



**Fuel Cell Proposal Response**

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**T2 Technologies**

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## **Preliminary Information**

### **Statement of Need:**

The Republic of China, Taiwan, is an island whose population is increasing. This has created a need for a safe transit system.

### **Proposed Solution:**

We at T2 Technologies are a leader in the fuel cell transportation industry. T2 has international experience in the design and manufacturing of fuel cell transportation vehicles. The energy sources used to fuel these vehicles include but not limited to:

- Phosphoric Acid Fuel Cells (PAFC)
- Proton Exchange Membrane Fuel Cell (PEFC)
- Alkaline Fuel Cells (AFC)

In response to the request for proposal to us by T.G. TIGER Motorcycles, T2 Tech is interested in forming a partnership with a company who is experienced in manufacturing transportation vehicles. Together these two organizations will design and produce an environmentally safe and low cost product that will have a significant impact on Taiwan's transit system. T2 Technologies will design, engineer and manufacture fuel cell powered scooters using fuel cell technology for retail sale in Taiwan. We will work with their manufacturing technology and planning division to guarantee that our product is dependable and environmentally safe. During the duration of this two-year project, T2 Tech will train engineers and manufacturing technologists on this new technology.

## **Our Mission at T2 Tech**

Established in 1976 and celebrating 25 years of excellence in engineering design and manufacturing, T2 Technologies is internationally recognized for its continual dedication to clean alternative fuels for the environment while improving transportation for the global marketplace. As co-founder of the American Hydrogen Association, T2 Tech specializes in educating the public about the advantages of hydrogen as fuel while improving the environment. Due to the depletion of oil and other fuels, developing substantial energy systems is vital to survival in the near future. T2 Tech has established guidelines that coincide with the Sector Facility Indexing Project, which is an extension of the Environmental Protection Agency. T2 Tech success is based on our excellent history of unparalleled customer service and product innovations. Practices used to assess customer feedback include: customer focus, human resource management, process management, and leadership. In addition, specific tools used for customer feedback include:

- **Remain customer focused to quickly adapt to changing marketing conditions.**° Leading customer service companies remain customer focused by capturing and segmenting customer needs and designing products to meet those needs.° After this evaluation and fulfillment process, support is provided throughout the entire sales cycle of purchase, delivery, bill collection and customer inquiries.
- **Implement an excellent human resource program to select and retain valuable employees.**° Leading companies nurture effective customer service

representatives by developing teamwork systems, rewarding employee excellence and continuously monitoring employee satisfaction.

- **Create a seamless customer service process to remove inefficiencies and reduce cycle times.**° Benchmark research shows that companies are using a number of innovative process management techniques to improve their customer service levels.° These techniques include using a balance scorecard to measure performance, implementing knowledge management systems to facilitate learning and communication, and managing vendors to achieve a flexible supply chain.
- **Utilize leadership techniques to ensure that customer service centers are well managed.** Strong leadership is a crucial element in achieving world-class customer service. Techniques used by effective leaders include: setting a clear direction that is aligned with business goals, communicating effectively through all levels of the organization, developing a coaching employees and serving as a champion for continuous process improvements.

## **Management Structure**

T2 Technologies management and financial structure will concentrate in the following areas:

- Mechanical Engineering
- Manufacturing Technology
- Chemical Engineering
- Safety Engineering
- Research and Development
- Product Management
- Account Management
- Industrial Technology
- Quality Control Engineering
- Reliability Engineering
- Environmental Engineering
- Marketing

T2 Technologies management workforce s main goal is to oversee the designing, engineering and manufacturing of scooter vehicles using fuel cell technology. Our organization and management structure varies across an extended-time program. As our organization evolves, project managers must develop structures for hiring, supervising and selecting engineering and manufacturing employees to monitor performance and generally oversee the program. The shape of these structures depends on the development by employees, by divisions, an in partnership with an outside organization.

## **Hiring and Supervision**

For the extended-time program developed by project managers, hiring and supervision practices may resemble those used for a business: business administrators (sometimes managers, but often other coordinators) supervise the overall operations; regular trainers provide the training services, and in some cases, trainers or aides work with the supervisors. A site project manager oversees each of T2 Tech s sites; each site also has five supervisors, engineering specialists, research and development lab specialists, and a manufacture assembly employees.

In many organizations, supervisors who apply to serve within the organization are selected based on their experience with employees and their desire to participate in the company. In most cases, business administrators or coordinators receive higher salaries. Supervisors often receive extended contracts, bonuses, or stipends.

A partnership between the organizations relies on an external business administrator to coordinate overall management of the extended-time program, but we also rely on the internal resources. Our partnership program depends heavily on expertise and training. In the engineering division, each new site will provide facilitators with two days of intensive training on the design of the product. Through role-playing, trainers focus on ways to encourage employee participation and self-reflection and build assertiveness and communication skills. The varied types of engineers for the extended-time program typically include chemical, industrial, mechanical, safety, environmental and reliability.

At T2 Technologies, employees receive three training sessions a quarter from a technical training staff. Topics include techniques for world-class manufacturing, engineering

designs, and project planning. Technical trainers also receive a summary of issues affecting T2 Tech s achievements and research and development methods.

### **Employee Selection**

The employee selection at T2 Technologies, serve the majority of our employees in highly concentrated areas. However, this organization also supports other categorical training--whether business related or non-business related. The human resource department must select from a pool of qualified employees, to receive best training from the services under the funding category. Our organization cannot serve all professionals who may be eligible to participate and could benefit from the company. The generally accepted positions are often in engineering departments. T2 Technologies selects the best-qualified employees. Our organization s profile demonstrates a variety of engineering and manufacturing methods, often used in combination, for best practice.

- Manufacturing — Responsible for the production of the scooters and fuel cells.
- Engineering — Responsible for the design and implementation of the scooters and fuel cells.
- Marketing — Responsible for the promotion of the organization and ensuring management s know how about foreign and domestic customs and the consumer
- Quality Testing — Responsible for testing and evaluation of the scooters and fuel cells.

### **Performance Monitoring**



Thorough evaluation and effective management, T2 Technologies generally require project managers to monitor employee performance and assess whether needs are met and employees are progressing. In order for this organization to be successful, a set of goals and objectives will be established to monitor how well employees meet these goals. Our project managers described here rely on various performance measures, including portfolio assessment; longitudinal case studies; quality control charts; and training. Typically, project managers working directly with employees, meet regularly to review employee needs and progress.

### **Financial Structure**

T2 Technologies is prepared to acquire the ownership of the joint venture at fifty-two percent having a maximum equity of twenty percent and a maximum debt of twenty-five percent. The issuing of stocks and grants will be a gain by the required capital.

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### **Technical Background**

Our mission statement is supported by top-notch technical and production floor leaders (from the ground floor up), a customer-first service approach, quality driven initiatives, and years of learning through extensive research and development. We have established three principles for success that has catapulted T2Technologies to heights never seen before in the alternative fuel cell industry. It all starts with 1) Creative and Critical Thinking Processes, 2) Breakthroughs in Fuel Cell Technologies, and 3) Global acquisitions.°

### **Creative and Critical Thinking Processes**

Creative thinking is generally considered to be involved with the creation or generation of ideas, processes, experiences or objects; critical thinking is concerned with their evaluation. Critical and creative thinking are interrelated and complementary aspects of thinking. As an organization, these principles allow us to discover our strengths and weaknesses before they have a negative impact on the consumer/client. Almost all of the thinking which we have undertaken contains some critical and some creative aspects. Critical and creative thinking processes are combinations of abilities, knowledge, values, attitudes, skills and processes. Observing and evaluating ourselves quarterly and streamlining our processes and procedures to minimize waste and maximize production is only the first step in catapulting T2Technologies into the future.

### **Breakthroughs in Fuel Cell Technologies**

As a leader in implementing alternative energy technologies, we are using solar power to generate electricity at several of our plants. In City of Industry, Calif., T2 Technologies dedicated the largest industrial, majority privately funded, solar installation in the U.S. at one of its Bentley Mills of California plants. The solar array, located adjacent to the plant, is generating 127 kw of electricity, covering 6% of the plant's peak power demand. One intriguing possibility we are exploring is using solar collectors to operate fuel cell cars or fuel cell power plant.

A French company, in conjunction with T2 Technologies, is now ready to mass produce cars powered by compressed air where filling up means going to the gas station air pump instead of the fuel pump. The Mexican government is planning to buy 40,000 of its cars as taxis. This compressed air system is easily transferable to other modes of transportation that only require a certain amount of speed i.e. scooters and/or transit bus systems.

### **Global Acquisitions**

Here at T2 Technologies, the bottom line is only a small portion of our company objective. Before considering an acquisition, the feasibility of our product lines and resources merging and their attitudes regarding safety must take the forefront. Everyone must meet a minimum safety standard and show us that they can commit themselves to our high safety standards. Once the orientation process is completed, everyone in the acquired company needs to embrace the T2 Technologies Safety Philosophy. Using motivational tactics and incentive based programs, we can now begin to realize the vast, positive effects of the acquisition. This allows us to crisscross continents, countries, cultures, governments and languages to deliver development, implementation and

management of training systems and programs. This can easily be translated into a client base destined to grow and even deeper market penetration into the public, private, and possibly government sectors.°

## **Technology Safety Information**

### **Need for Safety Rules and Policies (safety program)**

The safety program at T2 Technologies encourages all employees to practice safe work applications while enhancing the safety of the work environment. Through continuous practice, employees can minimize accidents and injuries. The principles and techniques of safety lie in the Safety Training Observation Program (STOP) that have proved to be the most effective supervisory and employee safety training programs available today. This technique is at the core of all T2 Tech facilities globally. STOP is people talking with people about safety. In a series of training programs, behavior is modified in favor of safety. This objective of the STOP programs is to teach safety auditing skills, so supervisors and employees can observe workers who are performing normal work activities, reinforce safe work practices, and correct unsafe acts and conditions.

STOP effectively communicates management's commitment to safety through the entire organization. From the top manager down, all employees are involved in the program. Everyone has a role to play in the safety effort when STOP is on the scene. Positive on-the-job safety activities generated as part of the STOP series establish safety as equal in importance to cost, productivity, quality, and morale in the minds of all employees. The STOP series is built on the principle that safety is everyone's responsibility, so safety becomes a unifying element, not a divisive one.

The STOP series provides a path to safety excellence by making safe behavior part of the work culture and by maximizing the potential for dramatic safety improvement and loss control management. STOP is good business. For the employee, it reduces injuries and

improves morale; for the employer, it boosts safe performance and overall productivity, often while cutting costs.

Results from STOP include:

- Injuries are reduced.
- Supervisory skills improved significantly.
- Continuous improvement efforts are enhanced.
- Safety is established as an integral part of a cost effective quality process.
- Other in-plant safety activities, such as safety audits, increase in quality and quantity.