Executive Summary

By:80923

Ontario consists of a population density of approximately 14.1 persons per square kilometer and with a rapid growth rate, Ontario is expected to exceed its boundaries in the mere future. In fact, Ontario has been infected with issues involving the lack of housing, scarcity of job opportunities, and for many families and communities, but gridlock has been a predominant obstacle that we have been commissioned to address. We have decided to propose one of the newest most innovative state of the art technology called the Land 'air' bus. It has been designed by a Chinese company called China TBS in 2010, and although it hasn't yet incorporated in their Public Transport System, the idea has been booming ever since. By implementing Land 'air' buses on local roads of many congested cities in Ontario, we can help alleviate traffic and congestion problems for our future hereafter.

Briefly speaking, the Land 'air' bus operates similar to trams that exist throughout many cities in Ontario. It sits on rails that rest of either side of the road, and operate according to the positioning of the rails. In areas where rails don't already exist, the Land 'air' bus would run on white lines that use autopilot technology which would follow the lanes using sensors to reach the required destination. The beauty of the Land 'air' bus is its composition; it consists of a hollow lower part that allows cars to conveniently move across, and a loaded upper layer carrying up to 300 passengers per carriage taking up no additional space on the road. One of the best features of the Land 'air' bus is its ability to operate even in the middle of traffic. As a result of its hollow lower part, the bus can freely operate without the sweat of being concerned about the cars underneath. In knowing its true potential, people who drive to work everyday, may decide to take the Land 'air' bus in regards to its minimized travel time which will displace some cars off the road, reducing traffic in general. Exclusively in terms of finance, the Land 'air' bus is well-affordable, and operational costs are very minimal. Its fuel source is mainly electricity generated from stations equipped with solar panels and a supply from the municipal electricity source. The Land 'air' bus consists of many more extraordinary features that will benefit our future, and who knows, this might be the key to a new remark for our nation.

The Land 'air' bus received great applause from countries like China, India, and Pakistan, and it is significant to highlight that these countries aren't much different from Ontario, if problems seem to be comparable, the solutions might be similar as well! With this underlying motive, we can come to a conclusion that the scale of this project is quite suitable to our municipality. In fact, it may be the missing ingredient that we need, in order to reach our true potential!

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The Land 'air' bus, a future awaiting to be established...

By:80923

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Background and Justification

Land 'Air' Bus, making its way up the Urban calender...

Why choose the Land 'air' bus?

The Land 'air' bus without a doubt presents an innovative solution to help alleviate current pressures with traffic and congestion in many urban areas within our province.

Many of us know that an ocean is made simply out of a collection of smaller drops, and this seems to perfectly depict our current traffic issue. Simply, gridlock has affected many sectors of development and formed into a vast ocean of problems. For example, as a result of traffic and congestion, people from the range of CEO's to Part-Time employees have to spent their precious time in the midst of traffic. Surprisingly, people are finding more ways to cope with traffic like using Blue-tooth, working on potable devices with cellular data, rather than solving the problem at its roots. Mainly speaking, there is no current solution in our province that has addressed our needs in particular. This is where the Land 'air' bus comes into play; it is a modern technology that focuses on our current needs, and will definitely put an end to gridlock.

What's Special?

With the ongoing issue in the transportation sector, the Land 'Air' Bus is the perfect solution in putting a full stop. In fact, it elegantly addresses the issue of traffic in Ontario without being a vague solution. Moving up to 23 miles per hour, the bus carry's up to 300 people, accommodating more than 3 times the number of passengers compared to a Double-Decker bus. In acknowledging the low costs in construction involving rails and white lines, the bus is additionally run entirely by electricity that is supplied by solar panels, and power from the local municipality, known to be a more cost-effective option as compared to fuel. Also, a common obstacle nowadays is the hold back in cars, as the buses waits at the bus stop to pick up, and drop off its passengers. The Land 'air' bus is renowned for its ability to provide what we call 'duel-advantage'; as a result of the hollow lower part, there is no hold back in cars, and the passengers can get on/off the bus through elevators connected to the shelters, with no possible way of interfering with the cars below. In examining the features of the Land 'air' bus, it is truly worthwhile to say that it elegantly addresses our issues.

Aims and Objectives

Along with solving the problem at its roots, the Land 'air' bus has a vision set for the future. Below are a list of goals which the project would like to accomplish for our future.

- Reducing gridlock in some of the major cities of Ontario
- Being accessible throughout all cities in Ontario
- Increasing the employment status in urban areas
- Reducing Co2 emissions by half
- Replacing the Land 'air' bus with all existing buses
- Having sustainable amounts of fossil fuels for the future generations in our province
- Using the savings from the Land 'air' bus, we must invest in other sectors Eg. housing, job opportunities etc.

The Land 'Air' Bus project attempts to deduce gridlock, which is an issue often costing millions including jobs and investment. But with a one time investment in implementing this project, Ontario will receive great economical benefit from the transit system, along with running a well functioning community as a whole. In establishing this new state of the art technology, people would be empowered to commercialize and take on various job opportunities boosting the economical platform to a whole new level. This not only helps our province but will give birth to a new technological superpower.

Project Description

Not only for us, but traffic and congestion has been swarming countries like China for years, if not decades. The problem has not been the projects we've implemented, but mainly with the fact that these projects aren't suitable for our province, and hasn't checked off all the parts of the 'must haves' involving Ontario's needs. The Lands 'air' bus is considered a better approach on the basis of 3 levels, its function, operational benefits, and its costs.

Functional Benefits

Currently, the public transport system is simply non-functional. The buses are getting overcrowded and are generating more traffic as they pick up and drop off passengers. In fact, cars have been surpassing signals of up to 2 km away, with the hold up of Mi Way buses. One of the most unique features that the Land 'air' bus unmasks is its ability to not create nor involve in it either. The bus, obeys this mantra inside out; as the bus stops to unload and reload its passengers, they enter from the elevators that rest inside the bus shelter, without causing a hold up. In addition, the Land 'air bus consists of high tech emergency exits for the passengers similar to that of an airplane, in order to evacuate as quickly ans safely as possible. It definitely adds an element of comfort, especially to passengers who are reliant on this technology on a daily basis. Functionally, the Land 'air' bus addresses the difficulties of our current methods and suggests an innovative solution that is appropriate for our province.

Operational Benefits

In addition to benefiting along the lines of function, the Land 'air' bus consists of many operational benefits. Primarily, the Land 'air' bus is run on electricity generated by solar panels, and electricity from the local municipality, which powers the bus as it awaits for the passengers to get on/off. In doing so, we are conserving many of our fossil fuels, and preserving them to ensure sustainability for the future. A small scale approach like the Land 'air' bus may swarm across borders and territories, replacing current technologies to help reduce Co2 emissions in many of the densely polluted areas of the world. In addition, the Land 'air' bus is entirely, self-automated, and avoids the cost for drivers, and cuts down the costs in building machinery for them. Each city consists of a control station that examines ever step of the bus ensures constant safety. As a whole, we can acknowledge that a technology as innovative as the Land 'air' bus may obtain a new remark for our nation, and will be the future role model for many first world countries.

Cost Benefits

Costs in detail will be explained further in the report, but in summary, the Land 'air' bus is a more cost-effective option as compared to many current transportation systems. For instance, digging a single-bore tunnel costs more than $250 million, and with the costs of construction, fuel, and maintenance subways exceed the financial limits. Briefly, the Land 'air' bus involves no means of digging underground, nor any construction of new roads, and consists of a very minimal expense on fuel. With its modern, updating features, the Land 'air' bus, serves as a whole new cost-effective option.

In summary, this new technology has great potential, mainly against the fact that it is technically better and more innovative as opposed to many of the existing technologies. When implemented, it has the chance to change our future for the better.

Financial Analysis

The Land 'air' Bus would be a great success functionally all throughout Ontario. It is realistic to state that there are some costs involving such a modern technology. The costs ranges through a span of 3 sectors; it involves remodeling the road, building a station platform/ shelter, and constructing the bus itself, and although these may seem like a great expense, with out proposals of collecting the capital investment along with the operating costs, assemble to create the recipe for a project that is ideal for Ontario.

Remodeling Roads

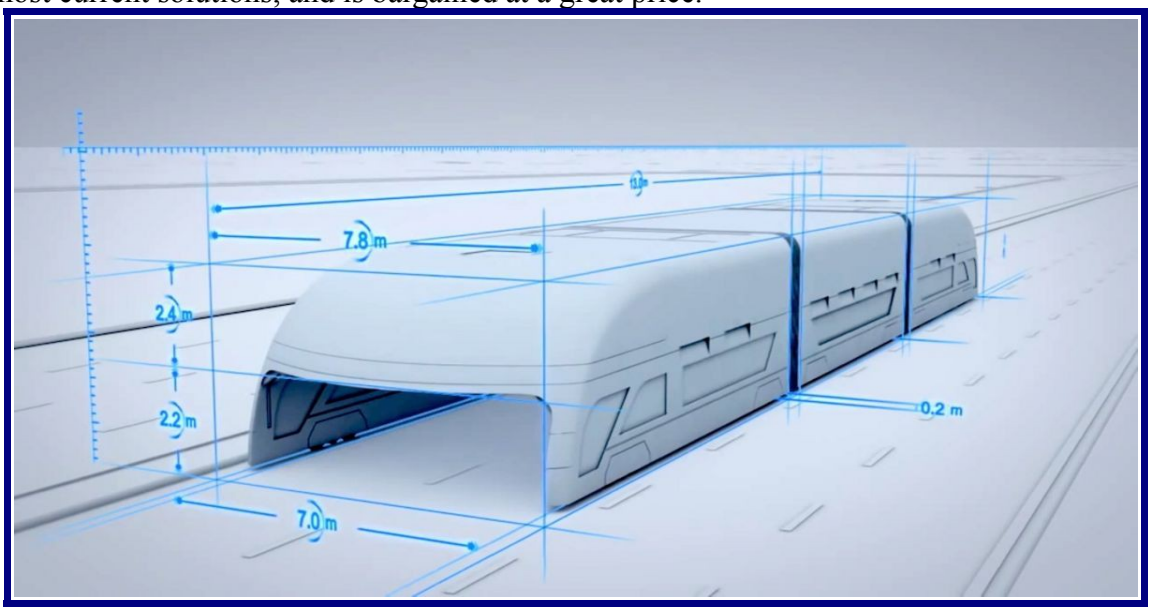
Remodeling the road, the Land 'air' Bus requires very minimal if not no shift on the road sizes. In areas where rails have already been built for trams, additional rails will be placed to make adjustments for the sizes required for the Land 'air' bus. Although these rails may seem to be costly from $5-30 million per mile, constructing Land 'air' buses that run on rails must only be done in areas where rails are already dominantly existent, which will budget our expense. Alternatively, in areas where no construction has taken place involving rails, the bus will run on white lanes that run on either side of the road, serving as sensors for the bus to use in terms of following particular routs. This will be more cost-effective in terms of construction on the road, but will involve costs of up to 500k to upload built in sensors. Either methods will be functional, and are ways to effectively remodel the road, and stay within budget.

Constructing Bus Shelters

Building the bus shelters is another cost that must be paid for. Mainly, the bus shelters consist of an elevator topped with solar panels that are connected to a charger that attaches itself onto the bus to keep its charged until the next station. In general, this is expected to cost 150k involving the costs for labor. With a median of 5 shelters in each city depending on its population density, the shelters will cost 750k per city. In making a one time investment, we are left with a life-long reliant system that will function for generations to come.

Building the Bus

Constructing the bus itself is probably the most significant investment of all. According to China TBS, the Land 'air' bus costs less than Metro, which means that the Land 'air' bus is quoted to have been costing less than $50 million. With such new facilities that are incorporated into this bus, this would be a great deal. One of the most unique fact about the Land 'air' bus is that a 40 km track, can be completed within a year which is remarkable, in comparison to subways that take a minimum 3 year period for construction alone! Therefore we believe that the Land 'air' bus is much better off than most current solutions, and is bargained at a great price.



Privatization

We believe that the capital costs must be paid for through our concept of 'modified privatization'. We propose to sell this project to a reliable private company(s), who will abide to our proposal, and bids a reasonable amount of money. As the company(s) prepares to establish this project, we will use the money that we've received from the bidding to invest in other sectors such as housing, infrastructure etc. Meanwhile, the company will construct the project within a given amount of time, and will bare all profits, losses, and expenses through a span of 5 years. After the 5^{th} year, the project will be rehabilitated back to the government. This provides a 'duel-advantage'; the private enterprise can promote itself by using the bus as a form of media, and will be recognized for their investment in supporting the public. In terms of the government, we don't have to bare in investment, and we will maintain a project that is already well-functioning.

Operational costs involving the Land 'air' bus is very minimal. Unlike many buses, there is no driver required eliminating labor costs. Also, the bus is powered by electricity, cutting down the costs for diesel. Operating costs are expected to be approximately $120 per hour maximum, but with 300 passengers traveling every hour, across 51 cities, revenue will surpass spending's entirely! Other ways to generate extra revenue for potential repairs, is by promoting advertisements, and incorporating strategic methods of guerrilla marketing to add a feature of interest for tourism. We can also encourage the construction of fast food restaurants inside or around bus shelters to help generate a constant source of income, for other corporate companies. Ideally, after the project is implemented, income will start to pay back spending, and it would evolve into a fully functional system for our communities.

Challenges and Vision

This project has received applause from the public across many areas of the world. A common concern is regarding safety, and not knowing how people can adapt to a 'tunnel' that moves on top of cars. These are similar challenges faced by any new form of transportation in a community, and can be solved with simple tweaks to the original solution.

One challenge that people are often concerned about, is about drivers coming too close to the side of the bus, and hurt themselves/ the vehicle. In order to avoid this, high-tech sensors have been upgraded near the bottom ends of the bus that signal the cars in advance when they are coming too close. Also, the height of the bus is constructed after taking into consideration about the maximum height of the vehicles that run beneath it. Knowing that the bus only runs on local roads, and not highways, the bus can run without the difficulty of passing through tunnels etc.

We do know that this is a newer technology, and there are some drivers who may not be able to adapt as quickly. So, for people in need of help, the government should send out brochures to every family in Ontario explaining the rules and regulations of the Land 'air' bus, and be willing to provide free training/driving lessons to people in need of help towards opting to this technology. In addition, we can change the syllabus for new drivers, and train people on ways to get familiar with this new technology. In doing so, we can ensure that this system is friendly and safe for everyone in our community.