

# INTRODUCING B-DOUBLES AS PART OF A GEOSTRATEGIC LOGISTICS PLAN FOR REGIONAL DEVELOPMENT; THE CASE OF SAN LUIS PROVINCE IN ARGENTINA.

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## Abstract

The high capacity vehicles (HCV) known as B-doubles or B-trains are attracting increasing attention in South America, and most particularly in the Southern Cone Common Market, known as the Mercosur region (Argentina, Brazil, Paraguay and Uruguay). In 2010, country members experienced GDP growth in the region of 7 to 9 per cent. This paper provides details on the introduction of B-doubles in the province of San Luis, Argentina, as part of a visionary geostrategic logistics plan which envisages the social and economic development of the province within the Mercosur. San Luis is the only province in the country which has succeeded in legislating B-doubles' transit along its roads up to June 2012. Movements by diverse stakeholders in different provinces of the country, interested in B-doubles, are indicating that all is about to change. The paper will describe the efforts lately made in order to achieve legislation of the use of B-doubles nationally.

**Keywords:** B-double, bi-train, logistics, plan, development, San Luis, Argentina, Mercosur.

## **1. Introduction**

The high capacity vehicles (HCV) known as B-doubles or B-trains are attracting increasing attention in South America, and most particularly in the Southern Cone Common Market, known as the Mercosur region (Argentina, Brazil, Paraguay and Uruguay). The Mercosur region encompasses an area of almost twelve million square kilometres, and a population of two hundred and fifty five million (est. 2011), mostly living in cities by the east coast. In 2010, country members experienced GDP growth in the region of 7 to 9 per cent, according to figures by the Economic Commission for Latin America and the Caribbean.

Setting new standards for HCVs as a way to increase trade in a region where neighbouring countries have found it difficult to harmonise weights and dimensions, could be seen as an exercise in futility. However, when these new standards are part of a visionary geostrategic logistics plan which envisages the social and economic development of a province within the Mercosur, then all pieces of the puzzle fall into place.

This paper provides details on the introduction of B-doubles in San Luis, Argentina, the only province in the country which has succeeded in legislating B-doubles' transit along its roads up to June 2012. Firstly, the Latin American and Argentinian contexts are elaborated on, including the maximum weights and dimensions allowed for the various heavy vehicles currently permitted. Legislation regarding the use of B-doubles in some of the countries is described. Secondly, the paper will explain how the vehicle was promoted and dissemination of the vehicle configuration and performance took place, including the use of social media. Activities by a range of stakeholders in different provinces of the country, interested in B-doubles, are indicating that a tipping point is being reached, and provides the platform for envisioning the future of B-doubles as part of a regional Logistics Plan. Finally, a description of the recent efforts regarding proposed Argentinian national legislation for the use of B-doubles will conclude the paper.

## **2. San Luis in the Context of the Mercosur-Chile Economic Axis**

The South American Regional Integration Initiative (IIRSA in Spanish) is an intergovernmental coordination mechanism created with the objective to build a common agenda among the twelve South American countries in regards to transport, energy and communications infrastructure.

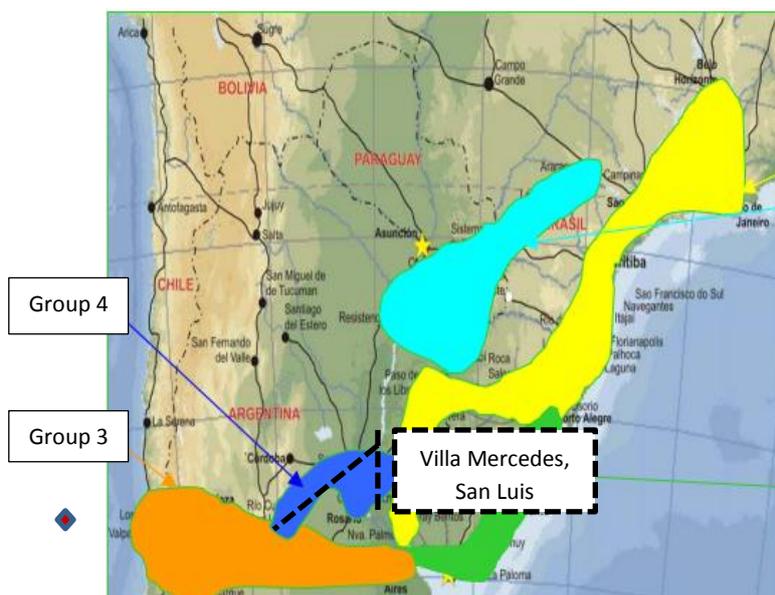
There are ten Economic Integration Axes according to IIRSA. The one of interest to this paper is the Mercosur-Chile axis, which is shown in Figure 1. The area is an extremely dynamic one, linking the main cities and ports of Mercosur and Chile. With only 25 percent of the geographical area of the five countries integrating the axis, it accounts for 54 percent of the population and more than 60 percent of their GDP and economic activities. Major population centres such as Rio de Janeiro (10 million), Sao Paulo (25 million), Buenos Aires (15 million) and Santiago de Chile (8 million) all lie on this axis.



**Figure 1: Mercosur-Chile Economic Integration Axis Map.**

Source <http://www.iirsa.org>

The axis is divided into five different groups, according to their strategic functions, dominant economic activities and investment needs. Group 5 refers to energy, while the other four groups relate to transportation. Of particular interest to this paper are: Group 3, the bi-oceanic corridor between the ports of Buenos Aires (Argentina) and Valparaiso in Chile and; Group 4, central Argentina. The locality of Villa Mercedes in San Luis is located in the centre of Group 4, and is the western link of the Group 3, as shown in Figure 2.



**Figure 2: Project Groups, Mercosur-Chile Axis**

Source <http://www.iirsa.org>

The potential of this strategic location for logistics activities was recognised and quickly acted upon by the San Luis authorities, designing and implementing a geostrategic logistics plan to become the logistics hub providing support not only to San Luis's industrial, agricultural and mining sectors, but to the Argentinean central region.

Infrastructure, legislation, and political will were key factors in the implementation of this vision. Argentina has a federal political structure; therefore, the government of San Luis was able to develop its provincial infrastructure and legislation to cater for this logistics plan independently. San Luis developed appropriate infrastructure and provided legislation for an integrated system of:

- Free Trade Zones
- Two Logistics Activities Zones/ Intermodal Cargo Platforms, one for agricultural goods and another one for all other customers.
- Rail system which connects the Logistics Activities Zones with the networks linking the ports of Chile, Argentina and Uruguay.
- A Primary Customs Clearance Zone
- New motorways (approximately 35 per cent of all motorways existing in Argentina in 2010)
- A new international airport, in addition to the two other existing domestic ones

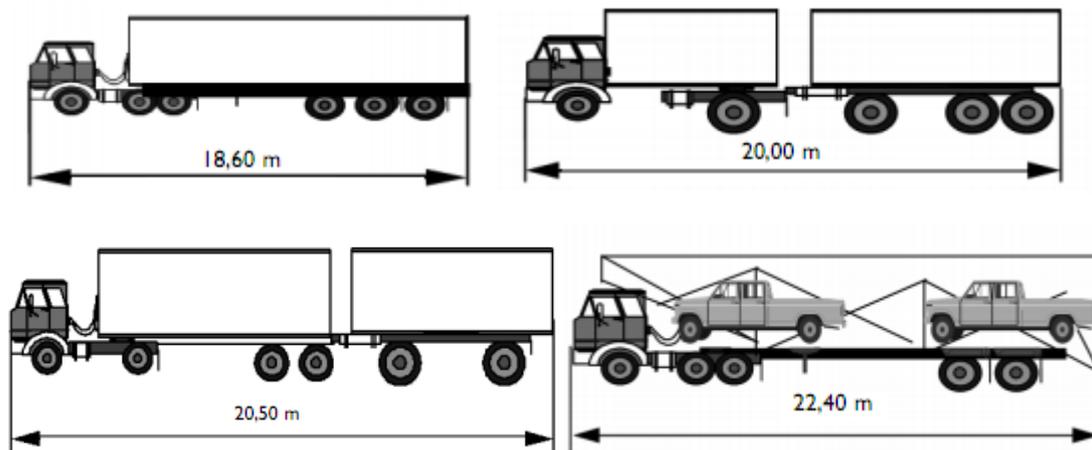
Political will to manage this integrated logistics system was shown by the creation of “San Luis Logistics”, a self-sufficient governmental body with ministerial hierarchy. San Luis Logistics can grow only by its own means, in other words, although a government agency, it has to manage itself as a private enterprise and be profitable.

### **3. B-doubles and Present Size and Weight Limits**

Exceptional regional growth cannot compromise community safety nor can be halted by legislation or infrastructure constraints. That is why B-doubles are seen as playing an important role in the logistics plan. The already proven safety, environmental and productivity benefits of these HCVs’ could be one of the quick answers to balance safety and productivity concerns.

In May 2010, Mercosur country members finally harmonised weights and dimensions for heavy vehicles. Resolution 197/2010 regulated that maximum width and height is 2.6metres and 4.3 metres respectively, with length depending on the type of heavy vehicle used, as Figure 3 shows. Maximum gross weight for any configuration is 45 tonnes, with a maximum 10.5 tonnes per simple axis with four wheels. The car carrier of 22.4 metres is considered a special vehicle, with restricted transit.

It is important to highlight that Resolution 197/2010 regulates weights and dimensions for international traffic only. For domestic transportation, each country member can still determine maximum weights and dimensions for transit in their national roads. To give an example, maximum height in Argentina is 4.1 metres, 20 centimetres less than Resolution 197/2010. Each province can legislate over their own roads too, which is the reason why San Luis managed to successfully regulate B-doubles’ use along its provincial roads.



**Figure 3: Maximum Length for Heavy Vehicles according to their configuration. Mercosur 2010. Source: <http://www.edutecne.utn.edu.ar/transporte/capitulos.htm>**

As of today, only Brazil, Uruguay and the province of San Luis have regulated B-doubles' use. Because B-doubles only travel domestically, their use has been regulated to different standards. For example, five years ago in Brazil, Resolution 211/06 (and later 256/07) regulated the use of B-doubles, with a maximum tonnage of 74 gross weight, and 25 metres (minimum) to 30 metres (maximum) total length. Uruguay regulated by a presidential decree the use of B-doubles only recently, on the 25th of October 2011, on specific routes and allowing maximum dimensions of 20 metres total length and 57 tonnes of gross weight. In Argentina, the presidential decree 1886/04 allowed the B-double's configuration, however unfortunately the decree did not establish weights and dimensions for them, and thus the national roads' agencies continue to enforce a maximum of 45 tonnes and 20.50 metre as with all the other vehicles.

San Luis's legislation has regulated a maximum tonnage of 75 gross weight, and 25 metres total length, in sync with Brazil's B-doubles. Both Logistics Activities Zones have been built to provide for B-doubles corresponding to San Luis's configuration. Trials with these HCVs started in 2008, with the support of Heil Trailers, Scania, and an interested client, Avellaneda Cements. A 20 minute video showing the vehicle's characteristics, competing in diverse tests against other permitted configurations in the country was produced for promotion.

#### **4. Promotion and Dissemination**

San Luis Logistics promoted its geostrategic plan and activities in the context of a series of weekly talks held in Buenos Aires city, the capital of the country. The series brought together renowned local logistics experts and closed in July 2011 with the presence of Bob Pearson and the launch of the Spanish version of his book "B-doubles: First decade in Australia".

Both the book and presentation provoked immense interest in the business and public administration community, who have contacted San Luis Logistics since to express their willingness to introduce B-doubles in their own provinces. Since the final aim is to legislate the use of B-doubles nationally, dissemination and promotion of the vehicles were deemed key to achieve community (both business and social), and political support. The arguments to put forward were discussed among some of the interested stakeholders, and it was decided that given the changes in the country in regards to the economy and growth expected,

particularly associated with the agriculture (soy) boom experienced, safety and productivity would be the main arguments, leaving the environmental one as an aside.

For example, during the first months of 2012, the Industrial Association of Córdoba province, took the initiative of gathering diverse members to impulse the issue of regulating bitrains to be placed in the government's agenda. Organisations included members of the cement association, trailer and truck companies besides Heil and Scania, and an important cereals processor. The association managed to meet and interview Córdoba's Industry, Commerce and Mining Minister, and the Transport Minister, who genuinely expressed their interest but requested tools to allow them to 'sell' the idea, both to the national government as well to the community.

These local ministers, together with businessmen from Córdoba and the province of Santa Fe, met with the National Transport Sub-Secretary and expose the subject of B-doubles and its benefits. At the same time, a series of meetings with experts were organised in order to respond to those legal and technical aspects of the vehicle, as well as the potential economic advantages the use of B-doubles could bring to the provinces. The provinces of Córdoba and Santa Fe belong to the Mercosur-Chile axis, are the second and third most populated territories in Argentina, and have borders with San Luis. The city of Rosario in Santa Fe is a major railroad terminal and the shipping centre for north-eastern Argentina, especially for commodities including soy and wheat many coming from San Luis and Córdoba, besides Santa Fe itself.

Other organisations from the Mesopotamian provinces of Misiones and Corrientes, which also belong to the Mercosur-Chile axis, started to show interest. This interest has been led by a large Chilean multinational forestry company, while successful road tests had been made in the western provinces of Mendoza and San Juan with a mining conglomerate.

Slowly but steady, the logic of San Luis' geostrategic logistics plan is manifesting itself in the surrounding regions.



Figure 4: Western, Central and Mesopotamian territories in Argentina.

#### **4.1. The Power of Social Media**

Dissemination continued through talks in universities and business associations. Through these talks, diverse organisations, both private and public, explained that they had tried unsuccessfully in the past to promote the b-double and had requested modifications to transport legislation in regards to weight and dimensions, however lack of success meant they left the issue to rest. For example, the logistics manager of a large forestry company had researched and written an article showing the economic and safety benefits the use of B-doubles could provide for this particular trade, in 2007. But the company was prevented from presenting his findings publicly by the conference organisers who were afraid of stakeholder backlash.

Another example would be the work of two road engineers, provincial advisors to a regional highway authority, who had written a research report about B-doubles from a civil engineering point of view. Only now, two years after the research was written, they are being heard by the main roads authority.

Bringing the threads of economic, logistical and technical aspects together is key in gaining the attention of decision makers. The promotion of international experience, such as the translation of Australia's experiences presented a more complete view, while acting as a focal point for the scattered efforts by other actors.

The knowledge of these previous efforts, all individually pursued and dispersed throughout the country, triggered the idea of gathering all interested participants into an active web community, via social media tools such as a blog, Facebook, Twitter and LinkedIn, all in Spanish language. The first three may be more familiar to the reader. The last one is a business related social networking site which allows members to maintain lists of business contacts for a range of purposes. One feature, the Groups function, facilitates discussion for topics of mutual interest to the groups' members. Groups may be private, accessible to members only.

A good example of the flexibility of the group to respond is the reaction to the Expo Transport 2012. One of the LinkedIn members received an invitation regarding the Expo-Transport 2012, to be held at the end of June in Buenos Aires. He immediately posted this fact on the LinkedIn group, suggesting a conference on B-doubles at the Expo. In the space of a few hours, this suggestion had morphed into a roundtable, moderated by one of the authors of this article, with group members nominating and approving participants, topics for discussion and contributions to costs. This was then presented to the Expo organisers for inclusion. The roundtable will be held on June 28<sup>th</sup> 2012. The organisation of such a roundtable and participation in a conference would normally take months, and the speed of the response demonstrates the potential benefits of social media in the promotion of new technologies and processes.

The ability of responding in such a fashion results in the creation of momentum surrounding B-Doubles, which the dissipated activities of isolated individuals could never achieve. Moreover, on June 23<sup>rd</sup> to 25<sup>th</sup> the vehicle will be exposed in an important agricultural expo, "Agroactiva 2012", near Rosario, where Scania and Vulcano, a trailer company, will have a promotional stand.

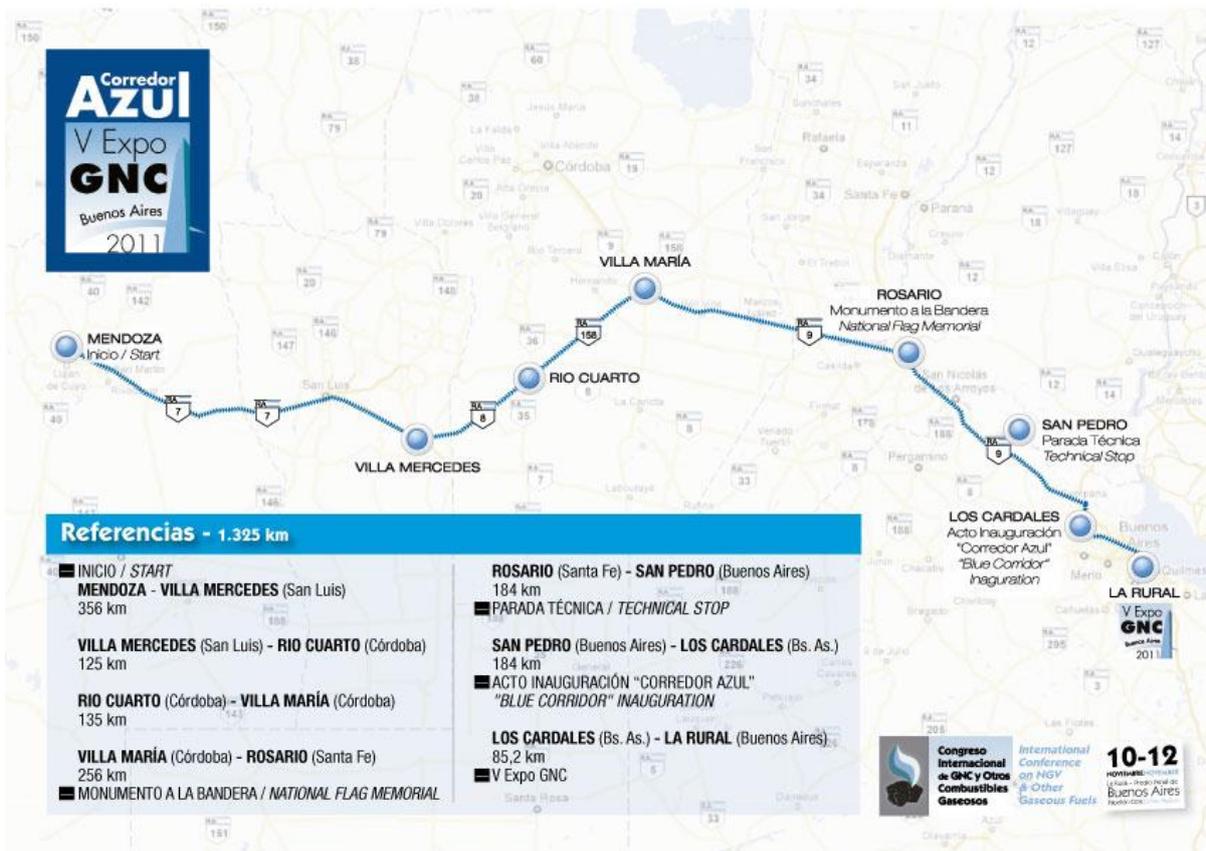
By maintaining B-Doubles on the radar of the various interested professions, it is possible to reinforce the message surrounding the productivity, safety and environmental performance to decision makers.

### **5. Future of B-doubles as Part of San Luis's Geostrategic Logistics Plan for Regional Development**

By promoting the introduction of B-doubles at national level, San Luis Logistics will enable its clients to become more competitive. The strategic localization of Villa Mercedes city, as commented at the beginning of this article, implies that, for example, the place may become the stopover of choice for vehicles throughout the Mercosur-Chile axis. Different services will develop in the surroundings, attracting regional growth and development. For example, a large petrol station is being built inside of the 'land' of San Luis Logistics (ZAL), security is offered 24/7, and in the future shore power and ways for plugging reefers could be provided. Hotels, restaurants, banks and other facilities will be developed for drivers and companies' employees and visitors. These services and facilities will enhance the actual logistics services offered by San Luis Logistics, (customs clearance, insurance and warehousing, to name a few).

Villa Mercedes is also part of the 'Bi-Oceanic Blue Corridor', a project of the Chile-Mercosur axis that aims to connect Valparaiso in Chile, with Buenos Aires in Argentina and Rio de Janeiro in Brazil with vehicles using Compressed Natural Gas (CNG). The 'Blue Corridor' project by the United Nations Economic Commission for Europe (2003) aims to establish transport corridors for heavy duty transport vehicles using CNG as fuel instead of diesel, both because of its economic and environmental advantages. In Mercosur, 'Bi-Oceanic Blue Corridor' saw thirteen medium and heavy vehicles, originally diesel propelled and transformed to work with CNG, travelling from Valparaiso in Chile all the way to Buenos Aires city in November 2011.

Figure 5 below depicts the Argentine side of the corridor, showing Villa Mercedes city as one of the stops. Valparaiso is located west of Mendoza, where the Andes crossing starts. Other stops on the blue corridor are two cities in Cordoba province (Rio Cuarto and Villa Maria) and the city of Rosario in Santa Fe, which we described already. The destination point, "La Rural", is in the city of Buenos Aires, where the Expo CNG was being held in November 2011.



**Figure 5. Map of the Argentine part of the Bi-Oceanic Blue Corridor Project.**  
**Source: International GNC and other Gas Fuels Congress, <http://www.expognc.com/>**

## 6. Conclusion

Since logistics has been regarded at a national level as one of the crucial activities to be included in the governmental agenda to pursue sustainable growth, the introduction of B-doubles in Argentina may soon come to fruition. The transit of these vehicles throughout the Mercosur-Chile axis would see the fulfilment of San Luis province's strategic objectives.

The vision of logistics acting as a driver for economic growth of a small province in Argentina has acted as the catalyst for a concerted drive for their introduction nationally. By raising awareness and providing a focus for an examination of their productivity, safety and environmental benefits, San Luis Logistics has demonstrated that national and regional development can complement each other. The role of international experience has been key in providing the necessary data and evidence of the vehicle's performance, while also providing comfort to those trying to gain their acceptance that the issues they are experiencing have been faced and overcome before.

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