in the first year. However, we plan to ramp-up our production right away in the first year to follow our targeted objectives as shown in Table 2. The basis of this assumption is the high demands that we receive from our Alibaba.com site. We need to fulfill these demands as soon as possible.

Elektrikka Projected Vehicle Production Volume in Five Year						
Model	Year 1	Year 2	Year 3	Year 4	Year 5	Total Volume
Tucuxi Limited Edition	3	200	1,000	2,000	2,000	5,203
Tucuxi T18	2	300	2,000	5,000	5,000	12,302
Electric and Fuel Cell Buses	2	20	50	100	100	272
Electric Tri-Cycle (Trike)	5	2,300	5,000	15,000	15,000	37,305
Electric Motor Cycle	5	4,000	5,000	5,000	5,000	19,005
Total Vehicle Per Year	17	6,820	13,050	27,100	27,100	
					Total Vehicle for Five Year Plan	74,087

Table 2. **Vehicle Manufacturing Plan for Year 1 to 5**

Our first year activities will be split between China, Indonesia and USA. Engineers (as in our current situation) are mainly hired from Indonesia and China; with the US engineers/staffs are hired on part time bases before being ramped-up into full time employment. Materials are originally sourced from China, USA and Indonesia per our current activities. Once decentralized assembly plants (dAPs) are established, part sourcing will be distributed around the world (where our dAPs located) with the focus on sourcing from local manufacturers.

Our estimated original total cost at around $2.6 millions USD can start the expansion for electric vehicles (EV) and fuel cell electric vehicles (FCEV) developments. We are boot-strapping (extreme cost saving) our companies to still be capable to conduct productions. Please see

Table 3 for the Profit and Loss (P&L) statement for Year 1 to 5 and Table 4 for the end of Year 5 P&L.

Again as a reminder, we ask our current and future investors to consult with their investment advisors before participating into high risk electric vehicle productions as you may lose part or all of your investment.

	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	$2,614,228	$45,026,762	$169,222,078	$388,099,328	$388,099,328
COGS	$1,083,055	$28,977,952	$111,429,483	$252,334,483	$252,334,483
Gross Margin	$1,531,173	$16,048,810	$57,792,595	$135,764,845	$135,764,845
Gross Margin Percentage	59%	36%	34%	35%	35%
Total Payroll	$300,000	$743,971	$748,602	$858,526	$858,526
General Administration	$40,690	$42,069	$122,759	$122,759	$122,759
Certification, Professional, Test Fees	$111,034	$53,103	$83,103	$83,103	$113,103
Insurance Costs	$40,000	$90,000	$140,000	$140,000	$140,000
Workshop Costs	$28,828	$28,828	$28,828	$200,000	$200,000
Material Shipping Costs	$75,000	$250,000	$1,000,000	$1,500,000	$1,750,000
Electrical Works	$185,000	$390,000	$660,000	$960,000	$960,000
Tooling and Dies	$420,000	$40,000	$80,000	$100,000	$100,000
Reserve for Overbudget Costs (35%)	$420,193	$573,290	$1,002,152	$1,387,536	$1,485,536
Operating Expenditure	$1,620,745	$2,211,260	$3,865,444	$5,351,924	$5,729,924
Operating Profit	($89,572)	$13,837,550	$53,927,151	$130,412,921	$130,034,921
EBITDA	($89,572)	$13,837,550	$53,927,151	$130,412,921	$130,034,921

Table 3**. Profit & Loss (P&L) Statement from Year 1 to 5 (EV and FCEV Development Only)**

Revenue	$993,061,723
COGS	$646,159,455
Gross Margin	$346,902,268
Gross Margin Percentage	35%
Total Payroll	$3,509,625
General Administration	$451,034
Certification, Professional, Test Fees	$443,448
Insurance Costs	$550,000
Workshop Costs	$486,483
Material Shipping Costs	$4,575,000
Electrical Works	$3,155,000
Tooling and Dies	$740,000
Reserve for Overbudget Costs (35%)	$4,868,707
Operating Expenditure	$18,779,297
Operating Profit	$328,122,971
EBITDA	$328,122,971

Table 4. Profit and Loss Statement at End of Year 5 (EV and FCEV Development Only)

8. Team Managers

This is the list of our managers and advisors only. Staff engineer's names are not listed .

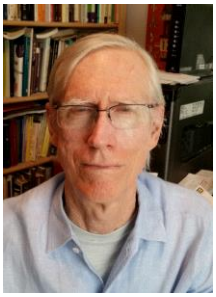
Danet Suryatama, Ph.D.,

President and Founder
Vehicle Development and Engineering Coordinator for EVs and FCEVs

Dr. Danet Suryatama earns his doctorate in engineering from the University of Michigan, Ann Arbor, MI. He has more than 21 years of auto industry experience in Michigan USA (FCA, Chrysler, Daimler-Chrysler, Beta CAE, EDAG and others). Danet has been involved in the development of various electric/hybrid electric vehicles such as FISKER Karma, Chrysler Minivan Hybrid EV, Fiat 500 EV, World Auto Steel PHEV and ElektrikCar-Elektrikka EVs and FCEVs. For ElektrikCar-Elektrikka, he develops and engineers Tucuxi, Tucuxi T18, China Dream FCEV Buses, electric motorcycles, three wheelers, CAE (computer aided engineering) analyses, and CAE virtual testings. He is also managing the day to day business of ElektrikCar and Elektrikka.

Jean-Charles Robin, Ph.D.,

Vehicle Homologation and EV Regulation Coordinator



Dr. Jean-Charles Robin has been a business owner and strategic research analyst in his 44 years of business career. Jean-Charles has been the Head of General Dynamics (GD) International Analysis Group and Escalante SA. Dr. Robin is truly a researcher in most of his career including when setting-up his strategic research company Necessary Knowledge International (NKI), in Ann Arbor, Michigan, USA. For Elektrikka expansion effort, Jean-Charles will assist us studying various governmental regulations and policies in regards to manufacturing and deploying electric vehicles (EV) and fuel cell electric vehicles (FCEV) in various parts of the world, especially in China, USA, European Union (EU) countries and other parts of the world. John fluently speaks several languages, especially Spanish, that will help us expanding ing central and southern American regions.

Muhammad Yusuf Efendi,

Business Development Manager and Blockchain DAPP Developer

Mr. Muhammad Yusuf Efendi is an accomplished manager and engineer in Silicon Valley, California, USA. Yusuf earns his degrees in Computer Science from the University of Toyama, Japan. He has more than 14 years of experience in network system administration, iOS, web and software development in several companies such as General Electric (GE) and AT-Link USA. He has various apps published and sold in Android and Mac OS PlayStores. Mr. Efendi has been assisting us in ElectrikCar business development in Silicon Valley area in the last several years. He will be developing and overseeing the Decentralized App (DAPP) development in Ethereum and tentatively Elektrikka blockchain development.

Aan Kasman,

Cyber Security Senior Analyst and Blockchain DAPP Developer

Mr. Aan Kasman is a cyber security engineer with experience in various companies from GE Digital, Cisco, Arbor Network and several others. He has more than 12 years of experience in big data security, cyber attack analysis, mitigation and prevention. Aan is an expert in the big data security analytics with proven records for cyber breach incident analysis. Aan will be assisting us in the security of our blockchain DAPP security and tentatively will be the main cyber security coordinator for our networks. Aan will be part of the team to develop our own blockchain network should the in-house blockchain is required for Elektrikka operation.

Aria Novianto,

Data Analytics & Cloud Infrastructure Development

Mr. Aria Novianto is a core computation developer with more than 12 years of experience of building cloud computation hardware in the University of Illinois, Urbana Champaign, USA. Aria is also an expert in big data analytics with proven records for teaching and implementing data analysis skills. Mr. Novianto will be assisting us in the development of our cloud computation as well as our hardware infrastructures for blockchain applications. He will be part of the team to develop our own blockchain network should the in-house blockchain is required for Elektrikka operation.

Chris Young, **EVAlbum**

Electric Vehicle Propulsion System Coordinator

Mr. Chris Young is a true system integration engineer. He has more than 13 years of experience as an integration and communication engineer in well-known companies such as Chicago Communication (a Motorola Solutions Channel Partner), Comcast, Precision Midwest (a Trimble Navigation Dealer), Doran Scales and etc.. Chris built his own electric truck from the ground-up by himself and his father. The work is so neat that it looks like an artwork with excellent vehicle craftsmanship. His work has been documented in his EVAlbum site above. Chris will be overseeing the electric propulsion system works in Elektrikka and he will be working to coordinate several engineers in different locations.

Adi Susmono,

Project Management Manager/Lean Six Sigma Blackbelt Specialist

Mr. Adi Susmono is an inventory and project management expert. He has more than 28 years of experience in various companies in California and Indonesia. Adi is with AT&T and SDV USA in the last several years. As an inventory specialist, Adi's expertise will be very crucial for our Just in Time or **Lean Manufacturing System** that we would implement in our automotive related blockchain networks. Also as a project management coordinator, his expertise will be extremely valuable to the success of our decentralized EV and FCEV manufacturing efforts all around the world. Adi is an important element in our Elektrikka team management. Adi holds the **Lean Six Sigma Blackbelt Certification.**

Solachuddin,

Product Technology Marketing, Sales and Business DevelopmentSolachuddin

Mr. Solachuddin is a Seasoned Semiconductor Professional with more than 25 years of Multi-Disciplinary Experiences in Technology and Business fields that includes Product Technology Marketing, Sales and Business Development, Product Line Management, Technology Evangelist, Semiconductor Product and Test Engineering, Research & Development, Manufacturing Operations Management, Technical Program Management, Supplier Partnership and Customer Relationship Management. Based in the US, Mr. Solachuddin serves as a Consultant to assist us in developing Strategic Marketing for Elektrikka vehicles as well as managing product lifecycles in terms of customer's trends, interests and accessibilities. He also assists us in coordinating the business development side, the sales and marketing team that will be projecting our strategies for the years to come.

Heru Susetyo, Ph.D., LL.M., ,

Corporate Legal Team Counselor and Coordinator

Dr. Heru Susetyo earns his law degrees of LL.M. and Ph.D with focuses on human rights law and especially in litigation practices against victims of abuse and injustice. Heru is a law practitioner and a faculty member of a prestigious University of Indonesia in litigations for the unfortunates and the underrepresented. This is the trait that we need to project our company as always be remindful from any transgression against human rights abuses, environment or social injustices. Indeed, Heru will coordinate our corporate lawyers in the USA, Europe and overseas to always show our compassionate business nature and guide us to achieve our strategic objectives to be morally ethical and legally sound.

Yudhi Nizar, ,

Marketing & Business Development Manager

Mr. Yudhi Nizar is an accomplished entrepreneur with several successful businesses that he has set up. Yudhi has more than 28 years of experience in structural, mechanical and electrical engineering contracting businesses. He has also more than ten years of working for a large Indonesian conglomeration Ciputra Group. In 2012, Yudhi joined us to develop ElektrikCar and now the Elektrikka as well. Yudhi's expertise, besides his accomplished design and engineering business, is to create business networks and follow up leads on prospective opportunities. He has been developing special vehicles in ElektrikCar and managing its engineering design and builds. Yudhi is to monitor all activities related to Elektrikka manufacturing activities in Indonesia.

9. Team Advisors/Partners

Winston Chung, Ph.D. (Honoris Causa),

Thunder Sky Winston Battery (CHANGTAI) Ltd. Founder and Chairman

Dr. Winston Chung is the founder of Thundersky Winston Energy Group Ltd and its current chairman right now. Winston is the original chemist of the Winston Battery in China since 1990. Winston Batteries are currently the most sought after batteries in the USA, Europe and other parts of the world. These batteries are known for the storage system for solar power plants and also electric vehicle batteries. Dr. Winston is also a strong supporter of the University of California, Riverside (UCR) by donating funds to battery research and even donating batteries for the UCR battery power plant. The Winston Energy Group is the main supporter of this project donating million of dollars in battery technology research and the batteries for the UC Riverside Sustainable Integrated Grid Initiative (SIGI) Project. The " Winston Global Energy Center" in University of California Riverside has conducted world first-class experimental research in battery technologies. Elektrikka is the North America representative for Winston Batteries and with our current STO, we would like to promote and market more of the application and research of Winston Batteries in the world.

Zhong Xuhang,

CEO of Thunder Sky Winston Battery (CHANGTAI) Ltd.

Mr. Zhong Xuhang is our colleague at Winston batteries. He has been helping us in various capacities especially during our fuel cell electric bus developments. As we are pushing to have Winston batteries to be manufactured in the USA or other countries, we will need extensive assistance from Mr. Zhong in his capacity as a battery expert. Xuhang will be advising us in the development of special format of Lithium Ion batteries with the state of the art technology which currently available.

Linda Liu,

International Commerce Director of Thunder Sky Winston Battery (CHANGTAI) Ltd.

Ms. Linda Liu is our main contact and translator in Winston Battery. Linda has been assisting us is ordering, shipping and marketing Winston batteries from China to the USA and Indonesia. Winston batteries are used in various applications from boat power system, solar power plant storage systems, battery plants storage systems and mostly in electric and fuel cell electric vehicles. For our current Elektrikka expansion, Winston batteries will be marketed more especially for solar, wind and other renewable energy resources storage systems. ElektrikCar has been the North American representative for Winston batteries.

Sumardi, , RiSEA Propulsion Group

CEO of RiSEA Propulsion Pte Ltd, PT. RiSEA Propulsion Indonesia, RiSEA Subsea Pte Ltd,, PT RiSEA Precision Indonesia

Mr. Sumardi the CEO of the RiSEA Group as stated above, companies with expertise in electric propulsion and automation for the marine and offshore industries. RiSEA companies are operating with Headquarters in Singapore and Indonesia working on worldwide projects. The Group is the designer and manufacturer of various marine, subsea equipments, power generations, fire detection systems, and propulsion control systems (azimuthing thruster control systems). RiSEA products conform with various regulating agencies such as DNV, ABS, RINA, BV and IRS. RiSEA will assist us in developing various vehicle control systems and our marine applications in the future.

Setia Budi Yunarto, M.Const. Mgt, UNSW Australia TATAMATRA Architecture Consultant

Chairman (Commissioner) and CEO of PT Tata Matra Indonesia

Mr. Budi Yunarto is the Chairman of a well known architect company, PT Tata Matra Indonesia (TMI). Budi established TMI in 2011, with three talented young architects who are serving as company executives. TMI is now an architect power house in Indonesia with expertise on designing structural and building projects in various parts of Indonesia. TMI has designed many outstanding and complex architectures such as airport gate project in Bali Indonesia and various international hotels. TMI will advise us on the design and styling refinement of our vehicles styling as well as our decentralized assembly plants (dAPs). For the dAPs, TMI will be assisting us in converting various workshops or factories into our environmental friendly facilities that maximize the use of green renewable energies. The dAPs development will follow our strict guidelines for short construction time, environmental friendliness, costs and green renewable energy uses.