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High-speed rail in the United States: an original model of establishment and development

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Abstract

Today, there are no high-speed lines in the United States according to the International Union of Railways' standards, but one higher-speed rail example in the Northeast corridor. Several resounding failures occurred in succession in the 1980s and 1990s in Texas, in Florida and in Ohio. The "Obamarail" initiative in 2009 and 2010 gave a new momentum with additional funding dedicated to this new means of transport associated with concrete state commitments, with, however, variable levels of commitment. At the end of President Obama's second term, the efficiency of these initiatives as well as the reality of high-speed rail in the US are worth studying. In 2016, the only project under construction lies in California. Other states started modernizing the existing networks as well as improving Amtrak services, although private projects are under development in parallel. Most projects at hand are not high-speed rail strictly speaking. This article suggests reviewing the Obama administration's initiative in favor of high-speed rail from 2009 and examining the political and territorial difficulties at various institutional levels. This analysis will enable us to develop a reflection on the high-speed rail model in the US as well as on the political and territorial lessons to be learned of this federal initiative.

Keywords: California, high-speed rail, Northeast Corridor, transport policy, United States

1. Introduction

Since the middle of the XXth century, passenger rail transportation has experienced an unprecedented crisis in the United States due to a lack of adaptation to new demand constraints and to the competition of new modes of transport. In 1970, the federal government decided to separate freight and passenger activities to relieve private rail companies, and to confide in Amtrak to take the responsibility and the monopoly of interurban passenger rail transportation. Since its creation, Amtrak has experienced heavy difficulties and has been in chronic deficit subjected to successive reforms. Despite structural handicaps which burden Amtrak's financial health, and a lack of political commitment which hinders its capacity of investment, Amtrak has registered since almost two decades a record for ridership and revenue – from 20.9 million passengers in 2000 to 30.8 million in 2015. This mode knows a form of revival although its total modal part in interurban passenger transport – 0.2% – remains very modest.

In parallel with existing rail services, this rail revival involves the establishment of high-speed rail in the United States. There is currently no high-speed lines in this country according to the standards of the UIC (Union Internationale des Chemins de Fer), but a single higher-speed line in the Northeast corridor. Several resounding failures followed one another in the 1980s and the 1990s in Texas, in Florida or in Ohio. The initiative in favor of high-speed rail in the United States of the Obama administration in 2009-2010 – called the “Obamarail” – reinvigorated this new mode of transport thanks to dedicated funds and a strong political commitment of some States and the federal government. At the end of the second term of President Obama, the question is whether the “Obamarail” has proven its efficiency and some concrete results. In 2016, only the Californian project of a new high-speed network is actually in progress. Other States are committed in the modernization of their existing rail network and the improvement of their rail services while private projects are developed through the country. The study of these various projects reveals a growing diversification of the technical, political and financial arrangements based on three trends: the adaptation of the existing network, higher-speed rail and true HSR. Most projects do not qualify for true high-speed rail strictly speaking. Indeed, the HSR model – more than 300 kph and requiring a dedicated infrastructure – does not seem adapted to the American context. After reminding the main legislative steps relative to HSR and establishing an assessment of the Obama administration's initiative, the main projects in the United States should be analyzed including private ones. This analysis will allow to elaborate a reflection on the HSR model developed in the United States, and on the political and territorial lessons to be learned from this federal initiative.

2. State of the art

This reflection leads us to identify the bottlenecks which prevent the development of an ambitious rail policy, and then to consider the economic model of high-speed rail and its real or supposed competitive advantages against air transport or interurban coaches. Numerous proposals – emanating from every type of actors – aim at restructuring or at strengthening the offer of rail transport. The most committed lobbies plead for a comprehensive true high-speed network by 2050. Several potential solutions are considered such as the preservation of the national network with adequate funds, a more important devolvement to States and local actors or a massive investment program intended for the modernization of the existing network and for the building of new high-speed lines. The profusion of reflections and debates about rail transportation – HSR in particular – supports the idea that the train is currently finding its place in the political debate and in the public opinion. The choice which seems to be made – to focus on the existing network and on higher-speed projects – may contribute to rethink the Euro-Asian vision of the object “high-speed rail”. Do we attend the emergence of a new model of

development based on a hybrid railroad network between higher-speed lines and true high-speed lines?

For more than fifty years, the high-speed rail has been developed across the world. This mode is now completely integrated into the national transport system of countries which made the development of dedicated infrastructures for high-speed trains a priority. The UIC identifies almost 30 000 kilometers of high-speed lines in 2016, and counts 1.6 billion passengers every year in the world. The UIC recognizes a railway line as a true high-speed line when the infrastructure enables trains to circulate at least at 300 kph. The European Union puts forward a wider vision of HSR including trains circulating at least at 250 kph on a dedicated infrastructure and more than 200 kph on an improved existing infrastructure. In the United States, the definition of HSR is fixed by the Congress and the Federal Railroad Administration. A statutory definition has been elaborated according to several federal laws:

- High Speed Rail Corridors Program (1991): « where railroads speeds of 90 miles or more per hour are occurring or can reasonably be expected to occur in the future » (23 U.S.C. §104d2C));

- High Speed Rail Assistance (1994): « reasonably expected to reach sustained speeds of more than 125 miles per hour » (49 U.S.C. §26105);

- High Speed Rail Corridor Development Program (2008): « reasonably expected to reach speeds of at least 110 miles per hour » (49 U.S.C. §26106b(4)).

The Federal Railroad Administration adopted in 2009 a definition based on three categories: emergent corridors (with maximal speed between 145 kph and 180 kph), regional corridors (maximal speed between 180 kph and 240 kph on dedicated lines), and Core Express corridors (minimal speed of 240 kph on dedicated lines). The adoption of a very wide definition of HSR is necessary in the United States to be able to integrate into it at least the Northeast corridor and some corridors identified by the “Obamarail” initiative. However, the study of these various projects reveals a growing diversification of the technical, political and financial arrangements based on three trends: the adaptation of the existing network, higher-speed rail and true HSR. Indeed, the true HSR model - more than 300 kph and a dedicated infrastructure - is not the dominant model anymore. The paradigm of speed, which has prevailed for decades in projects and political speeches, seems to be gradually questioned for the benefit of other key elements - integration of networks, financial profitability, preservation of the existing network, local service etc. This apparent diversification of HSR projects will be assessed thanks to an analysis of the situation of the United States. The scientific literature on the evolution of models of development of HSR, and on the lack of socioeconomic profitability of some high-speed rail networks is quite incomplete.

This analysis on the imbalance of the HSR model of development – based on a scientific article of Pierre Zembri and Eloise Libourel (Zembri, Libourel, 2016) about a comparison between France and Spain – supports the hypothesis that another model of development is emerging in the United States. This country embodies the historical triumph and the sensational history of railroads, while the U.S. freight rail displays particularly solid performances and results. However, the United States are a young country regarding the high-speed rail. It is a vast territory where there are numerous opportunities to build new railway lines. Despite the deep crisis of passenger rail transportation since 1950-1960 and several difficulties slowing down the redevelopment of this mode, important projects have emerged to create a true HSR network. The analysis of these projects of American HSR corridors demonstrates that the object “high-speed” is not at the core of planning documents. The main part of the HSR corridors projects comprises higher-speed corridors which might be upgraded to true HSR corridors, such as the Northeast corridor. The Californian project rests partially on the building of a new dedicated infrastructure but also on the use of improved existing sections.

This submission joins essentially in two themes of the Congress: the theme 1 (*HSR infrastructure and services evolution on a medium and long-term perspective*) and the theme 17 (*Case studies of overall social, economic, territorial, image and sustainability evaluation*). This article rests on three main objectives: the establishment of a geography of HSR in the United States thanks to

an analysis of projects and perspectives of development of this technology (1), the analysis of the economic model and the envisaged territorial effects of a future HSR network (2), and finally the identification of the characteristics of HSR model of development in the United States which allow to sketch an American model of high-speed rail (3). This article proposes to complete a still deficient scientific production on high-speed rail in the United States, and on the technical, institutional, economic and territorial characteristics of HSR projects. The historic initiative of the Obama administration contributed to revive the institutional and scientific production on HSR and conventional railway lines. Numerous works analyze the structural causes which explain the lack of HSR lines in the United States, contrary to many developed countries and emerging countries which conceive this technology as a way to renew passenger rail transportation (Lynch, 1998; Perl, 2002, 2012). Some researchers reflect upon the utility of this mode in the American context (Button, 2012; Lane, 2012; Levinson, 2012). Since 2010, the political, institutional and scientific reflections on the political blockages of the establishment of HSR network in this country and on the potential strategies of development have multiplied (Deakin, 2010; Murakami and Cervero, 2010; Ashiabor and Wei, 2012; Johnson, 2012; Loukaitou-Sideris, 2013, Kamga, 2015; Perl and Goetz, 2015; Ruggeri, 2013, 2015; Schorung, 2017).

3. An unprecedented political commitment for the establishment of high-speed rail in the United States

3.1. Theoretical frame: true high-speed rail or higher-speed rail?

High-speed rail consists of trains circulating at a more important speed than conventional trains, at a higher frequency with better transport capacities (Todorovich, Schned and Lane, 2011). In terms of speed, the definitions diverge according to diverse institutions and countries between “purist” definitions and wider definitions allowing to integrate more projects and corridors. In the United States, this question of the definition of HSR is crucial because the federal government opted for a wide definition in order to consider certain rail corridors as high-speed corridors. Our starting assumption is to speak about “higher-speed” for corridors and projects in the United States.

To understand the fundamental distinction between true high-speed rail and higher-speed, one can start with three institutional definitions resuming the main meanings of the object “high-speed rail”. First of all, there are the strictest definitions from the UIC (Union Internationale des Chemins de fer) and the European Union. The UIC lists true high-speed railways as the ones circulating at speed of 250 kph and more (UIC, 2013). The European Union considers that a true HSR train is a train circulating at 250 kph and more on a dedicated infrastructure and also a train circulating at 200 kph and more on a conventional infrastructure (Peterman, Frittelli and Mallett, 2013). In the United States, the official definition of HSR results from the Congress and the Federal Railroad Administration. The FRA adopted a very wide definition of HSR: “Service that is time-competitive with air and/or automobile travel in a given intercity corridor” (U.S. GAO, 2009). This choice allows the FRA to include varied projects in its rail policies.

The Federal Railroad Administration adopted in 2009 a definition based on three categories: Emergent Corridors (with maximal speed between 145 kph and 180 kph), Regional Corridors (maximal speed between 180 kph and 240 kph on dedicated lines), and Core Express Corridors (minimal speed of 240 kph on dedicated lines). The adoption of a very wide definition of HSR is necessary in the United States to be able to integrate at least the Northeast corridor and some corridors identified by the “Obamarail” initiative (Peterman, Frittelli and Mallett, 2013).

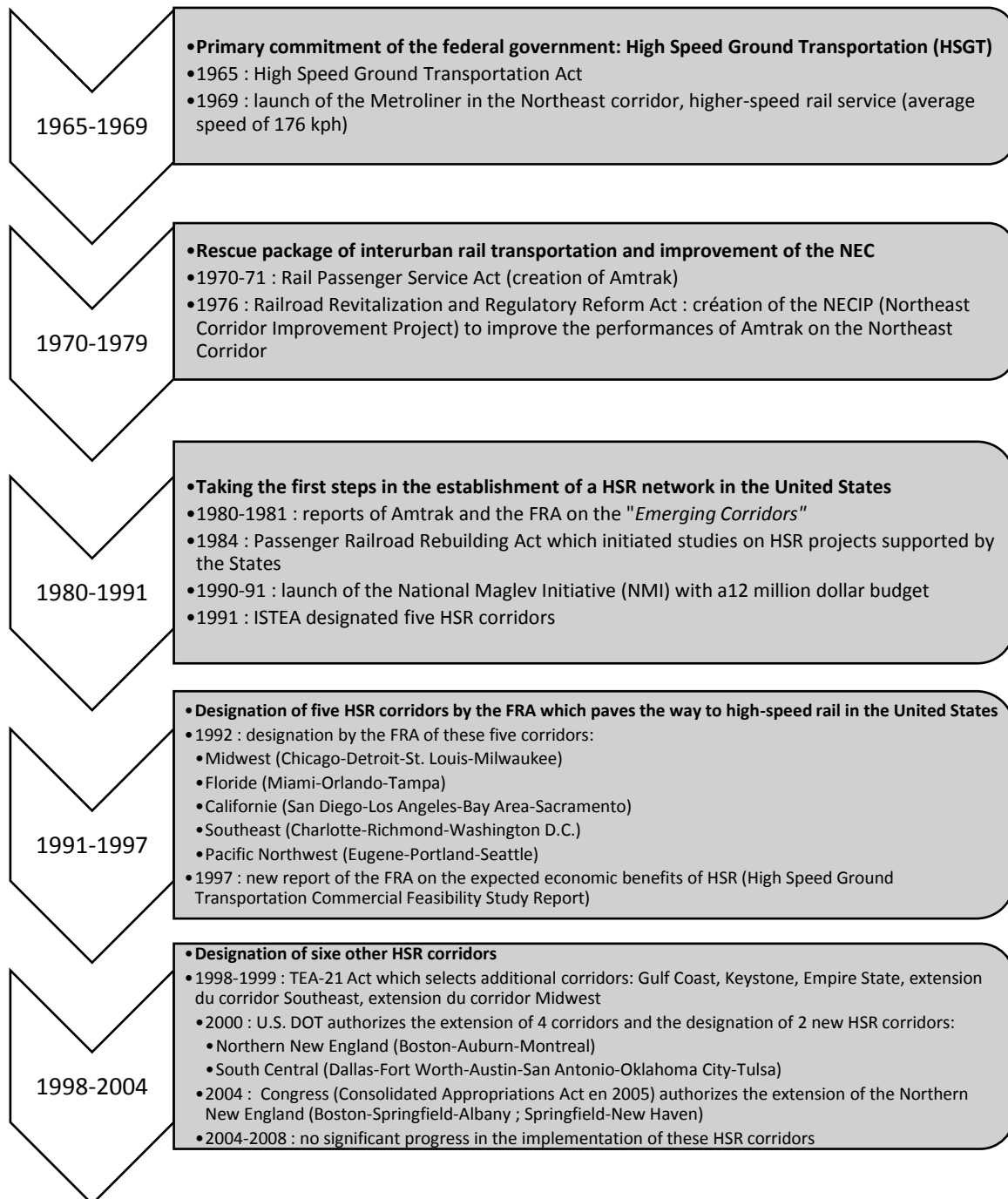
Beyond these official criteria, the research on this subject agree on the EU’s definition of speed but remind that HSR depends on criteria other than speed (Campos & de Rus, 2009). Moshe Givoni and David Banister consider that the question of speed has become a fixation of rail policies while it might be often secondary for travelers, more interested in comfort, service

reliability and transport cost. Furthermore, they insist on the importance to distinguish maximal speed and average speed (Givoni and Banister, 2012).

3.2. Breaking a long series of failures

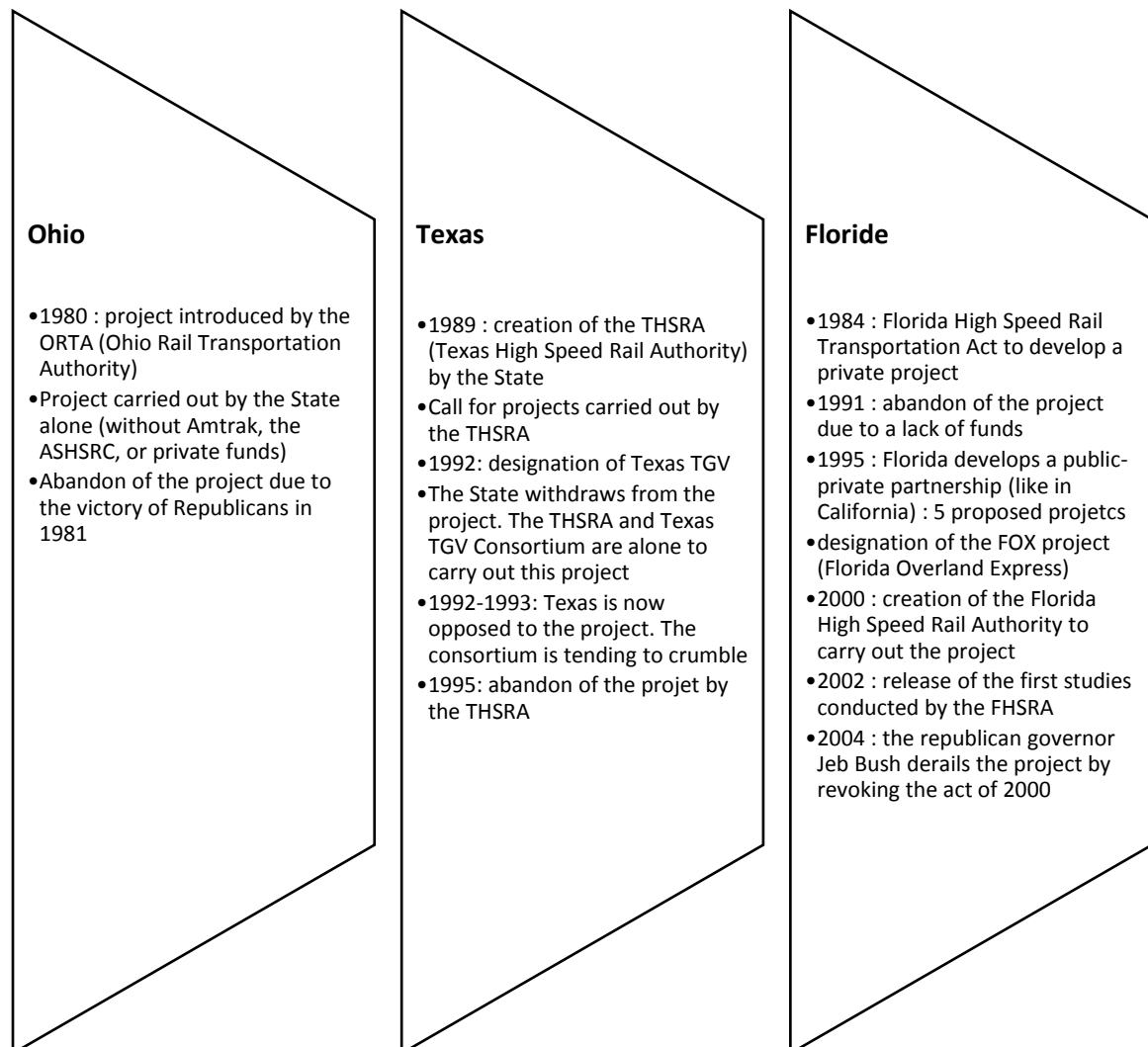
In a fiercer international competition in the 1960s, the United States reacted to the inauguration of the Shinkansen in Japan. The U.S. federal government launched the first studies on high-speed rail before most of the European countries. Nevertheless, the establishment of HSR in the United States has been only a succession of failures, false starts and political deadlock.

Figure 1. The HSR in the United States: the federal government as a “bridgehead”



Anthony Perl has traced the repeated failures of diverse HSR projects since the 1980s. The Californian case may be qualified as a false start. The first project prepared by the AHSRC – American High Speed Rail Corporation – and by the State of California, in partnership with the Japan National Railways, was presented in 1983. It planned a train circulating at 250 kph connecting Los Angeles and San Diego with a complete opening in 1990. This project was abandoned in November 1984 due to a lack of sufficient funds (Perl, 2002). It is necessary to wait for 2008 to witness California reinvesting in this HSR project. Other examples in the United States are truly failures which have never restarted.

Figure 2. HSR projects in the United States: multiple and repeated failures



Two main reasons explain these resounding failures: the lack of public and/or private dedicated funds, and the absence – or the retreat – of political support. Since 1965 and until 2008, the federal government has been interested in this innovative mode of transport, appearing as a leader and committing legislative and financial means for prospective and conceptual studies. However, its role is limited to the request of studies and to the designation by law of HSR corridors. There are actually no properly funded programs to support the building of high-speed lines (Lynch, 1998; Perl, 2002). This complicated situation is confirmed with the three cases of failures presented above: the federal level decided either to stand back, either to withdraw brutally making collapse the project or to commit too timidly. After this series of failures or

aborted attempts, the year 2008 marked a clean break in the history of HSR in the United States and a renewal of federal rail policies.

3.3.The “Obamarail”: an ambition to form HSR corridors

The renewal of the federal rail policy is based on three legislative acts voted in 2008 and 2009: the Rail Safety Improvement Act (2008) which increased safety requirements and modernized the legislation relative to railroad safety, the Passenger Rail Investment and Improvement Act (2008) which supported three new programs of investment for rail transportation, and the American Recovery and Reinvestment Act (2009) which dedicated eight billion dollars of the economic stimulus plan to HSR (U.S. DoT, 2009a, 2009b). The Congress adopted in 2010 a 2.5 billion dollars additional budget for high-speed rail and Amtrak (Randall, Frittelli and Mallett, 2013).

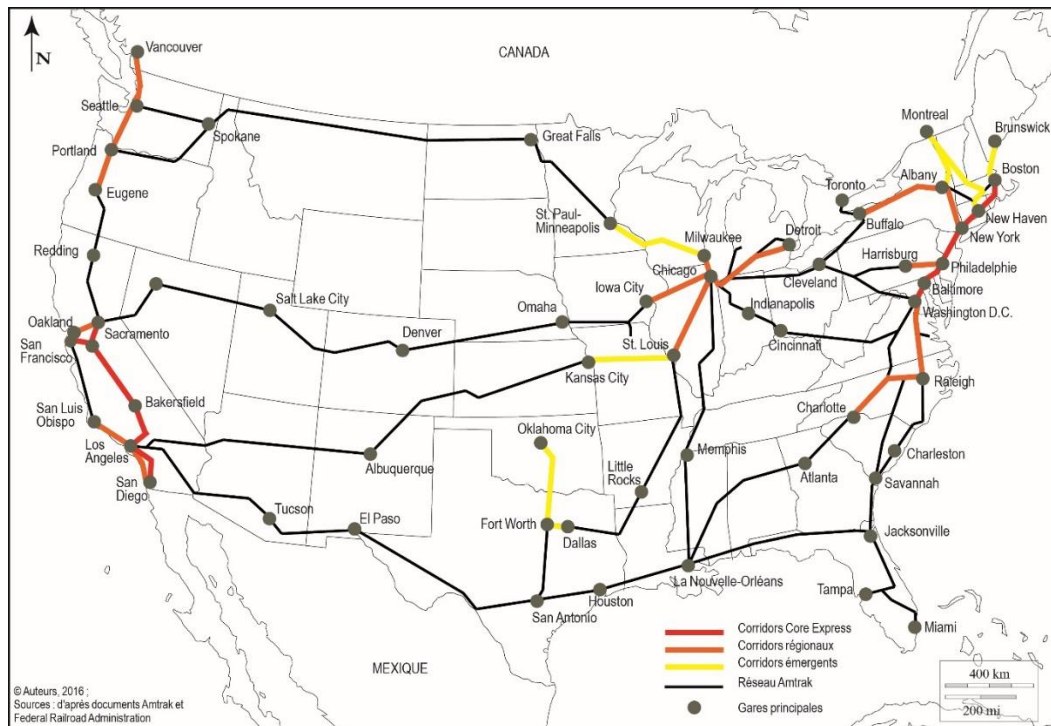
In addition to these laws, President Barack Obama, Vice-President Joe Biden and Transport Secretary Ray LaHood presented in April 2009 the Obama administration’s initiative in favor of high-speed rail. Ten corridors – plus the Northeast corridor – were designated to receive federal funds (U.S. DoT, 2009b).

This initiative for high-speed rail is based on two pillars: the construction of new dedicated lines for high-speed trains, and the improvement of existing services by an incremental approach. Regarding high-speed rail specifically, three project types are planned:

- The individual projects which are subsidies to on-going projects allowing a fast stimulus of local economic activity;
- The projects which are subsidies to support projects HSR corridors projects whose planning studies are well advanced;
- The planning, that is the development of partnerships to envisage future HSR lines whose funds come from other sources than the ARRA.

At the end of 2009, the federal administration established the structure responsible for the financing – High-Speed Intercity Passenger Rail Program (HSIPR). It proposed a typology of projects based on speed: Core Express Corridors, Regional Corridors, and Emergent Corridors. Only the first category corresponds to true high-speed rail strictly speaking.

Figure 3. The HSR corridors funded by the HSIPRP in 2010 and 2011



The “Obamarail” represents a clear break in federal rail policies, conferring a leading role to the federal government in the building of a new high-speed network and an improved higher-speed network. The initiative of B. Obama has reinvigorated the political, technical, and scientific reflections and debates on interurban rail transportation.

4. The reality of the « Obamarail » initiative: a new emerging railroad geography?

4.1 An assessment of the HSR corridors

The initiative of the Obama administration has generated an increase of projects but it has concerned finally only very limited territories, identified as “relevant territories” for higher-speed rail or true high-speed rail. Indeed, it seems unrealistic to think that HSR trains could cover all of the American territory and form a comprehensive network. These “relevant territories” match some demographic and economic criteria: high population densities, a dynamic labour market, congested highways and airports, and important metropolitan areas less than 800 kilometres apart from each other.

The leading territories are California and the Northeast States. The promising territories are the Midwest characterized by a *hub and spokes* network based on Chicago and secondary cities – Milwaukee, Minneapolis, Saint Louis, Detroit and Indianapolis – and the Northwest (Seattle, Portland). Finally, the innovative territories are Texas and Florida. These two States, which proposed failed public or private projects, now turn to private projects such as All Aboard Florida.

4.2. Two HSR corridors under development: the Northeast Corridor and the California Corridor

The network of the Northeast corridor is the busiest of the United States, combining numerous rail services. On this corridor, Amtrak operates the only higher-speed train of the country, the

Acela Express. This one can reach the maximal speed of 240 kph on very limited sections but it circulates at an average speed of 105 kph. The growth perspectives of this corridor are very favourable, Amtrak estimating a 60 percent increase of ridership on all Northeast rail services (Amtrak, 2015). The NEC has to face in the coming years a major capacity problem because of this projected increase of the traffic and because of too often postponed investments. These difficulties are aggravated by the advanced ageing of many infrastructures – some must be replaced.

Since the middle of the 2000s, Amtrak has launched a profound reflection and a vast planning process to increase the capacities of the Northeast Corridor and to transform it into a true high-speed rail network in the medium term. In 2010, the *Northeast Corridor Infrastructure Master Plan* is released and is the result of a collaboration between twelve Northeast States, the District of Columbia, Amtrak, the FRA, eight public transport agencies, and three freight companies. This master plan identifies about 52 billion dollars of investments required by 2030 to place this corridor in a good state of maintenance and repair, and to absorb the increase of interurban and regional traffic. The same year, Amtrak published a new major report, *A Vision for High-Speed Rail in the Northeast Corridor*. This plan designs a new 690 kilometres double-track line between Washington D.C. and Boston for a true HSR service – NextGen HSR. This new dedicated line is estimated at 117 billion dollars, for a complete opening in 2040. The recommendations of these two reports were integrated into one program, the Northeast Corridor Capital Investment Program (NECIP), intended to launch major investments to improve the existing network first and then to lay the foundations for the future HSR line (Amtrak, 2012).

The NECIP confirms a double approach: to improve the existing network by an incremental approach and to prepare the establishment of high-speed rail. This is explained by the heavy financial constraints which weigh in on Amtrak. The objective is to confirm the train as a very competitive mode in this region because a main part of interurban travels is already made by train. This very ambitious program testifies of a declared willingness by Amtrak and the FRA to build a true HSR corridor serving as a structuring axis for the Megalopolis. However, three major problems remain: the commitment of public authorities, the lack of financial resources, and the technical complexity of this program due to the replacement of heavy infrastructures and the modernization of the Hudson tunnels.

The Californian project represents the second laboratory of high-speed rail in the United States and plans to build a dedicated network for HSR trains. Since the 1990s, California has tried to build a high-speed rail network between Sacramento and San Diego servicing San Francisco and Los Angeles. In 2002, a 9.9 billion dollars loan was adopted by the legislature but this loan was approved six years later by referendum. The authority received the support of numerous cities, counties and public transport agencies (Audikana, 2012; Ruggeri, 2015a). In November, 2008, the loan – known as the “Proposal 1A” – was approved by Californians. This project is boosted by the commitment of the Obama administration. The future network will extend over more than 1200 kilometres between Sacramento, San Francisco, Los Angeles and San Diego, with 14 intermediate stops (Ruggeri, 2015b). The construction in the central Valley of the new dedicated infrastructure has started since 2015.

The building of this network was initially divided into five main stages (CADOT, 2013; Ruggeri, 2015a). In February 2016, with the release of the updated financial plan of the CAHSRA, a consequent modification of the program was announced. Following the construction of the central section, the third initial phase “Bay to Basin” will become a priority. The CAHSRA considers that it is more urgent to build the network towards San Francisco and the Bay Region (CAHSRA, 2016).

Figure 4. The building of a new HSR corridor: the Californian project



Beyond the incremental approach by successive phases from 2018 to 2040, the Californian project is based on a “blending strategy” to set up a “seamless” network and to assure the best possible interconnectivity of the various rail networks (CAHSRA, 2012). Some sections of the future HSR network are existing sections which need an upgrade to adapt to the technical constraints of higher-speed trains. This strategy reveals the financial difficulties of such a project. Indeed, the initial business plan of the CAHSRA planned a total 98 billion dollar investment program for the completion of the Phase 1 (San Francisco-Los Angeles-Anaheim). The revised business plan of 2012 planned a 68 billion dollar investment program. This 30 billion dollar gap relates to the use of an existing section between San Jose and San Francisco, instead of the building of new tracks and to the use of an improved Metrolink network between Los Angeles and Anaheim (CAHSRA, 2012; Ruggeri, 2015a). Finally, the change of priority announced in 2016 is essentially due to financial constraints. Works towards San Francisco represent fewer technical and financial problems than works towards Los Angeles – because of the necessary crossing of the Tehachapi Mountains (CAHSRA, 2016).

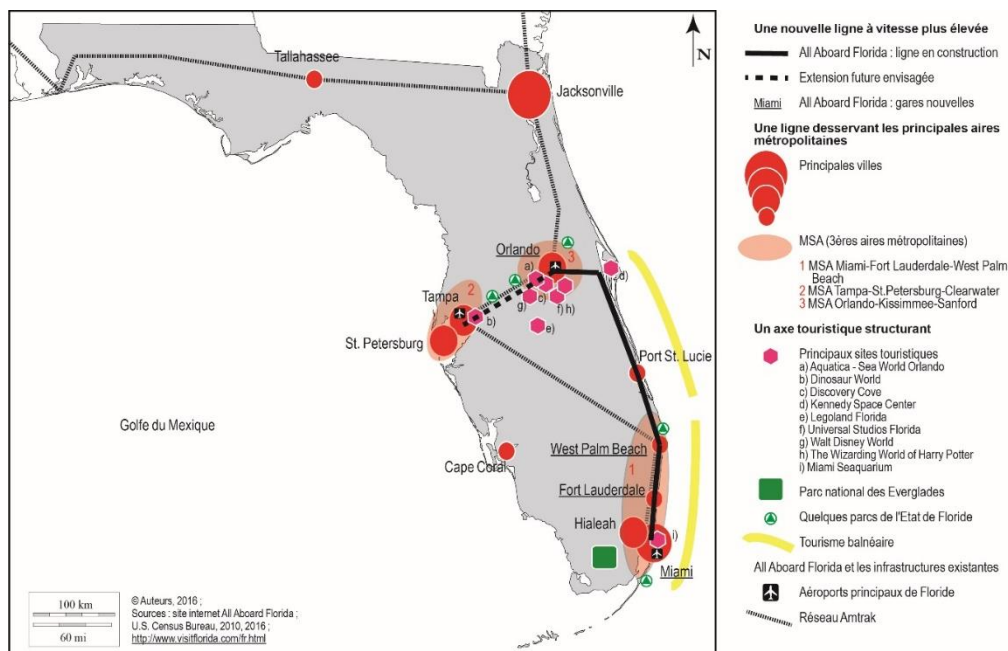
In brief, Northeast States and California are territories of advanced experiment of HSR in the United States, both with a mixed project of modernization of the existing network and the building of a new infrastructure. Some common characteristics to these two projects can be identified: the medium-term phasing, the financial uncertainties, the commitment of the federal government and States, the valuation of the future HSR corridor as a structuring axis of a megaregion.

4.3. Private projects: symbol of the failure of the Obama administration or of a recapture of the train by economic actors?

Several projects are currently carried out by private consortiums in the United States and are financed only by private funds, not to depend on public programs. We can identify five main private projects – not at the same level of progress: the Texas Central Railway (TCR), the Midwest High Speed Rail Association, the All Aboard Florida project and two projects to connect Los Angeles and Las Vegas (Xtrain Service and XpressWest). This analysis is focused on the Floridian project because it's the only one to be actually under construction in 2017.

The All Aboard Florida project is led by Florida East Coast Industries-LLC (FECI), a large real estate consortium which possesses the infrastructure between Orlando and Miami. The 312 kilometres project is a higher-speed interurban rail service serving four cities – Miami, Fort Lauderdale, West Palm Beach, and Orlando – by following the existing rights-of-way of the company. A new section of 64 kilometres is planned to serve Orlando's airport. According to the FECI, Miami and Orlando will be connected in three hours, with trains running at an average speed of 170 kph.

Figure 5. All Aboard Florida: a new polarizing axis of Florida?



This project represents an innovative model of development of a higher-speed rail service being carry out by a private enterprise. This private initiative can be interpreted as a way to by-pass political and institutional blockings – the republican governors of Florida decided to give up the funds of the “Obamarail” – and to mitigate the weakness of the current rail service offering. In order to finance this project, the FECI relies on real estate development. It offers an interesting strategy on how private actors may reinvest in the railway sector. In its communication, All Aboard Florida insists on the structuring role of this new line in a very touristic territory, allowing to connect and to serve the main travel destinations of Florida – Miami and West Palm Beach – and Orlando, capital of leisure parks. Furthermore, the company plans that the four new stations will be the support of vast real estate transactions particularly in Miami and Orlando. The future Miami Central Station will have a function of hub between interurban and urban transport networks and will be an element of an impressive real estate operation with several high-rise and luxury buildings and commercial spaces. The new stations are considered as a vector of

sustainability and profitability for the economic model of the future line beyond the architectural aspects of the buildings. Using existing infrastructure, the company proposes a tight timetable with the opening of the first section on October, 2017.

These numerous projects – private or semi-private – may be considered as an additional sign of the renewed interest for interurban passenger rail transportation in the United States. The projects holders, as well as public and private actors favourable to the train, try to by-pass the lack of public financing by attracting private investors and by relying on the capture of real estate value. However, these private projects may be also interpreted as an answer to the lack of stable political and financial commitment of the federal government and certain States. The “Obamarail” initiative from 2009 to 2012 has injected 10.5 billion dollars for railroad projects but this sum is in the end very low regarding the needs for true HSR lines. Moreover, the blockings at the Congress and the strong opposition of the Republican party have instilled doubt about the capacity of the public actors to honour long-term commitments for transportation mega-projects.

5. Conclusions

The emergence of private projects, sometimes has become real competitors of federal and state projects, reflects the current situation of passenger rail transportation in the United States, between a technological, scientific and political emulation and major financial obstacles. After a mattering reversal in 2008-2009, marked by the vote of several laws and the implementation of an innovative mode of governance resting on a collaboration between federal scale and state scale, railroad policies have seemed to be in slow motion since 2011. The defenders of true high-speed or higher-speed rail projects explain that the opponents of the various projects block potential funds. But the report seems more pragmatic: there would be simply no fund anymore to be blocked, this rail policy is not a priority of federal transportation policies anymore.

In view of the railroad geography inherited from the Obama administration, it would be excessive to conclude on a total failure. If the results of this railroad politics may seem limited, it is rather advisable to ask about the sustainability of this policy. It seems that the work made by the FRA establishes an incentive to rethink and to renew the approach to the passenger rail transportation. The federal state was a subdued and hesitating player for the years 1960-1970. Since 2009, the federal actor has reaffirmed as a pillar of the US rail sector by inaugurating a new partnership policy with the States. The question of its sustainability depends on the attitude of the new administration of President Donald Trump. The defenders of the rail hoped for a democrat administration, Hillary Clinton's program planned major investments for the transportation infrastructures. Donald Trump's victory casts a vagueness on the future transport policies of the federal government. Indeed, he had often denounced during his campaign the state of infrastructures in the United States and had proposed the launch of a massive investment. At this time, the Trump administration seems to sketch an ambiguous position with on one side a finance bill which would reduce all the investments to non-automotive transports, and of the other side the preparation of an investment plan of 1000 billion dollars (2/3 of this plan would be funded by the private sector) to modernize infrastructures and to boost certain railroad projects.

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