ETM
ENGINEERING & TECHNOLOGY MANAGEMENT

EPORO Marketing Plan

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Executive Summary

Nissan Motor Company has been working on a new safety technology called EPORO (Episode 0-zero Robot). The Episode is aiming to be CO2 free and accident free. Nissan is the third largest auto company in Japan and is the seventh largest in the World. They are known for their Infinity brand and have received notoriety for their Altima, Pathfinder, Z Sport car, and Cube.

The EPORO technology is an affordable safety device that contains three components:

- Anti Collision
- Communication
- Hands Free Driving/Drivers Assisted

The Anti Collision component provides the latest technology in preventing accidents. Consisting of radar and sensory technology, the anti collision system will warn the driver of an impending accident and will assist to prevent it (such as steering away from the accident, applying brakes, etc).

The Communication component will enable the EPORO technology to work in conjunction with other EPORO enabled vehicles or similar technology to not only avoid an accident but to also lessen traffic congestion. By working together, the EPORO systems will enable traffic to flow smoothly and effortlessly. Nissan's plan is to emulate the way a school of fish swims and move together as one into the way cars travel together.

When the driver enters the destination coordinates into the EPORO system, the Hands Free Driving/Drivers Assisted technology will be able to take over the driving of the automobile. For those consumers who are not yet ready for hands free driving, the Drivers Assisted technology will be there to assist drivers if they veer off the road. The system will guide the auto back into the lane and warn the driver of the incident.

The EPORO technology will be installed in all of Nissan's automobiles. In addition, a kit will be available for the private consumer and commercial buyer who do not own a Nissan. The target market for the EPORO kit will be large metropolitan areas with the highest concentration of autos.

This paper will cover the marketing plan for the EPORO kit. It will provide details of the market analysis, company analysis, financial objectives, target market, and the market strategy. The EPORO kit is a bold leap for automotive technology, and Nissan will lead the industry with their product and future developments.

Market Analysis

Market Demographics

The demographics that Nissan will focus on to sell the EPORO kit will be the major industrialized cities in multiple countries. This demographic was chosen because the kit will alleviate traffic congestion, and it's anti collision technology will prove very beneficial in populated city traffic. The Private Consumer and Commercial Buyer will be the demographic focus in each city. The Private Consumer will range in the age of 26 - 60 years old and will be concerned about driving safely. They will typically have a vehicle that costs over $15,000, and they will be rush hour commuters. The Commercial Buyer will include those companies that are looking for opportunities to increase the safety of their vehicles and looking to market their safe vehicles as a selling point. The four countries in which Nissan will target their sale of the EPORO kit will be Japan, China, US, and the UK.

- In 2007 there were over 254 million vehicles in the US, as can be seen in the graph in Figure 1.

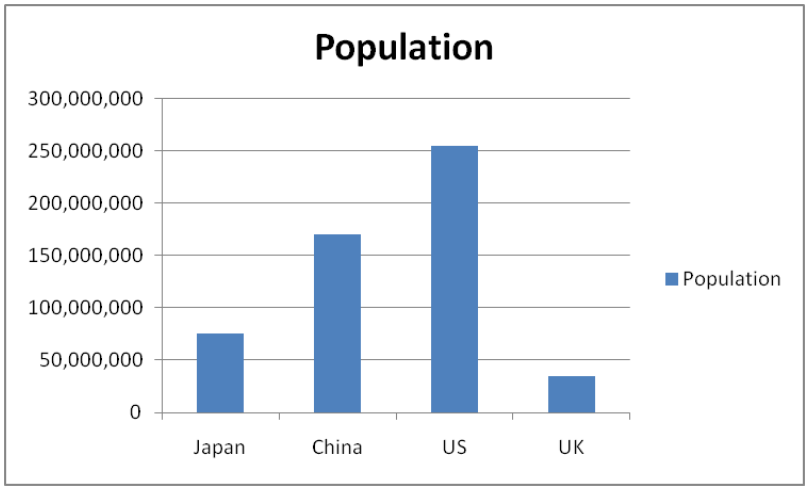

Figure 1 Car Population in 2007[1-4]

- Since Los Angeles has the most with 26 million, this will be the initial market that Nissan will focus on to sell their EPORO kit.

- There were 2.88 million vehicles in 2007 in Beijing [5], and the number increased to 3.50 million in 2008 and 3.87 million in 2009.[6] Those numbers are still small in comparison with other major cities. The number of cars is increasing every year; therefore, traffic congestion and car accidents will also increase.

- World Auto News & Reviews has ranked the world's 20 top cities with the worst traffic.[7] (See Table 1) Number one is Tokyo, and two cities from the US made the top 10, LA and New York.

Top 20 cities with worst traffic jams			
1	Tokyo, Japan	11	Chcago, US
2	LA, US	12	Manila, Philippines
3	Sao Paulo, Brazil	13	London, UK
4	Bangkok, Thailand	14	Jakarta, Indonesia
5	Moscow, Russia	15	Osaka, Japan
6	Shanhai, China	16	Venezuela
7	Mumbai, India	17	Athens, Greece
8	Maxico	18	Auckland
9	NY, US	19	Rio de Janeiro, Brazil
10	Seoul, Korea	20	Kathmandu, Nepal

Table 1 Top 20 Cities with the Worst Traffic Jams[7]

- Table 2 shows the number of car accidents that occurred in 2007 in four different countries. The number of accidents in the US is the highest among those three cities.

Car Accident	
Country	Numbers of Accident
China	450,000
Japan	940,000
UK	190,000
US	6,000,000

Table 2 Highest Car Accidents[8]

- Traffic delays caused people lose a total of 4.2 billion hours per year sitting in traffic. This time wasted 2.9 billion of wasted fuel and $78 billion dollars in 2007.[9]

- One third of all cars produced in the world are produced in the European Union as can be seen in Figure 2. China became the world's third largest producer in 2006 and is slated to become number 2 in 2010.[10] (Refer to Appendix A for further details)

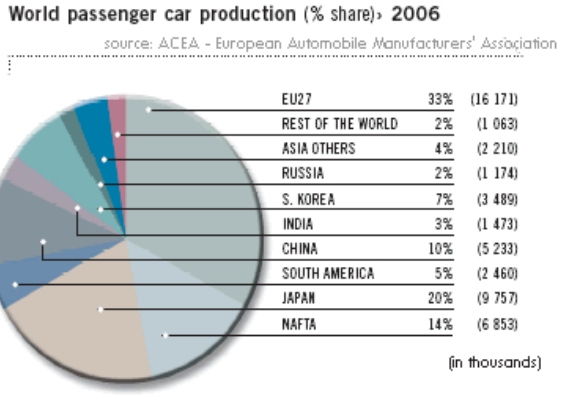

Figure 2 World Passenger Car Productions as of 2006[10]

Market Needs

As the number of automobiles increase every year, highways become more congested. This wastes time, fuel, and causes stress on people. In most major cities, a person can spend over 500 hours a year in traffic (based on 2 hours per day, 50 weeks per year). In addition to the traffic congestion, automobile accidents also increase. When an accident occurs, traffic delays are the result, which wastes even more time and money. Moreover, with the focus on conserving energy and saving the environment, the wasted fuel from traffic congestion produces dangerous carbon dioxide that causes serious environmental pollution. Commuters need a technology that can prevent collisions and increase the flow of traffic. The EPORO technology is designed to reduce traffic, which will reduce carbon dioxide emissions. With the anti collision and driver assisted system, accidents will be greatly reduced, causing an increased flow in traffic and reduced pollution. Once the kit has been installed in numerous vehicles, the communication system in the EPORO kit will work together with other EPORO installed vehicles to provide even greater traffic flow and fewer accidents.

The forecasted revenue of the active and passive safety systems show positive signs for the need to have a safe vehicle, according to market analysis data conducted by Nick Ford [11]. This data will be used to forecast the potential market for the EPORO kit in European and US markets. After defining the potential market segments -- private customers and commercial buyers-- these segments will be analyzed in order to select the most attractive target segment. In order to select specific market segments, this paper will look at the total number of new vehicles that are sold in the market. The selected market segments will then be analyzed by looking at the customer value drivers of each segment.

Market Trends

In the automotive market, the products and systems will trend towards advanced thermal comfort, hands free driving/driver assisted technology, modular chassis, collision avoidance, advanced energy systems, smart sensors and x-by-wire control (which are the need for more precision in electronic engine controls to eliminate continuously driven loads for improved fuel economy. X-by-wire is required for advanced collision control avoidance systems that override the driver's input for brakes, throttle, etc.)[12] The collision avoidance system is an important technology as it not only prevents accidents which lead to congestion, but it also promotes safety, which is very important for the car owner and the passengers. In the past few years, automakers have focused on innovative safety technology such as reinforced structural bars and crumple zones that protect passengers when involved in a car accident. The next technology for manufacturers is to develop a collision avoidance system that could inform the driver of either a collision or an out of control situation. In addition, they are designing a system that will take control of the automobile and take corrective action to prevent danger in parallel with a warning to the driver.[11]

In November 2008, Nissan announced that four advanced Cooperative Intelligent Transport technologies would be introduced in the 2009 models, as can be seen in Figure 3. The technologies include Signal Violation Warning, Cross Traffic Notification, Oncoming Traffic Notification, and Cooperative Intelligence Cruise Control. Nissan is developing these advanced

systems for future applications to help inform the driver and help control the vehicle, with the goal of contributing to improved traffic safety as the infrastructure is implemented.[13]

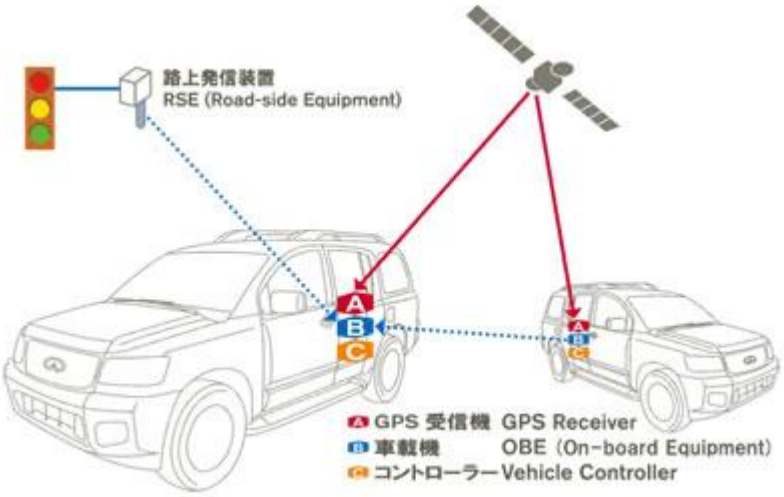

Figure 3 Nissan's Cooperative Intelligent Transport [13]

With the different kinds of active safety systems that have been developed over the years, Nick Ford conducted a research among EU customers to obtain insight into which active safety system is the most attractive to consumers.[11] Anti-collision systems, blind spot detection, and tire pressure monitoring systems are the most preferred, while radar and dangerous area is the least desirable. It turns out that anti collision systems are the most preferred accessory for customers as shown in Figure 4. This data provides the market potential to commercialize the EPORO kit to both the US and European markets.

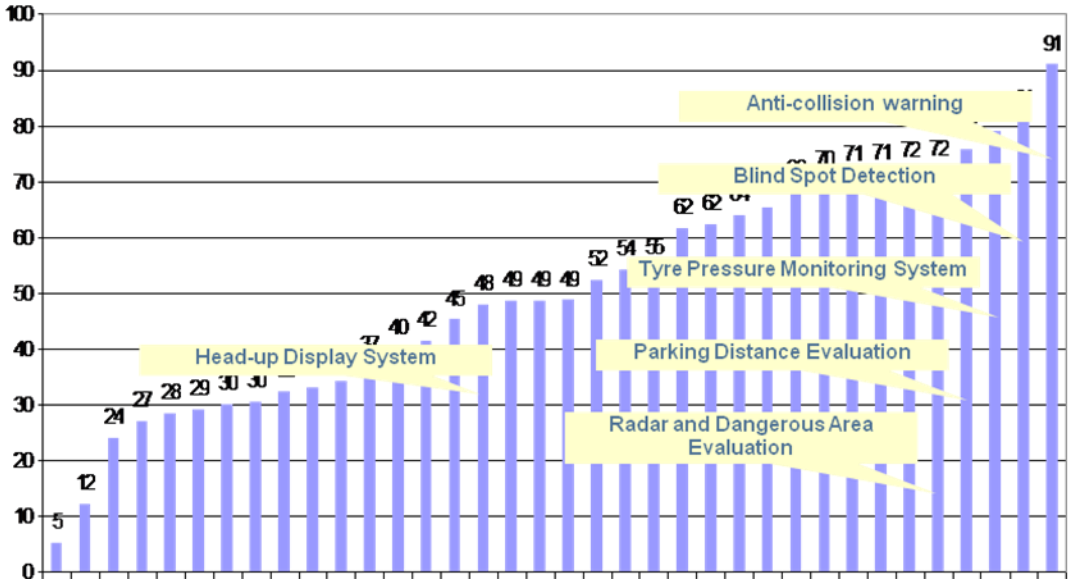

Figure 4 Purchase Intentions of Accessories in Aftermarket.[11]

Market Growth

The market growth for the EPORO product kit has great potential as the increase in traffic congestion takes its toll on large cities throughout the world. In addition, the sheer increase in car sales each year will provide an excellent opportunity for market growth for the sale of the EPORO kit. Installing the kit in new and existing cars and trucks in large cities would provide major benefits to each city mentioned in the demographic section above, including: less accidents, less congestion, and decreasing the need to build more car lanes. The benefit for customers would be less time in traffic, decrease in accidents, assisted driving, and less stress. The market growth is directly affected by the economic growth, and currently the economic growth for most developed countries is on the upswing, as seen in Figure 5 in the Economic Growth Rate map. There have been several years of economic decline due to the devaluation in the stock markets around the world. Now that the economy is starting to recover, purchases of consumer goods will start to increase, which will be perfect timing for the EPORO product kit. As can be seen in the map, the economic growth rate of countries such as China and India will provide an excellent opportunity to market the product in these countries.

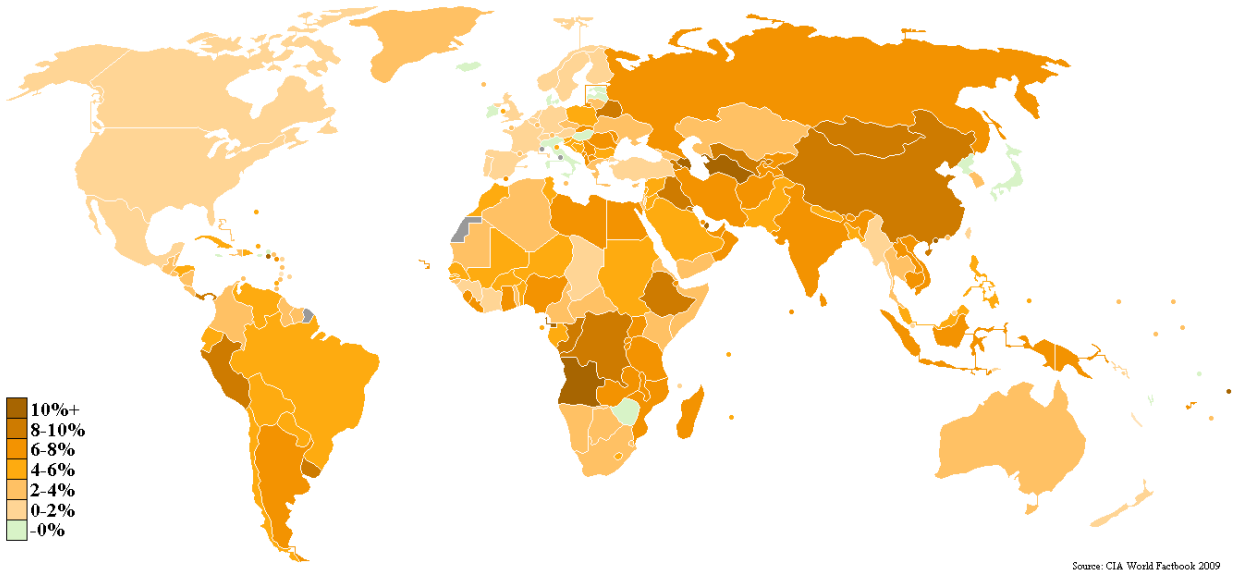

Figure 5 Economic Growth Rate from CIA Factbook[14] The darker the region, the higher the growth rate

In the study by Nick Ford, it mentioned the huge potential market for Advanced Driver Assistance System (ADAS).[11] This market and revenue forecast study shows that Asia will be the the major contributor to the global safety systems market revenues attributable to wider installation in Japan**.**

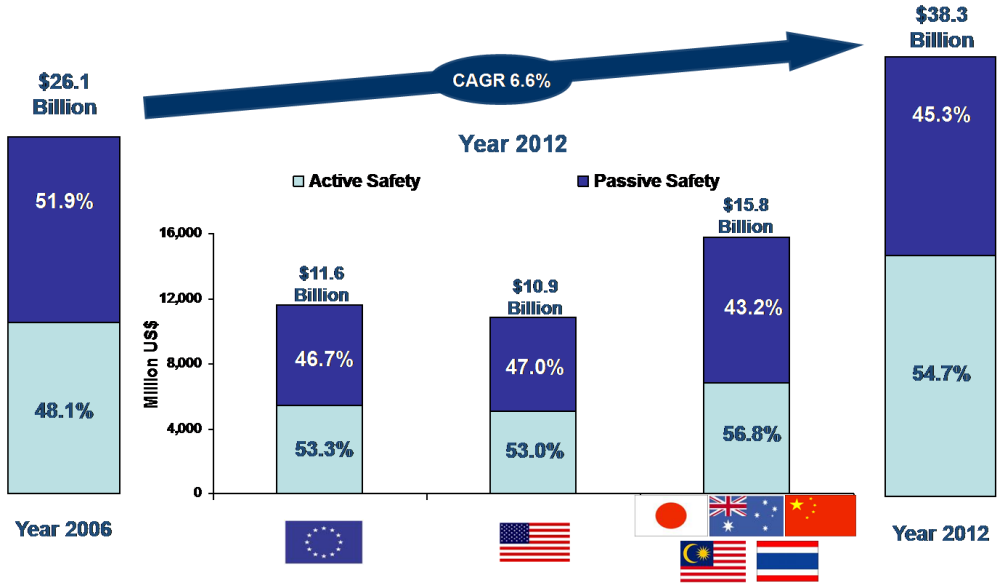

Figure 6 Global Safety System Market – Revenue Forecast [11]

Figure 6 describes the market potential revenue forecast for global safety systems which include both active systems -- such as collision avoidance; driver warning and information system; and vehicle stability systems—and passive systems, such as seat belts and air bags. Since EPORO will be categorized as an active system, the potential market for the active system is shown in Figure 7.

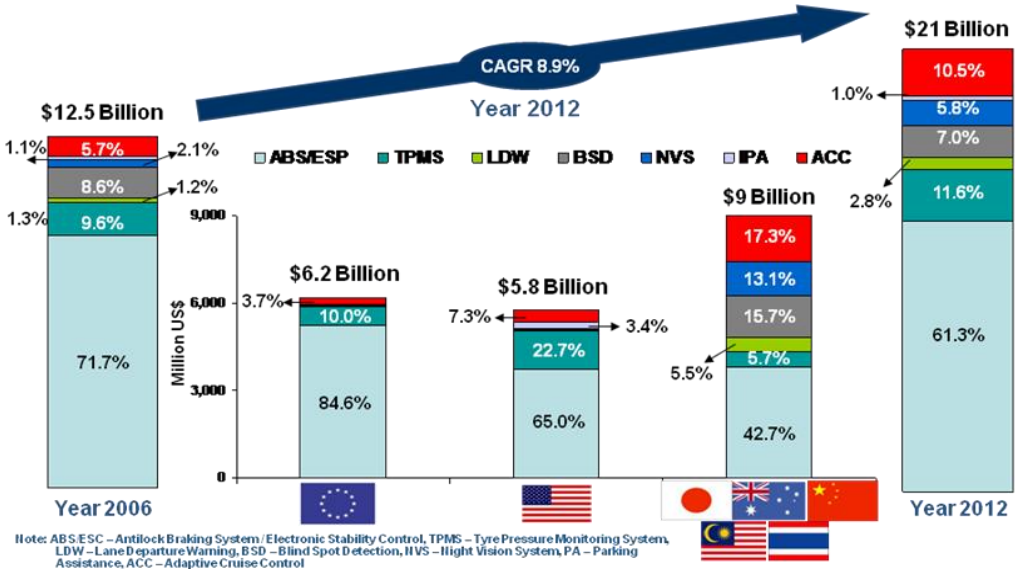

Figure 7 Global Active Safety Systems Market: Revenue Forecasts (in Million US$), 2006 and 2012[11]

Buyer Behavior

Consumers would benefit greatly from the EPORO product kit as it would lessen accidents, provide a sense of safety, lessen traffic congestion, lessen stress, and provide hands free/assisted driving. Safety is one of the top three concerns in autos. According to a survey from Consumer Report, safety is the number three factor of customers' consideration for buying a car.[1] Thus, for new and used cars buyers who are interested in safety, the EPORO product kit can be installed in all cars and trucks. More specifically, the high accident rate among teenage drivers will make this product more attractive to parents.

Factor	All respondents	New-car buyers	Used-car-only buyers
Price	49%	36%	55%
Fuel economy	46	46	51
Safety	42	39	39
Quality	39	42	37
Value	24	24	24
Performance	21	18	26
Brand	16	14	19
Environmentally friendly/green	13	13	10
Design/style	12	19	13
Manufacturer's stability	12	13	10
Technology/innovation	6	7	5
Manufacturer incentives	4	8	2
Government incentives	3	11	4

Table 3 Consumer Report Ranking of Customer's Reasons to Purchase a Vehicle [15]

The fate of the communication technology of the EPORO kit is similar to the fate of the first telephone: there is little use of the communication technology of the kit until everyone has it. The network potential would need to grow for each city in which the kit is planned to be installed. Negotiations with local governments would provide opportunities for tax deductions if the kits were purchased. If the price of the kit were kept low at first, more customers would have the incentive to be the first to purchase the product. Commercial purchasers would benefit from the anti collision technology as this would be an added marketing tool for their business. The kits could be installed by the customer or by a certified mechanic. A product demonstration would be available in each city that plans to incorporate the kit. This would provide the private consumers and commercial buyers a chance to test the kit in a real world driving experience to see the anti collision and hands free technology in action. Convincing the early adopters to purchase and install this product will be the greatest challenge. Once the kit has penetrated the early adopters, then advertising would propagate from word of mouth, news reports, car reviews, etc. to make this product popular.

The buyer's behavior is affected by the information below. Nissan will work closely with the marketing team to ensure all points are addressed.

- Relative advantage of the EPORO kit over other brands
- Compatibility of the EPORO kit with other kits that might have the same technology
- Complexity of the EPORO kit, which will be a minor decision in this case due to the ease of installation
- Trialability of the kit, as there will be opportunities to test drive the kit in all the markets
- Ability to communicate the three product benefits of the kit (i.e.: anti collision, communication system, and hands free/drivers assist)
- Observability of the kit in regards to its visibility to the markets

Customer Segments

Since our market coverage will be worldwide, we will focus our attention on the US market for our first target. We will determine the behavior of our potential customers regarding the active safety system product using the data finding from Frost & Sullivan. [11] They conducted a market survey from 1635 respondents in the US and in Europe —as shown in Figures 10 and 11—on the customer behavior for this product. We have a very good picture that shows the prospect of our product—EPORO—as a breakthrough innovation in the field of active safety systems as the anti collision system that has a hands free/driver assisted accessory within it.

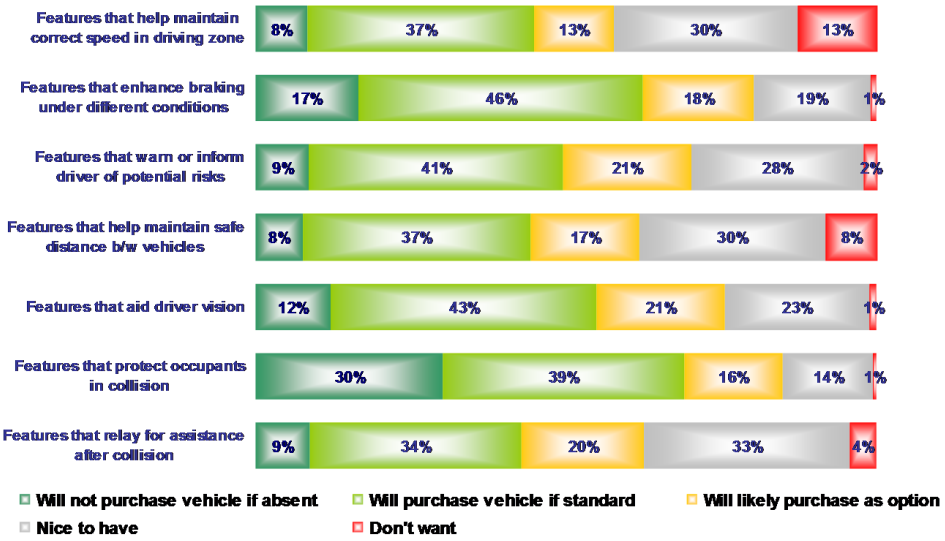

Figure 8 Customer Perspective among Different Type of Active Safety System[11]

Figure 9 Customer Perspectives on Features that Aid Driver Vision [11]

Competition

Nissan's EPORO kit faces several competitors from different auto makers, as can be seen below. Nissan's EPORO contains all the features that the competition has, which places it ahead of the curve on safety and anti collision.

- Volvo's City Safety system : front facing technology that helps the driver avoid low speed collisions[12]

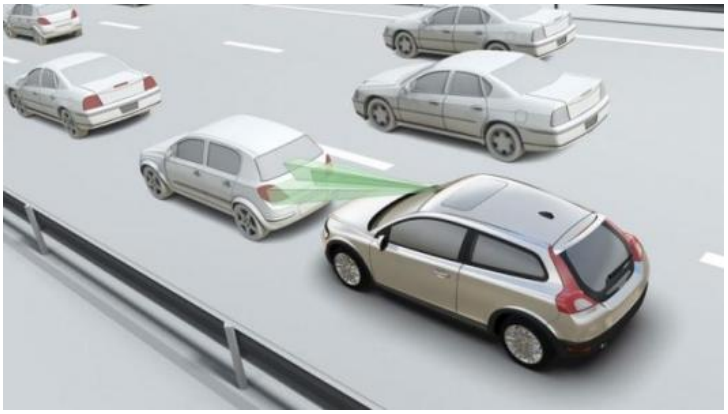

Figure 10 Volvo's City Safety System[12]

- Toyota's Forward Facing system: front facing technology that is capable of picking out child size objects in the front of the car. Toyota is also developing a new technology called i-units that are controlled by an Intelligent Transport System (ITS). It utilizes communication with a base station and other i-units to reduce traffic accidents and congestion, similar to the EPORO system. Toyota has been demonstrating the i-units in over 2550 shows and has not had one collision.[16]

Figure 11 Toyota's i-units [16]

- Mercedes' Distronic Plus: a cruise control system with a radar integrated in the grill of the car that measures the distance between your car and the one in front of you and will adjust its speed accordingly [17]

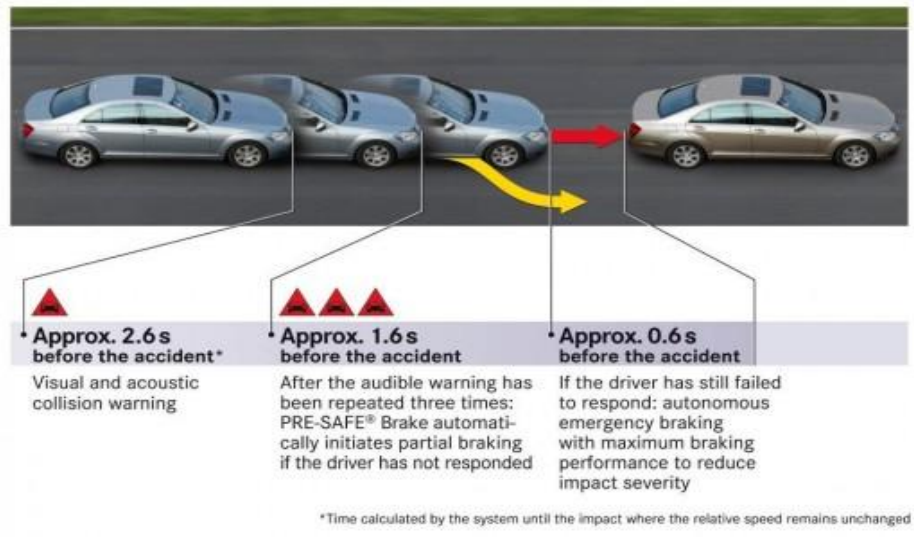

Figure 12 Mercedes Distronic Plus [18]

- Honda's CMBS (Collision Mitigation Braking System): radar based technology warning system to monitor the situation ahead and provide automatic braking if necessary and tightens the seatbelt. [19]

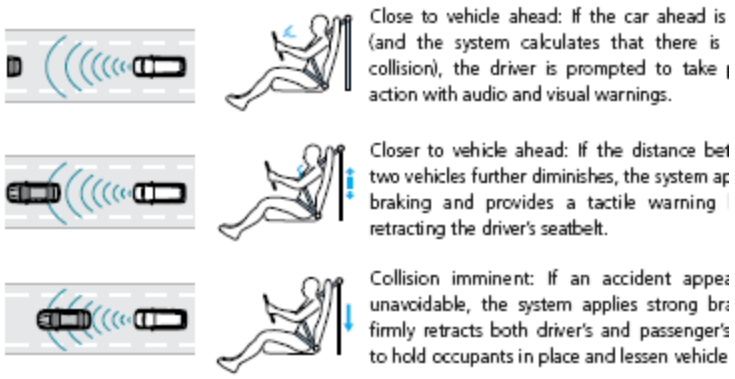

Figure 13 Honda's CMBS System [19]

- BMW's Emergency Stop: marketed towards senior citizens or drivers suffering from a medical emergency. The system will detect a drivers' health condition. If the driver does not react to a potential accident, the system will turn on the hazard lights, move the car to the side of the road, and make an emergency call to medical and traffic assistance. [20]

- Ford's Collision Warning with Brake Support System provides a warning through a display that visually resembles brake lamps. If the driver does not react, the system pre-charges the brakes and increases the brake assist sensitivity to maximize the driver braking performance. [21]

Figure 14 Ford's Collision Warning with Brake Support System [21]

To compare those systems with the competition, besides the BMW's emergency stop system, most of them focus on preventing collision with the front of the car and shorten the reaction time of stopping the car either semi-automatically or fully automatically. All of the competition installs their systems on their high-end products as it first launch the market. Thus, for anti-collision kits, the potential market is still broad and uncovered.

Company	System	Main Feature	The fist launch Model
VOLVO	City Safety System	Automatically brake control	XC70,XC60
MERCEDS	Distronic Plus	Adoptive cruise control	S and E serious
TOYOTA	PCS	distance warning and brake assist	Lexus LS430
HONDA	CMBS	distance warning and brake assist	Acura RL
BMW	Emergency Stop	Emergency parking	X-5

Table 4 Comparison of Competitive Safety Systems

Business Challenge in the Kit Market

In the study conducted by Nick Ford, it shows that many companies are working on the Advance Driver Assistance System (ADAS).[11] Collision avoidance is a key development area, and there are several products that use radar and camera sensor fusion for Emergency braking, as shown in Figures 15-17. The information in the figures describes the development area pertaining to ADAS from 2007-2008.

Figure 15 Key Product Launches in Automotive Safety Market – 2007[11]

Figure 16 Key Product Launches in Automotive Safety Market – 2008[11]

Since 2008 there has been a renewed interest in monitoring driving behavior for accident prevention. Many developers have been working on different concepts of accident prevention systems as shown in Figure 17.[11] Nissan is a leading developer of this type of system with the EPORO kit.

Figure 17 Key events/concepts in Automotive Safety Market – 2008 [11]

Collaborators

The advantages of the EPORO kit are anti collision, less traffic congestion, and hand free driving. In order for the system to fully utilize all of its features, especially the technology that brings about less traffic congestion, it will need to communicate with similar systems. To make the kit more effective it will be necessary to have it installed in many vehicles. Hence, to collaborate with other auto makers would be the best choice. Collaboration with Subaru and Kia Motors would be the best choice as they do not have any current research or development in anti

collision technology. Subaru is the automobile manufacturing division and brand name of Japanese transportation conglomerate Fuji Heavy Industries, which is in a partnership with Toyota.[22] Kia Motors is South Korea's second largest automotive manufacturer and is owned by the Hyundai Kia Automotive Group. [23]

In addition, insurance companies will also be another potential collaborator for the EPORO kit. The EPORO kit has a great chance to provide the car a perfect way to reduce both car bodywork damages and personal injuries. Both car owners and insurance companies can derive benefits from this outstanding characteristic. Therefore, to collaborate with the insurance companies to provide a discount to the EPORO kit customers, it will be a win-win strategy for Nissan, insurance companies, and EPORO kit owners.

Otherwise, the most significant advantage of the EPORO kit is "less congestion" and the "hands free driving" systems, but it requires a high percentage of cars with the same system on the road. Hence, to collaborate with government or other auto makers would be the future plan. For example, according to a report, the Japanese government has announced its "ASV (Advanced Safety Vehicle)-3," project. Even though there is still no standard, the government tried to establish car-to-car communication systems in order to avoid collisions. It also shows that some governments expect a new system, which will help to solve the car accident and traffic congestion issue. Therefore, the governments should be good collaborators for the development of EPORO in the market. [24]

Macroeconomic Forces

Macroeconomics deals with the performance, structure, and behavior of the economy for the entire community, and in this case, it would be the major cities in the world. The macroeconomic forces for consumers in the large cities include income distribution and wealth. For those consumers in the higher income bracket and who travel frequently in their vehicles during rush hour traffic, it would be relatively easy to sell them an EPORO kit as it would be a small percentage of the total cost of the car. For example, if the average car costs $30,000 for higher income bracket consumers, and if the kit is priced at $1200.00, that would only be less than four percent of the cost. Another factor to consider is the state of the economy for most of the US. With a near recession on the minds of most consumers, it is difficult to justify the extra cost for a technology that they might never need (such as anti collision). Especially for those with lower income levels and a low priced vehicle. It will be difficult to sell the kit and provide the incentive to use the product. Tax deductions can play a significant part in the kits acceptance. Interest rate changes and savings rates will also affect the adoption of the kit. A decrease in the interest rate could have a positive affect on the adoption of the kits, as loans could be provided to purchase the kits.

According to a report from The Commercial Vehicle Safety Alliance (CVSA), a bill is being proposed that would improve the Internal Revenue Code of 1986 to provide a credit against income tax to help accelerate the adoption of advanced safety systems for commercial vehicles, school and transit buses.[25] The systems covered by the Bill are brake monitoring, vehicle stability, lane departure warning, and collision warning. The legislation will include both the

original equipment (OE) and aftermarket installation of these safety systems. Tax credit incentives are as follows:

- Allow fleets to purchase multiple technologies, but limit the total amount of credit permissible to $3,500 per vehicle.

- Allow the overall tax credit for each truck owner or trucking company of up to $350,000 per year for all covered technology purchases.

This Bill will stimulate the installation of safety systems, which will provide a great opportunity for the EPORO kit.

Company Analysis

Business Overview

The Nissan group is composed of Nissan Motor Co., Ltd, subsidiaries, affiliates and other associated companies, with Renault owning 44% of Nissan. Major offices and facilities are located at Asia, Europe, North America, Africa, and the Middle-East. However, major offices and facilities operate in different functions such as headquarters, research and development, design, production, consumer finance, and operational support.[26] The main business of The Nissan Group includes sales and manufacture of auto parts, industry machinery, industry engines and parts, Vehicle R&D, evaluation, certification and business management of the domestic sales network.[27]

Nissan Motor Co., Ltd. is Japan's number three automobile manufacturer and the seventh largest automaker in the world by number of number of autos sold.[28] In the US, Nissan covers 7.06 percent of the total vehicle market and is one of three growing automobile manufactures.[29]

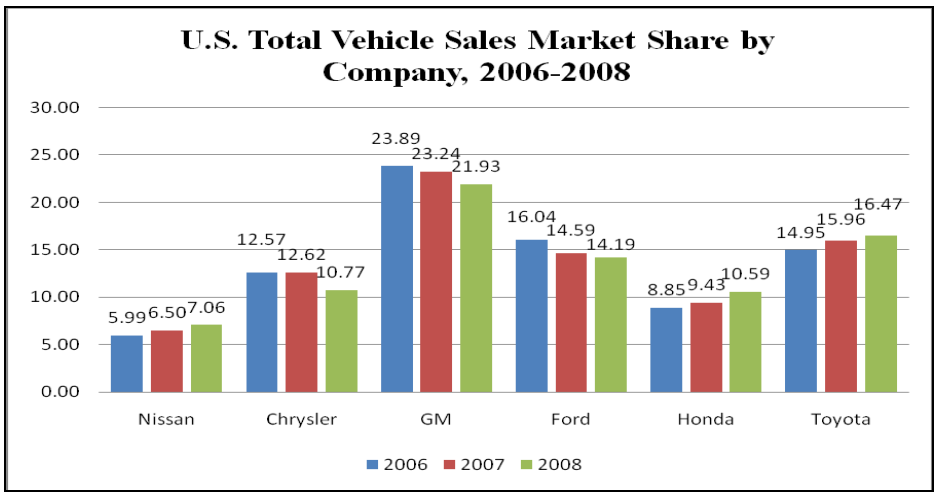

Figure 18 U.S. Total Vehicle Sales Market Share by Company, 2006-2008

Nissan Motor Co., Ltd. has two business segments:[29]

- The Automobile segment includes planning, development, manufacture and sale of passenger vehicles, trucks, buses, marine vehicles, forklifts and related auto parts. In addition, the import and export of automobiles, and the transportation of vehicles to overseas markets are also undertaken under the automobile segment. Nissan's models include Maxima, Sentra, Altima and Infiniti high-level vehicles. In addition, they also carry Frontier pickups, the 350Z sports car, the Xterra and Pathfinder SUVs.
- The Sales and Finance segment includes the provision of credit card and leasing services, and non-life insurance services. In addition, Nissan Motor is also involved in the car leasing business.

There are two brands of vehicles sold under Nissan Motor Co., Ltd.:[28]

- The Nissan line focuses on middle-class Americans and includes popular vehicles such as the higher-end Altima and Maxima, and the lower-end Sentra. In addition, Nissan's line also includes trucks, sports cars and SUVs.
- The Infiniti brand, Nissan's luxury edition, focuses on higher-income consumers. These vehicles have higher performance and come with the best possible features and styling to fit the higher-income customers' needs. Therefore, Infiniti generates higher profits per car than the Nissan brand. However, sales of Infiniti branded cars account for only 4% of Nissan's total global sales.

Tangible & Intangible Assets

The assets of Nissan Motor Co., Ltd. include current assets and fixed assets. Current assets, such as cash, are expected to be used or sold in the near future, usually not longer than a year. However, fixed assets, such as property, plant and equipment, cannot be converted into cash easily and are composed of tangible assets and intangible assets. The following is the list of tangible assets and intangible assets of Nissan Motor Co., Ltd.[27]

Tangible assets	Intangible assets
◆ Buildings ◆ Structures ◆ Machinery & equipment ◆ Vehicles ◆ Tools, furniture and fixtures ◆ Land ◆ Construction in progress	◆ Patent right ◆ Leasehold right ◆ Right of trademark ◆ Software ◆ Right of using facilities ◆ Brand

Table 5 Nissan's Tangible and Intangible Assets [27]

Capabilities

Since the growing demand for a cleaner environment has become an important trend, Nissan is focused on the solution to offer greater fuel efficiency and fewer CO2 emissions. By offering more efficient gasoline-fueled engines, hybrids, clean diesel, electric and fuel cell vehicles, Nissan plans to be the leader in being greener. The solutions include the following: [30]

- Electric and fuel cell vehicles that are attractive, fun-to-drive cars with zero emissions

- Innovative technological advances that are good for the environment, enhance safety, improve dynamic performance and provide greater life-on-board satisfaction.

In 2008, Nissan invested a total of $4.2 billion and concentrated on development of new products, safety and environmental technology and on efficient improvement of the production system. In the same year, Nissan introduced 11 important new technologies, such as a clean diesel engine for lower CO2 emissions, an ultra-low-precious-metal catalyst for lower costs and cleaner emissions, and a new STAR WINGS smart route-guidance navigation system. [27]

In 2009, Nissan announced that it will invest $750 million in a new research and development center to catch up with rivals in environmental and safety technology. [31] In addition, Nissan is the only auto manufacturer since 2006 that participates in CEATEC, an annual exhibition showcasing cutting-edge electronic and information technologies in Japan. In July 2009, Nissan revealed current cutting-edge autonomous safety technologies including Distance Control Assist System, Lane Departure Prevention and Around View Monitor with Parking Guide as well as cooperative technologies like Intelligent Transport Systems and Nissan's latest model, Skyline Crossover. [32]

Figure 19 Nissan Skyline Crossover

In 2008, Nissan enhanced a previous version of the robot car. The model of the robot car was inspired by a bumblebee's flight behavior to prevent collisions. The fish-inspired technology is the latest biomimetics technology introduced by Nissan. [32] With a large amount of capital invested in environmental and safety technology, Nissan has enough knowledge and skills to turn new technical concepts into reliable and stable products.

Areas of Advantage

The collision avoidance system in automobiles is not a new technology in the auto market. Therefore, areas of advantage come from the differences between the EPORO system kit and the existing collision avoidance system.

By comparing the existing collision avoidance systems and the EPORO system kit, the EPORO kit has significant advantages. First of all, the EPORO kit is the first collision avoidance system combined with an anti-collision system and a navigation system. Moreover, the EPORO kit is the first collision avoidance system that allows cars to travel in a group by sharing the position and information of others within a group via communication technologies. [33] Finally, the flexibility of the EPORO system kit is a major advantage on the consumer market. Buyers will not buy a car only because of the EPORO system kit. Since the kit is designed to be installed in any vehicle, this will provide an opportunity for consumers to have it installed in their current vehicle, although Nissan would prefer to have it installed in one of their own cars.

Key Success Factors and Key Weaknesses

Successes

The key success factors that will help Nissan sell the EPORO car collision avoidance system are listed below.

- First company to use the new concept in communication technology/anti-collision automotive systems
- High level of research and development strength (as mentioned above, $4.2 billion in 2008 and $750 million in 2009)
- Uniqueness of the school-of-fish/anti car collision system tool kit

- First company to offer hands free/drivers assisted technology

In 2006, Nissan introduced the concept of emulating the flight of the bumblebee as the technology behind their anti collision system. Then in 2009 they introduced the school-of-fish concept at the CEATEC exhibition, which makes them the first company to introduce the ability of group travel via communications. This demonstration of technological advancement will help Nissan to have the competitive advantage in dominating the anti collision/hands free systems. It will strengthen their brand identity, brand loyalty, reliability, and reputation by being an innovator of technology. Their competency with anti collision systems is a strong attribute of the company. They have invested billions of dollars into their technology divisions and have developed leading edge innovations, such as the EPORO system. Their dedication to research and development into new technologies will help the company succeed

Weaknesses

One of the weaknesses that Nissan will have to overcome is their market share. Since they only hold a seven percent share of the US market, not too many consumers are familiar with the brand name. They will have to compensate for this through advertising and unique promotions, which they have a reputation of succeeding at. More details will be provided on their promotional concerns later in the paper. They will also be able to overcome their lack of market share by aligning with Renault and Kia Motors. This will provide brand identity with the French/European markets and the South Korean market. The other weakness will be the adoption of such a radical new technology that the EPORO offers. The communications and hands free technology will require much testing, trust, and reliability for consumers to be willing to try it out. To overcome this, Nissan will have to work with the major automotive journalists, magazines, and early adopters to test the technology and speak to its reliability.

For the weaknesses, they are: technical challenge, brand identity, early adopters who are willing to use the product, and quality of performance.

The big challenge of the car collision avoidance system tool kit is to make it effective for all type and year cars. Some old cars might not be compatible with new technology. The installation for this product could be impossible, so the range of compatible car categories will be limited.

One of Nissan's weaknesses in the US market is brand awareness. With only seven percent of the total auto sales, Nissan has a challenge ahead of them. With the competition in anti collision devices coming from the larger automakers, Nissan will need to succeed in marketing the EPORO kit for all brands of cars.

Finding lead users to adopt the new technology might be very difficult. This weakness is related to their brand reputation. Even though early adopters are seeking the new technology, Nissan’s brand might get lower focus than other big auto companies. Some lead users might try the product once, and then wait for larger companies to produce the product using new technology.

Objectives

Financial Revenues

The tables below show the potential revenue from the sale of the EPORO kit in the US. Currently Nissan, Kia, and Subaru have over 10% market share on the sales of automobiles. With the kit priced at a discounted $1000.00 for Nissan's Commercial Buyers, and at $800.00 for Kia and Subaru. Percentage of contribution in the company's new car will be 100% for Nissan itself and 40% for two collaborators. That means that 100% of Nissan's new cars and 40 % of Kia and Subaru new cars will be have the EPORO system kit as original equipment.

The total revenue share would amount to $1.3 billion for Commercial Buyers.

Company	Market Share in U.S.	Cars Sold in U.S	Price	Total Sales	Percent of Contribution	Total Revenue
Nissan	7.06%	1154239	$1,000.00	$1,154,239,400.00	100%	$1,154,239,400.00
Kia Motor	2.03%	331885	$800.00	$265,507,760.00	40%	$106,203,104.00
Subaru	1.39%	227251	$800.00	$181,800,880.00	40%	$72,720,352.00
Total	10.48%	1713375				$1,333,162,856.00

Table 6 Market size of Commercial Buyers

For the Private Consumer market, the total revenue would be $3.5 million based on a 20% share of the market and sold at $1,200.00. We believe that 20 % is a reasonable percentage to target in the market of other car companies except Nissan, Kia and Subaru, since many new cars will have an anti0cillison system already especially luxury cars.

Market Share in U.S.	Cars Sold in U.S.	Target Percent	Target Market	Price	Total Revenue
89.52%	14635625	20%	2927124.96	$1,200.00	$3,512,549,952.00

Table 7 Market Size of Private Consumers

In conclusion, total estimated revenue from the EPORO system kit sold will be around $4.8 billion. It will be 72% from private consumers and 28% from commercial buyers.

	Total	Percent of Target Market	Total sales
Private Consumers	$3,512,549,952.00	72%	$3,512,549,952.00
Commercial Buyers	$1,333,162,856.00	28%	$1,333,162,856.00
	$4,845,712,808.00	100%	$4,845,712,808.00

Table 8 Projected Revenue from the EPORO Kit

Margins and Growth Rate

In order to show the EPORO tool kit's margins in the first year, we looked back to Nissan's financial report in two previous years. We use the average numbers of sales, Cost of Goods Sold (COGS), and tax from two years report. Also, we assume the relationship between estimated COGS and tax for EPORO from the financial report.

COGS are 80.6% of revenues calculated from the average two-year Nissan's financial report. However, EPORO is considered as a new product for Nissan, so we assume that COGS can be dropped down to 65%. For taxes, Nissan has recorded for taxes as 34% of revenues. Again, we assume, based on a new product, taxes can be varied around 30% of revenues. To sum up the data, the gross margin and net profit margin are shown in the following table.

Revenue	$4.8B
COGS	$3.12B
Gross Profit	$1.68B
Total SG&A	$768M
Operating Income	$912M
Tax (30%)	$273.6M
Net Income	$638.4M
Gross Margin	35%
Net Profit Margin	13.3%

Table 9 Gross Margin and Net Profit Margin calculation using estimated revenue

From the table, Gross Margin from selling EPORO in 2009 is 35%, and Net Profit Margin will be 13.3%.

For Growth Rate, we assume the second and third year of launching EPORO will double our sales. After the third year, sales will be continuously dropped until meeting the stable number to maintain due to the maturity of the market.

Segmentation/Targeting

Positioning

Figure 25 depicts where the EPORO kit resides on the Technology Adoption Life Cycle. The target market to focus on will be the early adopters, especially for those consumers that have to deal with rush hour traffic, and for the Commercial Buyers. Since the anti collision technology has already been on the market for several years, the communication and hands free technology will be best targeted to the early adopters rather than the innovators. Once the early adopters have accepted the new technology and have reported on its success, then the next target market will be the early majority. Once the momentum builds with the early adopters and the proof on concept has been established on the roads, the early majority will be more confident to purchase the kit and trust its reliability.
In order to cross the chasm with the EPORO kit, Nissan will ensure a complete end to end solution for the product and define specific target markets, which will be private consumers and commercial buyers, as they will be our beach head on focusing on the rush hour and safety conscious driver. The early adopters are the visionaries that want to revolutionize competitive rules in the auto industry. They are not as price sensitive, but will demand customized solutions. And finally, the early majority will need to see proven demonstrations and consumer tests on the EPORO kit. They will want a product that is reliable and has a track record of safety before they purchase the product. The EPORO kit will deliver on their needs.

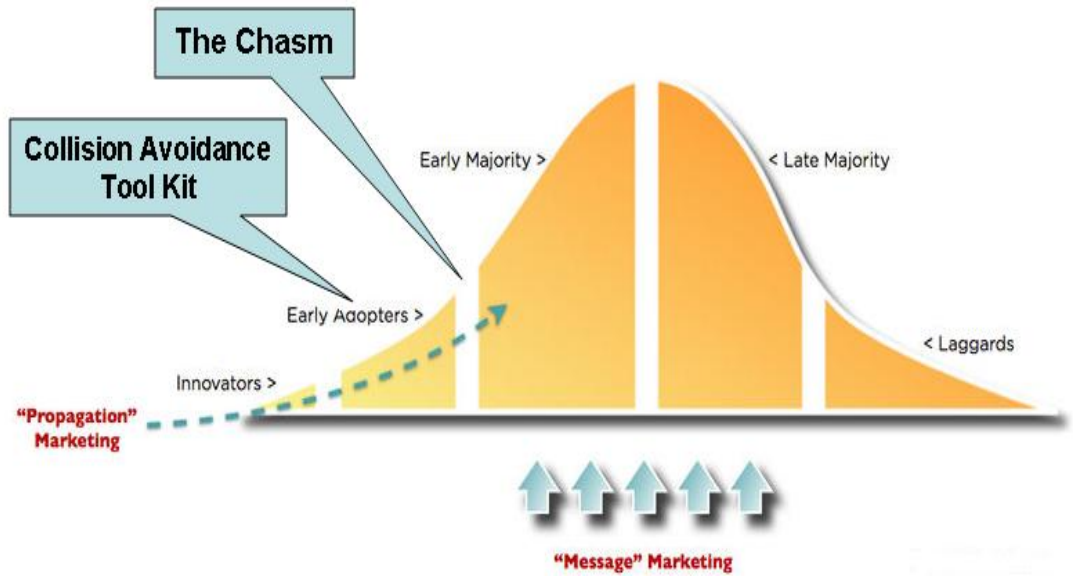

Figure 20 Crossing the Chasm by Geoffrey Moore [34]

Target Market

In order to choose the most appropriate target segment, we identified three potential target markets based on the needs and requirements of customer segments and the potential market share. Among them are private consumers, commercial buyers and federal fleet.

Private Consumer

The EPORO system kit is designed to give people a safe and comfortable driving experience. The private consumer would be those people who would purchase new cars from other car companies except Nissan, Kia and Subaru and will not be as concerned about the additional price of the EPORO system. According to the market share in the US auto market in 2008, Nissan, Kia and Subaru held 10.48% of the total U.S auto market, and other car companies covered 89.52%. [29]

Market share in U.S Auto Market 2008	
Nissan	7.06%
Kia	2.03%
Subaru	1.39%
others	89.52%

Table 10 Market share in U.S Auto Market 2008 [29]

The average car sold in the U.S from 2004 to 2008 was 16,349,000. [35] Other car companies except Nissan, Kia and Subaru covered 89.52% of the total U.S auto market in 2008. [29] Therefore, cars without the EPORO system will be 14,635,624 cars. We are targeting 20% of the cars without the EPORO system as the target market which is 73,178 cars per year.

U.S. Vehicle Sales, 2004-2008			
Year	**Cars**	**Trucks**	**Total**
2008	6,813,000	6,680,000	13,493,000
2007	7,618,000	8,842,000	16,460,000
2006	7,821,000	9,228,000	17,049,000
2005	7,720,000	9,725,000	17,444,000
2004	7,545,000	9,753,000	17,299,000
Average	7,503,400	8,845,600	16,349,000

Table 11 U.S. Vehicle Sales, 2004-2008 [35]

Commercial buyers

The commercial buyer would be interested in having a system that would promote safety and provide the opportunity to market this feature to their customers. Commercial buyers are targeting on Nissan itself, Kia Motor and Subaru car buyers. In the future, three car companies which are Nissan, Kia and Subaru will offer the cars which have the EPORO system kit built-in already. We expected that100 % of Nissan new cars and 40% of Kia and Subaru new cars will come with the EPORO system. According to the data, Nissan, Kia and Subaru covered 7.06%, 2.03% and 1.39% of total U.S auto market. The potential market size for three companies will be

1,154,239 cars, 331,885 cars and 227.251 cars. Total estimated cars with the EPORO system kits as an original equipment will be 1,377,894 cars.

Market Size of Commercial Buyers				
Company	market share in U.S.	car sold in U.S	% of contribution in the car	Total estimated cars
Nissan	7.06%	1154239	100%	1154239
Kia Motor	2.03%	331885	40%	132754
Subaru	1.39%	227251	40%	90900
Total	10.48%	1713375		1377894

Table 12 Market Size of Commercial Buyers

Federal fleet

According to fiscal year 2008 data, the federal fleet has around 645,000 vehicles, including a wide range of vehicles from large trucks to small vehicles. The fleet can be divided into three sectors 1) Department of Defense operates 30 percent of the fleet, 2) USPS operates 34 percent of the fleet and 3) Other civilian agencies operate the remaining 36 percent of the fleet. From fiscal years 2004 through 2008, the overall size of the fleet increased about 4 percent. [36]

The U.S. transportation sector relies heavily on oil. Consequently, the U.S. transportation sector causes about one third of the nation's greenhouse gas emissions. The federal government set a goal for federal agencies to reduce oil consumption. In order to reduce oil consumption, the federal government is planning to switch the federal fleet to plug-in hybrid electric vehicles. Nevertheless, federal agencies have to face challenges related to cost, availability, planning, and federal requirements. [36]

Instead of switching the federal fleet into plug-in hybrid electric vehicles, the federal government can adopt the EPORO system kit for the first step to reduce oil consumption. Federal governments can address challenges related to cost and availability since the EPORO system kit has a lower cost to adopt and is available in the market. In addition, EPORO can add extra benefits for federal fleet such as safety and time saving.

However, the prior goal of the federal government is to reduce oil consumption. The rate of reducing oil consumption from adopting plug-in hybrid electric vehicles is higher than adopting the EPORO system kit. In conclusion, the benefits from adopting EPORO might not fit the priority of federal government's goal. Federal fleets might not be an appropriate market segment for EPORO.

In conclusion, the customers that Nissan will focus on will be the private consumer and the commercial buyer. The consumer would typically live in a major city and drive on congested highways, as one of the benefits of the EPORO system is to reduce congestion by having a system communicate with other systems to avoid collision.

The first test city for the EPORO system kit is Los Angeles (LA), CA. LA is the largest city in the state of California and also the second largest city in the United States. With over 26 million automobiles, LA provides a wealth of opportunity to sell a high tech safety product for cars.

California already has been more energetic than some states in taking action against drivers for causing fatal accidents, as they were the first state to ban cell phone talking while driving. In addition, according to an America's 20 Most Congested Cities report by Forbes.com, Los Angeles is the No # 1 city of traffic congestion in the U.S. [37] Based on the features of the EPORO system kit, Los Angeles is an appropriate city to introduce the EPORO system kit.

Marketing Strategy

Positioning

Porter's Five Forces provides insight into the competitive intensity and attractiveness of the anti collision and hands free/driver assisted market. [38] The middle box in Figure 21 shows the current competition in the market place. Potential entrants pose quite a bit of threat as more and more companies and products are being introduced with anti collision systems. The potential of high yield returns will draw new entrants into the market. The added value for the EPORO kit will be its hands free/driver assisted technology along with the communication system. Buyers have bargaining power as there are many products to choose from in the anti collision systems market. The EPORO kit's niche for the buyers will be in its ability to provide not only anti collision, but also hands free/driver assisted technology to provide the added safety while driving on the road. Buyers will feel safer knowing that if their vehicle happened to drift out of their lane, the EPORO kit will bring them back into their lane. The substitute products are already on the market for anti collision devices, but there are no substitutes for the hands free/driver assisted technology or the communication system in EPORO. The component supplier has an important stake in the technology behind the hands free/driver assisted technology and communication system. Strong relationships will be established between Nissan and its suppliers for the EPORO kit.

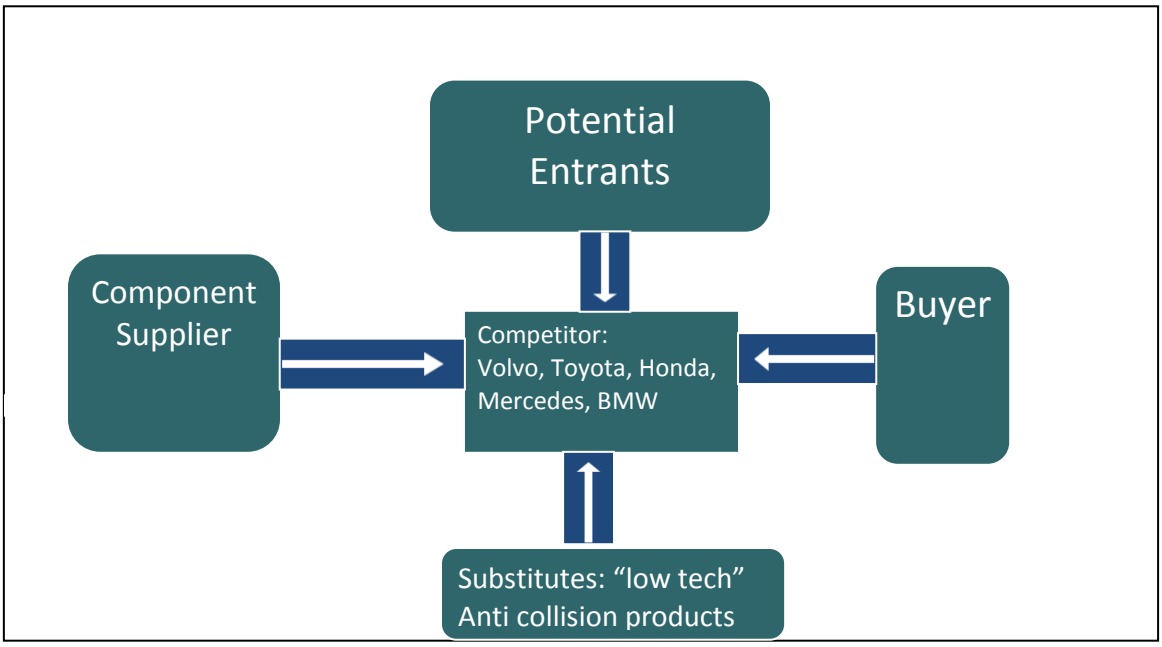

Figure 21 Porter's Five Forces as it pertains to the EPORO kit [38]

Collision Warning is largely expected to be bought as part of a vehicle purchase or subsequent up-grade, either by consumers or corporate fleet operators. The products will therefore need to meet the requirements of at least two distinct market segments:

- private consumer
- commercial buyer

The private consumer market in turn can be sub-segmented by class of vehicle, price range or territory or a combination of all three. In general, introduction will be demand led with fitment to individual model lines occurring where the customer has the propensity to purchase the feature.

The commercial buyer market may be much more 'value' conscious, and therefore the cost benefit of a particular feature needs to be much more transparent to the purchaser than to the private consumer. The drive to reduce accident rates within vehicle fleets may lead to demand from this sector, but collision warning and avoidance systems may be assessed by buyers against investment in other methods of achieving improved accident rates. Other methods of achieving reductions in accident rates that vehicle fleet managers are known to be evaluating currently include driver training and awareness campaigns, fitment of on-board data loggers or simple speed limiters / warning devices, or safe driver incentive schemes.

Market Penetration Strategy

Even though we have a data survey that supports the potential market for EPORO as an active safety system, we still need to build customer awareness to give them enough evidence that the EPORO system can actually work in a real world situation. In order to do so, it is very important to test EPORO in one specific area that has the most number of collisions and the number one traffic congestion in the US, as mentioned in the Market Demographics section. We chose Los Angeles, CA, as our place to test EPORO. We want to deliver a message to our potential customers that EPORO is designed to give people a safe and comfortable driving experience. Los Angeles is the largest city in the state of California and also the second largest city in the United States. California already has been more energetic than some states in taking action against drivers for causing fatal accidents, even when they are not impaired by drugs or alcohol, such as talking on a cell-phone while driving.

Based on the features of EPORO, Los Angeles is the perfect city to introduce the kit and establish a market for the hands free/driver assisted technology. Once EPORO becomes recognized for its ability in anti collision, we will have sufficient brand recognition to sell this product in the US and European markets.

Distribution

Anti collision systems require a high level of integration with other on-vehicle systems, therefore most of the initial entrants to the market are likely to appear as original equipment items rather than after-market. However, after-market collision warning systems will emerge as independent

systems for additional routes to market for their sub-systems. This is the reverse market introduction scenario where features initially available in the after-market are being progressively included in vehicles as original equipment.

With this in mind, the route to market for EPORO can be considered under two main headings:

- Original equipment – installed in the vehicle during manufacturing
- After-market – installed in the vehicle as an accessory or non-factory installed option.

Considering original equipment systems first, EPORO will be marketed alongside or as part of the vehicle by the vehicle manufacturer. The vehicle manufacturer in turn handles the purchasing of the system components, integrating them on the vehicle and providing after-sales service to the customer. There is no relationship between the component/system supplier and the end customer as the overall performance of the system is a function of the vehicle manufacturer.

For the after-market condition, EPORO will be marketed through trade and retail outlets as separate retail products. Installation on the vehicle is the responsibility of the customer and will generally be undertaken by qualified mechanics. The customer relationship will be with the outlet where the system was purchased and/or installed. The vehicle manufacturer is not involved at all, unless the item has a factory-fit or factory–approved specification, in which case the system is normally fitted by an approved mechanic of the vehicle manufacturer.

Customer Centric Framework

Companies are losing customers at an alarming rate. Millions of dollars are spent on making multiple customer service touch-points. Some of the customer relationship strategies and customer relationship management tools and systems have failed to retain customers. According to Industry analysis the market reality is: [39]

- Only 40% firms know a problem before a customer does
- Only 43% alter services based on customer profitability
- Only 42% would sell something during a service call
- Only 37% know if they share a customer with another division
- Only 20% know if a customer has visited the website
- Only 23% of telephone agents can see customers' web activity

Customer management complexity starts within the enterprise. Some customer information resides at several locations, departments and touch-points. Each department needs customer information for different purposes. They are often provided access to disparate, obsolete, redundant and inaccurate customer records. Unfocused market campaigns, opportunities loss, poor customer services, and customer loss are just some of the hazards of a non customer-centric enterprise. To avoid this, Nissan will ensure their customers are the number one focus in their organization. Customer relationship management will be their top priority. They will accomplish this with state of the art customer relationship management software and ensure that their

customer profiles are updated and accurate. They will provide a world class customer service division to handle all concerns and questions from their customers. Nissan's brand positioning, brand buying, and brand experience will be centralized around their customers, which will provide the complete customer centric framework, as shown in Figure 22.

Figure 22 Customers Centric Framework

Brand Positioning

Brand positioning is an essential element of a winning brand strategy. Positioning simply refers to how your product or service is viewed in the minds of prospects and customers relative to other products or services available in your niche. [40] The term *positioning* has two connotations: a vertical and a horizontal one. In terms of the vertical connotation, the term refers to the order in which your product ranks relative to the products of your competitors in the minds of your customers in your industry niche. In terms of the horizontal connotation, the term refers to the qualities and attributes your product represents in the minds of your customers, again relative to your competitors.

Nissan's vertical brand position is reflected in their global ranking in car sales. They currently rank seventh in the world, and have a wide range of vehicles. From the luxury Infinity brand, to the sporty GT-R, Nissan's brand depicts style and comfort. Their reliability and quality service will be the foundation for launching EPORO. Customers will know that the Nissan brand stands for a quality, reliable, and safe product, and this will be a key selling feature for EPORO. Nissan wants to be known as the leader of safety vehicles and kits, and they have backed this positioning through extensive research and development on innovative robotic technology

Brand Buying

Brand buying is another term for marketing mix. The “Four P’s” of marketing: product, price, placement, and promotion are all affected as a company moves through the evolutionary phases to become a global company. Ultimately, at the global marketing level, a company trying to

speak with one voice is faced with many challenges when creating a worldwide marketing plan. Unless a company holds the same position against its competition in all markets (market leader, low cost, etc.) it is impossible to launch identical marketing plans worldwide. The "Four P's" for EPORO will be described as follows:

Product

The EPORO system kit provided by Nissan will contain three components:

- Anti Collision
- Communication
- Hands Free/Drivers assisted steering

Price

The pricing structure will be based on the total customer value perspective: the aggregate value available to the customer from the systematic integration of the individual product components. The price structure for the EPORO system kit is based on several factors. The first factor will be Value-Based Pricing. The customer's perceived value will determine the price, and the cost and residual margin will be covered by the total spend. [41] The customer value in the EPORO kit will be derived from the value the product delivers to the customer, at the price the customer is willing to pay. The customer's value requirements involve a tradeoff between perceived product benefits and price. Currently anti-collision only products range in price from $500.00 to $1,100.00. Nissan believes that the cost of $1,200.00 will be a reasonable price based on the extra value it brings to the customer not only on top of the line anti collision technology, but also hands free/drivers assistance and communication technology. The customer value drivers are composed of the following:

- Economic Value - based on the customer's perception about the price of acquiring, owning, installing, using, and disposing of the EPORO kit. Customers will value the safety features of the EPORO kit as it will provide anti collision and drivers assisted technology to protect the driver and passenger of the vehicle.
- Performance Value - based on the customer's perceptions of the utility to be derived from the features and benefits with the EPORO kit. Customers will have opportunities to fully test the EPORO kit by test driving vehicles with the EPORO kit installed. Nissan will also provide warranties on the kit.
- Supplier Value - the customer's perception about supplier credibility and trust in the business relationship. Nissan will ensure suppliers and retailers will provide world class service and support. The components of the EPORO kit will be overseen by the Nissan engineers and fully tested for reliability.
- Buyer Motivation - the customer's value perceptions occur within a situational context that may inhibit, facilitate, or have no effect on the purchase. The EPORO kit offers a safe driving experience, easy installation, and affordability.

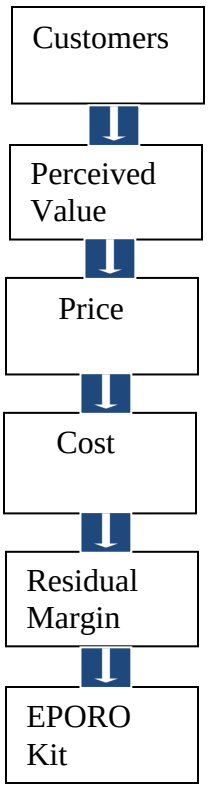

Figure 23 Customer Value Centric [41]

Placement:

Place is also known as channel, distribution, or intermediary**.** It is the mechanism through which goods and/or services are moved from the manufacturer/service provider to the consumer. Since EPORO will be targeting the commercial buyer (OEM) and private customer, the distribution channel will be slightly different. For the OEM, we will be placing our product in a virtual market to ensure that those customers are able to obtain the information easily. As for the private customer, we will use both the virtual market (online store) and brick and mortar stores.

Promotion:

Promotion includes all of the tools available for "marketing communication". With EPORO, we will use the combination of marketing communication tools which include:

- Personal Selling:
  An effective way to manage personal customer relationships. Professional sales people act on behalf of the organization. They tend to be well trained in the approaches and techniques of personal selling. However, sales people are very expensive and should only be used when there is a genuine return on investment. Our strategy is to use personal selling for the commercial buyers (OEM) who tend to buy our product in bulk to be installed in their autos.

- Sales Promotion:

  Tends to be thought of as being all promotions apart from advertising, personal selling, and public relations. We will use different type of sales promotions including couponing, money-off promotions, and introductory offers (for example, buy EPORO and get free installation).

- Public Relations:

  Will be use to raise awareness on the importance of using anti collision systems. Nissan has been working with the Safety Consortium of Japan to find ways to change the laws of safety devices in autos.

- Direct Mail:

  First, we will define our target private customer based upon a series of attributes and similarities. Our marketers will use this data to design a highly focused communication in the form of a mailing. The mail is sent out to the potential consumers and responses are carefully monitored.

- Trade Fairs and Exhibitions:

  The purpose is to increase awareness and to encourage trial. We will be actively involved in some of the prestigious exhibitions such as the CEATEC exhibition in Japan to gain awareness and recognition especially with our potential commercial buyers.

- Strategic Promotions:

  Nissan is known for its unique approach to unusual promotions. For instance, in 2007 Nissan introduced the GT-R "muscle" car to the US market not in the normal marketing venue, but rather in a more non-traditional way. [42] They developed a "viral" campaign aimed at building a buzz by spreading the word through a wide range of product-placement arrangements in video games. Unlike with other models, it didn't reveal details to anyone outside the company, and posted sneak previews of the car masked in a black rubber on blogs and YouTube. This unique approach provided Nissan with a new opportunity to sale their product via targeted consumers who would be most interested in purchasing the new GTR model.

Brand Experience

Brand experience can be defined as the cumulative brand impressions garnered from visual, verbal and experiential encounters with the brand. The brand experience encompasses a range of intellectual, sensory and emotional connections. [43]

Brand experience can be gained from different approaches such as through:

Information	: EPORO will be introduced through some of advertisement media such as: advertisements in trade journals and business publications, catalogs & direct marketing
People	: Distributers that will deal with the information and installation of EPORO will be chosen with high skills and reliable work
Product	: Easy to install
Process	: Fast, effective and convenient
Physical Evidence	: Hi-tech, reliable and compatible
Service	: Available after sales service

Budgeting and Control

Financial resources required to execute the market strategy

As previously stated, our target customers are commercial buyers and private customers. The first market to test the EPORO kit will be LA, as it has 26 million autos. The revenue for the EPORO kit in the US is approximately $1.3 billion. After R&D, the most important part is marketing. The price for the EPORO kit is determined to be $1000.00 for Nissan's customers and $800 for other car manufacturers, like KIA Motor and Subaru. Marketing has a few aspects that need to be considered to understand the complete role. They are promotion, budget for customer awareness, sales budget that drives salesmanship, and the sales forecast. For promoting the product, advertisement is necessary. It has been estimated that the average cost of producing a 30-second national TV commercial is nearly $350,000. [44] Going to car magazines and road ads may be considered as an alternative choice. EPORO is not a well known product as it's not in the news and also it is almost new and revolutionary in most of the blogs. The other option is to send each of the car dealers in LA the product and price information in the form of a brochure.

System for comparing results to objectives

Meeting the corporate objectives is always an essential factor for any company's success. Hence, designing a system to compare results to objectives is very critical in all product lifecycle stages. There are some well known methods that have been used by other corporations to keep track of the results and objectives such as the Check List method. The Check List method will help in evaluating the results and that the result meets the company's objectives or not.

Conclusion

Nissan's EPORO kit will be a great success in the metropolitan markets and will provide a new level of safety in the automotive industry. Nissan has raised the bar with their technology, and they keep pushing themselves to do even better. If Nissan focuses its marketing plan as has been described in this paper, then they will achieve not only their financial objectives, but they will also achieve many awards for a product that saves lives and provides an enjoyable driving experience.

Appendix A

For a breakdown of auto production by country in the world, see chart table below:

Country	Cars	Commercial Vehicles	Total	Total Change
Argentina	263,120	168,981	432,101	35,1%
Australia	270,000	60,900	330,900	-16,2%
Austria	248,059	26,873	274,932	8,6%
Belgium	881,929	36,127	918,056	-1,2%
Brazil	2,092,029	519,005	2,611,034	3,3%
Canada	1,389,536	1,182,756	2,572,292	-4,3%
China	**5,233,132**	**1,955,576**	**7,188,708**	**25,9%**
Czech Rep.	848,922	5,985	854,907	41,3%
Egypt	59,462	32,111	91,573	32,2%
Finland	32,417	353	32,770	51,4%
France	2,723,196	446,023	3,169,219	-10,7%
Germany	**5,398,508**	**421,106**	**5,819,614**	**1,1%**
Hungary	187,633	3,190	190,823	25,5%
India	1,473,000	546,808	2,019,808	24,2%
Indonesia	206,321	89,687	296,008	-40,1%
Iran	800,000	104,500	904,500	10,7%
Italy	892,502	319,092	1,211,594	16,7%
Japan	**9,756,515**	**1,727,718**	**11,484,233**	**6,3%**
Malaysia	377,952	125,021	502,973	-10,8%
Mexico	1,097,619	947,899	2,045,518	22,4%
Netherlands	87,332	72,122	159,454	-11,8%
Poland	632,300	82,300	714,600	14,2%
Portugal	143,478	83,847	227,325	3,7%
Romania	201,663	11,934	213,597	9,6%
Russia	1,177,918	330,440	1,508,358	11,6%
Serbia	9,832	1,350	11,182	-21,1%
Slovakia	295,391	0	295,391	35,3%
Slovenia	115,000	35,320	150,320	-15,5%
South Africa	334,482	253,237	587,719	11,9%
South Korea	3,489,136	350,966	3,840,102	3,8%
Spain	2,078,639	698,796	2,777,435	0,9%
Sweden	288,583	44,585	333,168	-1,6%
Taiwan	211,306	91,915	303,221	-32,1%
Thailand	298,819	895,607	1,296,060	15,2%
Turkey	545,682	442,098	987,780	12,4%
Ukraine	274,860	20,400	295,260	36,8%

Country	Cars	Commercial Vehicles	Total	Total Change
UK	1,442,085	206,303	1,648,388	-8,6%
USA	**4,366,220**	**6,897,766**	**11,263,986**	**-6,0%**
Uzbekistan	100,000	10,000	110,000	14,8%
Supplementary	411,982	129,210	541,192	
Totals	**49,886,549**	**19,240,607**	**69,127,156**	**4,0%**

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