

# A New Vision for Trade Along the U.S. - Mexico Border



## A New Border Trade System to Enhance Border Security and Competitiveness Through Secure Manufacturing Zones

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*A Proposal for a Border Demonstration Project to Establish  
Secure Manufacturing Zones*

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This demonstration project proposal was prepared by the Border Quality Campaign of El Paso del Norte, Holguin Group/EPV Group, the Idaho National Laboratory and Ruby Mountain Inc. in cooperation with the Border Legislative Conference. The proposal was adopted by the Border Legislative Conference on December 9, 2005 in El Paso, Texas.

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## **I. Executive Summary**

### *Background*

On December 9, 2005 the members of the Border Legislative Conference (BLC) unanimously adopted the “New Border Trade System Proposal” during the 12<sup>th</sup> BLC in El Paso, Texas. The New Border Trade Proposal, a component of the BLC’s ongoing development of a Border 2020: *Secure-Fast-Smart* Strategy, is aimed at developing an integrated, systematic approach to enhance border security and economic competitiveness along the U.S. – Mexico border region utilizing new technologies and establishing innovative government – private sector partnerships.

### *Key Component: Development of Secure Manufacturing Zones along the Border*

The proposal recommends the funding of an initial demonstration project at key border ports of entry and vital trade corridors along the U.S. – Mexico border to establish a series of Secure Manufacturing Zones. The proposal identifies the following five geographic areas for initial implementation: 1) Brownsville – Matamoros; 2) Laredo – Nuevo Laredo; 3) El Paso – Chihuahua – Cd. Juarez – Santa Teresa; 4) Nogales, AZ – Nogales, Son; and 5) San Diego – Tijuana – Otay Mesa – Ensenada – Calexico – Mexicali.

The demonstration project entails the equipping of commercial vehicles and manufacturing facilities with Intelligent Software Agents (ISA) and Information Technology Systems (ITS) to enable point of origin monitoring and clearance of commercial cargo, supply chain visibility, and the system’s integration to high priority trade corridors. The proposal also includes the retrofitting of the commercial vehicles’ engines with innovative, clean natural gas systems and necessary refueling infrastructure to improve the border region’s air quality and public health.

The projected cost of the proposal is \$100 million over the next 3-5 years. The proposal recommends a combination of federal and state government grants, incentives, and low interests loans from the U.S. and Mexico to facilitate the creation of secure manufacturing zones.

### *Benefits*

The development of a border trade system that facilitates the creation of secure manufacturing zones along the U.S. – Mexico border meets both country’s priority to establish a strategic security strategy while promoting economic growth in a highly competitive global economy as expressed by the recent establishment of the Security and Prosperity Partnership of North America between the United States, Canada, and Mexico, as well as other international agreements. Collaboration, strategic planning, and commitment among federal, state, and local governments in the U.S. and Mexico, as well as the private sector and border communities, is essential to develop a border system that is safe, fast, and smart for the 21<sup>st</sup> Century.

## **II. The Purpose**

This proposal is focused on the development of a new integrated, systemic approach for trade along the United States-Mexico border and is a major component of the Border Legislative Conference's Border 2020 Secure, Fast, Smart Strategy. The proposal addresses four basic questions:

1. How to secure the manufacture and transport of goods in North America, while addressing hemispheric security that results from expanding border trade?
2. How to utilize 21<sup>st</sup> century technology to expedite the border crossing process and increase supply chain visibility?
3. How to integrate United States-Mexico border crossings into existing and emerging high priority trade and travel corridors in North America?
4. How to address issues and maximize opportunities related to energy efficiency and independence, environmental protection and public health?

At the core of this proposal is the implementation of a unified demonstration project for the United States-Mexico border that utilizes innovative technologies and integrates them with new border crossing procedures that ensure the fast, safe, secure, clean and energy efficient movement of goods. Specifically the project will establish a process to secure the movement of vital goods by utilizing state of the art security and tracking technologies 24 hours a day, seven days a week, three hundred and sixty five days per year (24\*7\*365) which will track all relevant activities from agreed upon points of origin until they reach the authorized destination across international borders. While the proposed project does not directly address the movement of people, the systems proposed can be enhanced to provide the same level of efficiencies to the movement of private citizens should it be decided to do so in the future.



**United States-Mexico Border Trade Demonstration Sites**

### **III. The Background**

For over 150 years the United States border with Mexico has been the topic of interest and fascination for both countries and their people. The border has been romanticized in books and movies as a place of history, adventure, outlaws, and revolution as well as a place of passage for those seeking refuge - whether they were going south like the Mormons in the 1880s seeking religious freedom or those going north in recent years seeking expanded economic opportunities.

Whatever its history has been or what it may become, the border is now an integral part of a rapidly developing sanctified trade relationship between the United States and Mexico. Since Mexico's entry into the General Agreement on Tariffs and Trade (GATT) in 1986 and the ratification of the North American Free Trade Agreement (NAFTA) in 1993, border trade has increased exponentially making Mexico one of the primary trading partners of the United States.

These dramatic increases are in large part based on efforts of United States companies seeking to compete in world markets by taking advantage of Mexico's lower wage and manufacturing costs and the country's unique proximity to U.S. markets. The most recent figures from the United States Department of Commerce declare that Texas leads all states in cross-border commerce with \$108.6 billion in goods from Mexico, which constitutes 68% of its total imported goods. The "Twin Plant" or maquiladora industry contributes \$105 billion of that total. The ten years of the North American Free Trade Agreement (NAFTA) between the United States, Mexico and Canada has encouraged the further expansion of trade and economic integration in the Western hemisphere. Discussions of CAFTA (Central American Free Trade Act), which includes the balance of the states south of Mexico in Central America, suggests the emergence of treaties at a hemispheric scale will increase the flow of goods at the United States border with Mexico.

This expanding trade relationship has created many challenges at current border crossings. Current border crossings and systems were never designed physically, psychologically or technologically to address these geometric increases in human beings and cargo we now face. Over the last decade there is a growing consensus that the current border system is no longer adequate to address the demands of the 21<sup>st</sup> Century. Border users are increasingly subjected to long delays, traffic congestion, and more detailed inspections. Additionally border communities and their residents find that roads, sewers and other infrastructure are no longer adequate to meet the needs of high growth populations and increased trade.

People in these communities also face increased pollution and the resultant detrimental impacts on public health due to increased traffic delays at border ports of entry. Finally, there is limited coordination among border public safety, border protection and emergency management personnel who are called upon to protect neighborhoods (*Colonias*) without an integrated domestic and international emergency response plan.

These administrative and structural border limitations have been further complicated by the terrorist attacks of September 11, 2001, which have heightened the concerns of terrorism among citizens of the United States. Concurrent with these increased concerns about terrorism, the border region simultaneously faces the expansion of Pacific Rim countries such as Malaysia, Thailand, India, and China, that can manufacture goods at costs lower than Mexico. Thus, just at the moment when there is a directive to make the movement of goods and people more restrictive to address terrorist concerns, the border region must be prepared to operate more efficiently than in the past to facilitate the movement of people and goods in order to remain competitive in both the domestic and global markets.

The development of a new vision for trade along the United States-Mexico border requires commitment and collaboration among numerous stakeholders, including federal, state and local governments on both sides of the border, and the private sector. Earlier this year, the United States, Canada and Mexico entered into an unprecedented trilateral Security and Prosperity Partnership (SPP) to establish a common security strategy and promote economic growth, competitiveness and quality of life. The establishment of this partnership provides an opportunity for all stakeholders - particularly state and local government entities and private sector stakeholders that will be affected by the implementation of such an agreement - to be proactive in their bi-national approaches and to influence the development of federal strategies. This proposal is geared to making the vision of a trilateral Security and Prosperity Partnership a reality.

#### **IV. Essential Elements of a New Border Trade System**

##### **Systemic Approach**

The task of developing a comprehensive system that facilitates the fast, safe, secure, clean and energy efficient movement of goods along the full 2000-mile United States-Mexico border is a complex but essential undertaking. The first challenge is to transcend the tendency of traditional institutional, political and national interests that focus on selected isolated parochial issues. Isolated uncoordinated solutions that do not ultimately address all essential aspects of a new border trade system will ultimately fail to meet needs, much less expectations. To avoid this problem it is essential that any new border trade initiative take a "systems" approach to address all essential steps of the border manufacturing and transport cycle simultaneously. Only then can the U.S. and Mexico achieve the essential efficiencies and security they mutually desire.

##### **Collaboration**

A second essential element in any new border system is that it must address the full range of border interests. In developing a new system, the needs of individual citizens who cross the border on a daily basis must be integrated with the concerns of business, and government at all levels, as well as national and hemispheric imperatives. Failure to address concerns of all constituencies will result in a system not fully capable of garnering the support necessary for implementation. To assure that these multiple interests are accounted for, the development process for a new border trade system must

be collaborative. It must be demonstrated and implemented in a way that requires federal, state, and local governments, as well as the private sector, to work in unison to develop a comprehensive border trade system. The cross-border transportation of vital goods and trustworthy people must be seamless, and a new border trade system must address the needs of all the communities of interest that will use and operate it.

### Security

The final and perhaps most important element is that any new trade system must be secure. How we choose to define what constitutes “security” and how we balance various competing “security” interests will dictate more than any other factor, the character of the system developed. While there are many definitions of security, for purposes of this proposal, the following standards have been established as the measurement by which we believe a new border trade system can be characterized as secure.

1. **Protection from man-made or natural threats.** Any new border system must be capable of providing coordinated protection for the citizens of the United States and Mexico from terrorists and other threats. Further, any new border system must integrate, and as required, execute community, state and federal emergency plans for accidents, and other man-made and natural disasters thus providing optimum safety to border residents and users.
2. **Economic Growth.** Any new border trade system must facilitate existing trade and manufacturing while promoting the emergence of new economic opportunities. The results must deliver long-term economic security for not only the citizens who live and work in the region but for all the citizens of the United States and Mexico.
3. **Consistency/Predictability.** Any new border trade system must provide a level of user and operator consistency and predictability. By utilizing common technologies, standards and protocols that enhance the efficient use of the border, users and operators can then focus their limited time and resources on mission-critical inspections of high-risk shipments and activities.
4. **Energy Independence.** Any new border trade system must recognize the opportunity provided by the innovative and economically efficient use of domestic fuels and power produced or generated within the region. Such fuels/power can provide strategic independence from traditional energy markets while providing a competitive advantage over those outside the region that remain subject to unpredictable energy markets.
5. **Environment and Health.** Any new border trade system must enhance the health of the border through the introduction of efficiencies and practices that promote the environmental and physical health of the border region and its citizens.

The ability to implement a border trade system that addresses these concerns will fully develop a fast, safe and secure border. This mandate is critical to the future prosperity, health and safety of the United States-Mexico and the entire Western Hemisphere.

## **V. The Proposal: A New Border Trade System**

In developing a specific proposal, the recommendations developed by the Border Legislative Conferences' Economic Development Committee over the course of 2005 have been considered. Specifically, the following requirements were identified as essential to any New Border Trade System:

1. The common use of existing and emerging technologies by the public and private sector participants (such as applications driven by Intelligent Software Agents technology (ISA) and advanced Information Technology (IT) communications systems and infrastructure);
2. Integrated transportation systems and intelligent transportation models to enhance the secure-efficiencies of transporting cross-border commercial goods, which includes the inherent optimization of the federal and state inspection facilities of both nations;
3. The integration of border inspection processes to include the pre-screening of commercial flows (both northbound and southbound) to make the border the last line of defense and enhance its efficiency;
4. Integration of environmental needs and public health models by developing incentives for and promotion of innovative, technologically-based projects;
5. A strategic focus on value-added manufacturing that is knowledge and technology-based, targeted on the military/defense sectors and strategic industries vital to the future of the United States;
6. Border demographics point to an abundant and younger population which creates an opportunity to transform to a highly trained and skilled workforce;
7. The establishment of uniform manufacturing and export/import industry standards to enable each higher order of security;
8. Collaboration and funding of key projects by the shared commitment of federal, state and local governments, and a strong partnership with the private sector; and
9. A strategic mobilization and effective management of natural resources (i.e. water, natural gas, and energy), which includes the ability to deal with evolving trends (growth dynamics, globalization, immigration, and information revolution). All factors converge to shape and form the best political, economic and cultural models for the future of the United States-Mexico border region.

The New Border Trade System incorporates the essential elements discussed in Section IV, and has been constructed to meet, and in some way exceed, the requirements outlined by the Border Legislative Conference. Further, the New Border Trade System will enhance the security of existing U.S. Customs and Border Protection (CBP) programs aimed at expediting secure commercial cargo such as Free and Secure Trade (FAST) and Customs-Trade Partnership Against Terrorism (C-TPAT). In this respect, it is also imperative that the federal entities implementing and planning the expansion of programs such as FAST and C-TPAT, in cooperation of border states, consider the efficient and secure movement of non-commercial vehicles and pedestrians at land ports of entry. Programs such as the Secure Electronic Network for Travelers Rapid Inspection (SENTRI), which expedites customs processes for pre-approved, low-risk travelers, needs to be expanded along the U.S. – Mexico border and integrated to current and future port of entry operations.

This New Border Trade System proposal is consistent with the policies and programs advocated by the Border Trade Alliance, specifically reverse customs and low risk ports of entry. The New Border Trade System is defined by four individual activities that are all necessary to work as an integrated comprehensive system. The four basic activities are:

1. Secure Manufacturing Zones
2. Supply Chain Visibility
3. Integration into High Priority Corridors
4. Energy, Environment and Health

### **Activity 1: Secure Manufacturing Zones**

At the core of the proposal is the concept of creating a series of Secure Manufacturing Zones (SMZ) along the United States-Mexico border. The objective of the SMZ concept is to develop secure and efficient manufacturing zones that enhance the security and efficiency of the border and the manufacturing supply chain. The importance of the SMZ is that it establishes a specific location at which inspections and clearance can occur away from the border.

These specifically sanctioned zones would operate under current, and as required, new industrial standards and operating protocols (ISOs). The result will allow the monitored placement of goods into secure authorized vehicles for transport to specified destinations on the other side of the border. The effect of the SMZ will move activities and functions that have previously occurred at the border to the manufacturing facility or other designated sites. This process known as “Point of Origin Clearance” is the heart of the SMZ.

### ***Point of Origin Clearance - Moving the Border to the Plant***

While such a system is applicable to all goods crossing the border no matter what their points of origin, it would be of particular value to the more than 2,600 maquiladoras along the United States-Mexico border region. The Maquiladora industry represents the largest component of trade between the United States and Mexico. The Maquiladora industry and the local economies along the border cannot afford to have inefficient inspections processes impede these vital flows of trade. The key to creating SMZ along the border and enhancing the efficiency of federal inspection facilities is to bring cost-effective technology into the process. Point of origin clearance is a concept developed by border trade professionals offering a multiple value proposition: predictable trade for industry, secure trade for government, and environmental innovation that benefits the quality of life of the border region. By securing the manufacturing supply-chain, this concept serves the industry-government Partnership essential to border security and homeland security.

Point of origin clearance is a concept that responds to two significant issues impacting the economy of the United States-Mexico border. The first is the “just-in-time” manufacturing and shipment of goods. To be competitive in the modern global economy border operations must be responsive to the needs of those engaged in international trade and industry sectors that are increasingly dependent on the “just-in-time” model. Thus, it is critical that these needs be protected in a post-September 11, 2001 environment. The second issue is the fact that the SMZ and point of origin clearance can provide effective inspection and oversight to protect the citizens of the hemisphere from the movement of illegal or dangerous materials across the border. Point of origin clearance offers intelligent monitoring and protection of the United States-Mexico border and its vital cross-border conveyances while concurrently facilitating the needs of cross-continental and global trade flows. By applying innovative and proven integrated technologies, SMZ provide a starting point for a secure and totally transparent supply chain.

This point of origin issue is of such overriding importance that the United States Senate Permanent Subcommittee on Investigations has released two reports compiled by the Government Accountability Office (GAO) from its investigation of key Homeland Security cargo security programs administered by United States Customs and Border Protection. The two reports are (1) Container Security Initiative (CSI); and (2) Customs-Trade Partnership Against Terrorism (C-TPAT). These reports were initiated to determine just how many containers crossing United States borders were in fact being inspected, the types of inspections conducted and where such inspections occurred.

The report identified weaknesses in cargo inspections that include the following:

- a. Only a low percentage of all of the containers passing through our ports are inspected overseas;
- b. Only a low percentage of high-risk cargo is inspected overseas;
- c. That the inspections (overseas) utilized untested nuclear detection devices and non-intrusive inspection machines

- d. Importers who own and operate the entire supply chain route from start to finish suffer fewer security breaches than others because they have greater control over their supply chains.
- e. Relatively few importers own and operate all key aspects of the cargo container transportation process, relying instead on second parties to move containerized cargo and prepare various transportation documents.
- f. As a result, a security gap exists. Certified C-TPAT importers benefit from fewer inspections, despite inadequate validation of their supply chain security.

The point of origin process proposed here would address most if not all of these issues for goods produced at and/or shipped through the United States-Mexico border.

### ***Hemispheric Security and Secure Manufacturing Zones***

The introduction of SMZ also create an opportunity to refocus both the perception and function of border communities from merely crossing points or places where companies can achieve lower manufacturing costs, to places that can produce high value goods central to the security of the hemisphere – in other words, Hemispheric Security Zones (HSZ).

In the simplest terms, the basic premise behind a Hemispheric Security Zone concept is that regardless of the ostensible lower costs of offshore manufacturing (such as China), there are certain materials and products that affect the security of our nation and the hemisphere in such a profound way that we do not wish to have them manufactured or processed on other continents. Utilizing and expanding the SMZ proposed here, industries central to the strategic security of the hemisphere could be focused on the United States-Mexico border region, thus taking advantage of a younger and increasingly higher-skilled workforce, while maintaining a level of security that will satisfy the defense establishment and other interests. Secure Manufacturing Zones also compliment the trend toward border-based value-added manufacturing and innovation.

Most likely, this HMZ effort will require the development of a new set of industrial operating standards (ISO 25,000). If implemented along the border, these new security standards will provide an inherent competitive advantage for border regions and allow them to attract industries from areas where cost structures are higher and security standards are lower. For example, if the United States wished to avail itself of the secure economic advantages of border production, it could move the manufacturing of bullet resistant Kevlar vests to a secure facility just over the border, without compromising its ability to obtain the quick delivery of vests or exporting a technology that North American security interests did not want in the hands of less secure, distant facilities. Therefore such industrial operating standards can help, maintaining not only manufacturing security, but also supply chain visibility from the manufacturing plant to the point of use process that cannot be matched by other domestic or international manufacturers.

## **Activity 2: Supply Chain Visibility**

The second element of the plan contemplates using layered, integrated security systems to provide supply chain visibility. Upon departure from the SMZ, each authorized vehicle is tracked and monitored from its point of origin to its destination, utilizing technologies that will protect every element of the supply chain, such as (1) identification of authorized drivers/carriers; (2) secure trailers with intelligent locking devices; (3) instant detection of tampering or compromising of cargo; (4) surveillance and tracking of each truck through authorized routes; and (5) instant alarms for any deviations, which includes violations of allowable travel times between checkpoints. With such security precautions in place, the flow of legitimate trade can be enhanced, allowing inspections to focus on higher risk vehicles and individuals not participating in the system. The capability is extremely important because less than 5% of trucks crossing the border can be physically inspected even in a post-September 11<sup>th</sup> era. Inspections focus primarily on the terrorist threat and secondarily on contraband and drugs.

Further, the emerging requirement for totally visible and secure transportation systems will be fulfilled by the next generation of software - intelligent software systems. Like point of origin clearance, the central feature of supply chain visibility arises from the use of Intelligent Software Agents (ISA). ISA allows users to effectively meet the security and efficiency needs of border trade by automating certain tasks that have previously been conducted manually or not at all. ISA do what human beings are not good at because we can become overwhelmed by excessive amounts of data, especially having to analyze it continuously and in real time. Human beings can also become bored or distracted. ISA thrive on data so they provide the human operator with decision support so that we can do what we do best, which is act. ISA transform data to knowledge. Technologies that are being implemented for security today, like GPS and sensors, generate data that needs to be continuously analyzed in real time. ISA transform this high-volume data (which offers low value) into low-volume, high-value intelligence.

### ***Intelligent Software Agents (A best practice)***

ISA are software modules that automate specific tasks, provide round-the-clock decision support and/or collaborate with each other without human intervention while providing increased security by increasing the number of vehicles that can be monitored. They also help manufacturers and border agents by providing real time information that will allow them to determine best response in the event of an incident or anomoly and to take decisive action. If these automated ISA were introduced to the border today, the system users and operators would be able to monitor vehicles 24\*7\*365 thus expanding the number of vehicles inspected while simultaneously reducing congestion. The use of ISA would increase overall system security by enhancing the capacity of border officials in conjunction with private industry.

***Intelligence Sharing & Multi-Agency Collaboration (IS&M-AC) –  
Interoperability for Emergency Response and Public Safety***

In addition to securing commerce and protecting the border, ISA facilitates the sharing of information between and across multiple agencies and units to respond to emergencies or incidents that require instant collaboration and coordinated action. For example, if there was a severe traffic jam caused by an accident at the border, the use of common software agents and a centralized communication platform would allow those dispatching vehicles to coordinate activities. A central dispatch system could deploy vehicles, serve as a common center for information and even deploy trucks, buses and emergency vehicles in the most effective and efficient manner.

ISA provides an interface and interoperability with local emergency management systems and thus allow local, state or even federal officials to exert real time coordination and control of transportation assets. In reviewing reports from the September 11<sup>th</sup>, 2001 terrorist attacks, and even most recently hurricane Katrina, the biggest problem cited among first responders and emergency managers was the inability to communicate with one another and to coordinate action across various levels of government. This problem would be substantially eliminated if these common ISA and communication technologies were deployed. The lessons of Hurricane Katrina point to an immediate need for IS&M-AC capabilities. ISA helps first-responders to begin strengthening the system. The technology overcomes the lack of dependable information coming from the ground and fills the need for feed back of reliable, real-time information to be used at all levels of government. Based on U.S. Department of Homeland Security (DHS) statistics, there are more than 87,000 different governmental jurisdictions at the federal, state and local levels that have homeland security responsibilities. Preparedness capacity depends on the ability to work collaboratively and seamlessly with partners across all levels of government and throughout the first responder community.

Interestingly, the effort to introduce SMZ, and their attendant ISA, resolves many of the agency communication problems we now face at the border. All of the key components necessary for a border trade system can be applied to promote interoperability among private and public agencies at the border in their efforts to respond to emergencies. Common detailed maps, global positioning technology, traffic and road condition modeling, location of hazardous sites and chemical storage locations, current weather information, real time communication to vehicles and dispatch locations, and direct communication with hospitals and other medical emergency systems can all become part of a single system.

A collaborative system implemented and operated by both the public and private sector partners will allow each participant the opportunity to work independently, but if necessary, work together utilizing the same technologies and communications systems in the event of an emergency. Perhaps the best analogy of this concept is the emergency broadcast system that links all television and radio stations together, but allows them to function as separate entities until an emergency arises. Such a system would provide border communities a new and effective tool in their efforts to address the public safety concerns that arise with increased border trade.

### **Activity 3: Integration into High Priority Corridors**

The third element of the proposal is to fully integrate border trade activities with high priority trade corridors that will allow goods produced at the border, or trans-shipped through border facilities, to move quickly and efficiently back and forth between sea, land and air ports. This integration includes related manufacturing centers, supporting logistics and networks of clients and suppliers. These corridors are coupled to the actual border crossings by use of common protocols and adherence to the governing information and technology-based systems. All results converge to substantially reduce the threats of terrorism and other illegal activities while increasing overall efficiencies at the border and the end-to-end supply chains to continental and global markets.

#### ***Trade Corridors***

While some perceive the only point of concern within the border trade cycle to be the actual road that crosses the border, an essential element of this proposal is how SMZ and their supply chains will link to national and hemispheric trade routes. Over the last several years, public and private officials across the United States and Mexico have worked to identify highways, ports, rail systems and airports that comprise the primary trade corridors. These same groups are developing plans that will allow the servicing and expansion of these existing routes by improving infrastructure, providing enhanced facilities and technologies to facilitate the inter-modal movement of goods.

The New Border Trade System proposed here has been developed with these plans in mind and can be integrated into the existing corridor infrastructure and also into the proposed expansion of these corridors. If integrated at an early stage, these new technology systems and trade practices can help reduce the costs of trade beyond the projections of trade corridor proponents. They will provide a model that will allow all air, land, sea and rail ports to integrate common technology and systems into their infrastructure as it is being constructed, thus maximizing the future efficiencies.

As an example, the proposed new trade corridors to connect Corpus Christi, Texas to the Mexican interior through Matamoros, Tamaulipas and Laredo, Texas to Monterrey, Nuevo Leon and beyond. Upon completion, utilization of the technologies and protocols would allow goods to be packaged and shipped in Mexico and monitored along a secure supply chain to Corpus Christi. At Corpus Christi, they can then be reloaded onto ships bound for the east coast or world markets without the need for new inspections, or only limited inspections. These innovations could be replicated at additional strategic locations to serve the most significant trade corridors from San Diego, California to Brownsville, Texas and from the interior of Mexico to the United States and vice versa.

## NAFTA Trade Corridors



### ***An Emerging Rail System***

While the primary mode for cross border trade has traditionally been trucks, the ever increasing volumes of goods will demand the upgrade of existing rail systems to accept more border cargo. Further, such improvements will likely include new north-south rail corridors to increase the efficiency of the entire border trade system. If these improvements occur, the same technologies utilized for trucks can be readily adapted to railcars. Monitoring and securing designated rail yards, and loading operations and passages can obtain an equivalent level of supply chain visibility. Global Positioning Satellite (GPS) tracking and ISA can provide real-time information regarding location, cargo status, and automatic alerts to tampering. Thereby, ISA will directly support the border crossing inspections and logistical management of rail cars and cargo. The ISA could also incorporate other activities and projects that will soon be presented to DHS regarding rail communications and controls. One of these activities includes a pending proposal by the Association of American Railroads (AAR) to the DHS to look at:

1. Technical vulnerability assessments (Vas) on railroad communications and control systems; and
2. Develop technologies to mitigate communication and control systems vulnerabilities.

An additional benefit of such a border rail system will be its utilization by emergency management personnel in the event of accidents, which will allow them to monitor, locate, and respond to spills and accidents in a highly collaborative and coordinated way. Finally, innovative environmental and energy technologies can be adapted to use by the rail cars and engines that operate at the border and along trade corridors that will increase energy efficiency and reduce emissions. Pending proposals have been developed to

address cleaner burning locomotives, reducing the overall train weight by developing light weight railcars and capturing expended energy during breaking and acceleration. The goal of upgrading accident response and reducing emissions on rail lines is especially important when we remember that in urban areas, rail operations frequently occur in the poorest and most densely populated neighborhoods which have traditionally carried a disproportionate share of the burdens associated with cross border trade.

The benefits of including rail lines in the new border trade system can be quickly summarized as follows:

- 1) Origin to destination, the 24\*7\*365 tracking of all conveyances and cargo;
- 2) The ability to identify, monitor, isolate and respond to railroad cars carrying hazardous materials, including off loading and/or moving them through urban areas in a more expeditious and orderly manner;
- 3) The ability to improve the vital control and communications of all stakeholders along the supply chain;
- 4) Round the clock security for cargo and the derivative benefit of theft prevention resulting from a transparent supply chain.

With more than 1.7 million shipments of hazardous materials by rail each year, the proposed solution can deliver the most cost effective and best model for the rail systems of the 21<sup>st</sup> Century.

#### **Activity 4: Energy, Environment and Health**

The fourth and final set of activities, are those related to energy efficiency, the environment, public health and quality of life. These issues are often overlooked because they are not perceived as directly relating to border trade. However, while they are external, upon close examination, they constitute important impacts on the border trade process as evidenced by their inclusion in the North American Free Trade Agreement (NAFTA).

##### ***Environmentally Sound; Energy Efficient;***

For purposes of this proposal, point of origin clearance and the corresponding integration of new and efficient technology into vital trade corridors also envision the utilization of environmentally sound innovations. For example: natural gas, hydraulic launch assist and other hybrid technologies, for use on border trucks and other means of transport will improve the border region's air quality. While such technologies bring reduced emissions at border crossings and the communities that surround them, they also bring two other potential benefits. Recent natural disasters such as Hurricane Katrina have demonstrated the fragility of the energy supply of the current United States transportation system. By utilizing stable sources of energy that are domestically produced (South Texas, the Permian and San Juan Basin), a new border trade system can utilize energy sources that are diverse and not affected by war or natural disasters.

Second, recent escalations in oil and natural gas prices (unrelated to the hurricanes) caused by increases in demand in China, India and other Pacific Rim nations suggest that the energy costs of traditional fuels will continue to increase. Therefore the use of regional energy sources, coupled with new clean and energy efficient technologies, offers the opportunity to create a competitive “energy” security for the border region.

Finally, if the prices of traditional energy sources continue to increase, the use of secure, alternative energy systems coupled with efficient, intelligent transportation technologies not available to other nations, may offer a previously unrecognized competitive advantage to the United States-Mexico border region. This energy and technology advantage could nullify the ostensible advantages of far eastern manufacturing plants, by reducing energy consumption and increasing the efficiency by which goods are produced and moved as a counter weight to lower offshore labor rates and inefficient energy practices.

### ***Public Health***

Directly related to the environmental and energy issues identified above is the problem of the actual and potential deterioration of public health in border communities where increased cross border trade and manufacturing is occurring. Over the last decade, border communities have witnessed increasing pressures on police and fire departments, health and human service providers, and noticeable deterioration of water quality and/or quantity, as well as increasing levels of air and land pollution.

While this proposal is specifically focused on air emissions, there are other technologies and practices that can be used to address other pollution and resources consumption issues. Since the implementation of NAFTA more than a decade ago, traffic at ports of entry between the United States and Mexico has increased exponentially. As a result, vehicle emissions associated with longer waiting times for trucks at international ports, as well as increased through-traffic associated with United States-Mexico trade, is well documented. Unfortunately these increases in trade disproportionately impact border communities where major trade corridors exist. Further, these impacts seem to fall on the young and elderly who are generally more susceptible to respiratory ailments and the poor who live immediately adjacent to the trade routes.

Unfortunately, the vast majority of these affected communities lack the public health resources and infrastructure to adequately address the growing number of health problems related to these vehicle emissions. As a result, substantial increases in asthma and other respiratory ailments in both children and adults have been documented in border communities over the last decade. Much of that increase can be tied to poor air quality, and more specifically, ozone precursors and fine particles associated with diesel vehicles operating in border trade as well dust and particulates related to unpaved roads. Many of these effects could be reduced or eliminated by the use of cleaner fuels and by decreasing waiting (and vehicle idling) times at international ports of entry through the use of the point of origin technologies presented in this proposal.

Beyond the direct health implications of this pollution, communities and regions suffering from these types of environmental problems often find it more difficult to attract new industry and thus critical, potential economic opportunities are lost as well. Steps to reduce the emissions levels of existing facilities and vehicles as well as careful planning for the future, will allow the border region to continue to attract manufacturing facilities without fear that such economic growth and development comes at the cost of the quality of life of its citizens.

## **VI. U.S. - Mexico Border Trade System Demonstration Project**

In order to prove the ability of the New Border Trade System to meet the needs of its users, to fully test and integrate proposed technologies, and to ensure that it addresses the quality of life issues of border communities, we are recommending the immediate implementation of a demonstration project that will fully test all the components discussed above.

This immediate implementation consists of a multi-site demonstration project that will establish a series of Secure Manufacturing Zones and the necessary protocols along the border. This project will establish SMZ in at least five geographic locations along the United States-Mexico border. The project will also equip a certain number of trucks at each location with ISA software and ITS communication technology, and also includes the retrofitting of engines with clean natural gas systems as well as the necessary refueling infrastructure. Finally, the project would also include a demonstration of new technologies in at least one rail center.

In discussions with various public and private participants in both the United States and Mexico, the following locations have been identified:

1. Brownsville, Texas – Matamoros, Tamaulipas area
2. Laredo, Texas – Nuevo Laredo, Tamaulipas area
3. El Paso, Texas; Chihuahua, Chihuahua; Ciudad Juarez, Chihuahua; Santa Teresa, New Mexico region;
4. Nogales, Arizona – Nogales, Sonora area; and
5. San Diego, California – Tijuana, Baja California - Otay Mesa area – Ensenada, Baja California and the Calexico, California – Mexicali, Baja California border region

While some of these locations are not on the border, they have been selected because the systems can be readily adapted to the flow of commerce from the interior of Mexico (such as the capital city Chihuahua) and from global trade-lanes to a seaport (the port of Ensenada). The resultant system will fully test and enable all vital trade corridors. The implementation of an integrated system at these locations will be coordinated with:

- (1) Mexican and United States government officials;
- (2) Industry, trade and private sector interests; and
- (3) local/state emergency management groups.

All activities converge to fully develop the first comprehensive, real-time border trade system in North America.

The estimated budget on the following page includes the assignment of the various sites along the border. Current projections place the cost at \$100 million dollars over the next 3 to 5 years via grants, incentives and low interest loans. This budget assumes funding for the initial effort from governmental sources, such as the Departments of Homeland Security, Defense, Transportation and Commerce. Other potential sources include the U.S. Environmental Protection Agency and the North American Development Bank. Funding will also be sought from the various states in Mexico and the United States that will benefit the most from these efforts, as well as the appropriate agencies of the Mexican Federal Government. Other potential funding sources from the private sector and border advocacy groups have not been included in our estimates.

In rapid order, the demonstration project will allow a new border trade system to emerge. Equally important is the fact that this project will provide a single point of focus for analysis and assessment of new collaborative procedures, protocols, advanced technologies and operating systems. The resources and capacity of shared technology platforms and infrastructure will always deliver advanced and cost-effective systems. The demonstration project will also provide a real-world laboratory to test the ability of participants to collaborate effectively. Without practiced collaboration, no set of technologies or standards will likely be successful. The new border trade system demonstration project provides an opportunity to test all these necessary elements simultaneously.

## VII. Proposed Demonstration Project Budget

Strategic Border Initiative							
	Brownsville	Laredo	El Paso/Juarez Santa Teresa Chihuahua	Nogales	San Diego Tijuana / Ensenada Calexico Otay Mesa		
# of Vehicles	50	200	275	50	275		
# of plants	5	10	20	5	15		
<b>Sub Total</b>	\$ 3,489,760.00	\$7,288,920.00	\$14,956,082.00	\$3,489,760.00	\$10,856,030.00		\$40,080,552.00
Trucks	\$2,500,000.00	\$10,000,000.00	\$15,000,000.00	\$2,500,000.00	\$12,500,000.00		
Refueling Facility	\$1,600,000.00	\$1,600,000.00	\$2,850,000.00	\$1,600,000.00	\$2,850,000.00		
Rail			\$7,000,000.00				
<b>Sub Total</b>	\$4,100,000.00	\$11,600,000.00	\$24,850,000.00	\$4,100,000.00	\$15,350,000.00		\$60,000,000.00
<b>Total</b>	\$7,589,760.00	\$18,888,920.00	\$39,806,082.00	\$7,589,760.00	\$26,206,030.00	<b>Border Trade Project Total</b>	<b>\$100,080,552.00</b>

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Coalición  
Empresarial  
**Pro-Libre Comercio, S. C.**  
Capítulo BASC Zona Norte de México

February 2006



In support of 'A New Vision for Trade along the U.S.-Mexico Border'

In December 2005 the members of the Border Legislative Conference (BLC) unanimously adopted the "New Border Trade System Proposal" during the 12th BLC in El Paso, Texas. This Proposal, a component of Border 2020: Secure-Fast-Smart Strategy, is aimed at developing an integrated, systematic approach to enhance border security and economic competitiveness along the U.S. – Mexico border region utilizing new technologies and establishing innovative government – private sector partnerships.

The Business Anti-Smuggling Coalition (BASC) / Coalition Empresarial Libre Comercio (Celc) of Northern Mexico is endorsing this important Proposal. BASC/Celc is the leading provider of Security Certifications to the Maquiladora Industry, covering over 400 of the largest plants and carriers and supported by the Customs Services of both nations. Headquartered in Ciudad Juarez, Chihuahua, BASC/Celc is a non-profit, formed by the business sector to facilitate efficient international trade through the establishment and administration of leading global safety standards and procedures for the global supply chain of its member nations and alliances.

We give our strong support for 'A New Vision for Trade' because it meets the demands of the supply chain of the 21st Century by offering leading Maquiladora clients what they need and want, a secure, visible and efficient supply chain for cross-border trade in a new security environment. The border economy depends on U.S.-Mexico trade, and by gaining efficiencies in logistics and supply chain management, we can impact regional economic development. By implementing this proposal, the critical U.S.-Mexico supply chain is brought up to a new generation of technology.

Oscar Kuri  
Executive Director

Jose Contreras  
President

Sergio Pastrana  
Director of Operations



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