Twenty years under the Channel, and beyond
A research and events programme to celebrate 20th Anniversary of the railway Channel tunnel by the French Railway Historical Society

Vingt années sous la Manche, et au-delà
Un programme de recherche et d'événements à l'occasion du 20e anniversaire de la liaison ferroviaire transmanche proposé par Rails et histoire

Twenty years under the Channel, and beyond: Capital and governance in major infrastructure projects

Call for papers

Second International Conference, London (UK), Institut français, Tuesday, 8 December 2015

Deadline for submission of abstracts:	**15 July 2015**
Notification of acceptance	**15 August 2015**
Deadline for submission of working paper	**8 November 2015**
Deadline for submission of full paper (final paper) for publication	**8 January 2016**

The languages of the conference are English and French.

About the conference

Twenty years under the Channel, and beyond: Capital and governance in major infrastructure projects is the second international conference on the agenda of **Twenty years under the Channel, and beyond**, the research and events programme led by Rails et histoire, the French Railway Historical Society, to celebrate 20th Anniversary of the railway Channel tunnel and 30th Anniversary of the Channel Tunnel Treaty.
The programme **Twenty years under the Channel, and beyond** strongly encourages the dialogue between the academic world, corporations and administrations. The international conference will bring together academics, professionals and policy makers interested in infrastructure finance and governance of major projects, with a focus on the cross-Channel rail infrastructure between London, Paris and Brussels and beyond.
Contributors to the conference are invited to present research papers or case-studies, to recount and share their experience as actors in this history, and all are welcome to take a part in the open discussion which is one of the main objectives of the **Twenty years under the Channel, and beyond** programme.

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Steering Committee, responsible for the scientific programme of the conference

- **Prof. Christian de Boissieu**, Université de Paris I Panthéon-Sorbonne (France)
- **Prof. Terence Gourvish**, London School of Economics and Political Sciences (UK)

Submission of abstracts, working papers and full papers

1. **Abstracts (in English or French)**
   Papers proposals may refer to research papers or case studies or first-hand accounts by actors.
   Abstracts should not exceed 1,000 words (Arial 12 pts, with bibliography) and include: Author, Position, Institution, Title of the paper and keywords, paper proposal, and short CV (maximum 150 words), as well as short summary in English (maximum 150 words) for abstracts in French.
   All abstracts will be peer-reviewed by the scientific programme committee based on standard review procedures.

The submission of abstracts implies:

2. **Submission of working paper** (no poster presentation) by 8 November 2015. Working papers will be circulated among the conference committee and attendees only as working papers before the conference. Working paper should not exceed 8,000 words.
3. **15 minutes oral presentation** (no poster presentation) of the paper by the registered presenter *in persona*, followed by questions**.**
4. **Full paper:** authors are invited to submit their final and full paper for publication in the conference proceedings (digital and print versions).

All communications should be sent to 20yearschunnel@ahicf.com

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Background

A network is worth only its weakest link. The road network of the Roman Empire remains an icon for major infrastructure projects at any time as well as an illustration for such a fact. What the many centuries which came afterwards taught us, is that the success in building and operating major infrastructure projects depends mainly on two earlier, less material steps: planning and financing. Here lies the actual challenge and place for out of the ordinary prowess - and failure. Since 1945, a steep increase of world population, economic growth and international trade supported an enormous increase of transport flows for passengers and goods. The rising costs for major infrastructure projects stretched the financial capacity of States and markets, encouraging complex and innovative solutions to make them possible.

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Topic

The cross-Channel railway link is the largest infrastructure project of the 20th Century. The tunnel and high-speed lines it connects constitute a Pharaonic and successful technical achievement. They carried more than 350 million passengers since 1994 with the highest safety records.

Beyond the tunnel, the cross-Channel link is a unique case of interdependent infrastructures, forming a complex transport system with the Channel Tunnel Railway Link (CTRL, now *High Speed 1*), continental 'LGV's (high speed trains dedicated lines), Eurostar services, *High Speed 2* project, to leave aside the important road access built around the tunnel and further developments in Kent and Nord Pas-de-Calais regions.

The funding and governance of this unique transportation system represented however a succession of unprecedented challenges. The tunnel itself was financed by private capital exclusively - a mix of equity and bond - on request of the British government, in the early 1980s. Traffic forecast and financial analysis prior to the selection of Eurotunnel project, in 1986, ensured that the concession (of Build, Own, Operate and Transfer or BOOT type) could generate sufficient return to attract private investors. But cost increase, delays and traffic flows much lower than forecast hampered the repayment capacity. The financing and governance of the Channel Tunnel concession led to major rows and law suits between parties involved as well as successive restructuring plans.

The construction of the Channel Tunnel Rail Link between the tunnel and London, CTRL, now High Speed 1, was initially based on a privately funded project finance as well. But the failure of the second equity phase paved the way for a public subsidy to finalise the financing plan.

Since then, their business model stabilised: financial results are encouraging, debts are serviced and tunnel shareholders even received their first dividends.

The financial history of the bi-national Channel tunnel concession and the British CTRL is of utmost interest to understand drivers of major infrastructure projects. The biggest private rail projects of all times with respectively 10 and 6 billion pounds, they are a unique concentration of experience.

Associated high-speed lines on the Continent - Northern French and Belgian LGVs - followed a more conservative approach and were financed with mostly public money. But they are equally key to success for the cross-Channel venture.

Analysing "how the project, marred by many difficulties, both political and technical eventually reached its successful conclusion" (François Crouzet) in its financial and governance aspects is a challenge worth being met or, to quote its first co-chairman, André Bénard: "The Eurotunnel project is not a model but a worthy reference". After twenty years in operation and as the 30th anniversary of the Canterbury Channel Tunnel Treaty will be celebrated in 2016, the research programme **Twenty years under the Channel, and beyond** puts the spotlight on this experience. The London conference aims at presenting existing research and initiating further studies to make the best out of this reference for major infrastructure projects today and tomorrow. Research papers, case studies, firsthand accounts are equally part of the discussion.

Contributors are invited to submit papers on the following topics:

1. Funding and governance for the cross-Channel transport system: a 'back door PPP'? (Public-Private Partnership)

- **"Not a single public penny": myth or reality?** The tunnel as such was allegedly exclusively funded by private money, but experts' estimations suggest that the two public sectors in France and the UK made interventions worth several billion pounds. All in all, public investment for the system as a whole may have been higher than private one. Legislative dispositions were taken in the UK in the early 1990s to facilitate the private funding of infrastructure - Private Finance Initiative (PFI), Transport and Works Act (1992) -, but the fact that the emergence of Public Private Partnerships is the restructuring of CTRL' contemporary is worth of notice. Which key drivers could be identified in this switch from exclusively

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private rail infrastructure ventures to mixed funding? Which kind of direct or indirect public funding was made available *ex ante* - connecting rail (and road) links, minimum user charge from nationalized railway operators - or *ex post* - subsidies, guarantees, liabilities, rolling stock buy-back? How was the dependency of the tunnel *versus* connecting infrastructures and operators taken into account in the original funding concept? How the CTRL case proved different?

- **Key actors and their strategies:** This bi-national project was conceived by a consortium of banks and public works companies. In 1986, a concessionary company was given responsibility for the major engineering project in the century, but neither governance nor funding was available yet. How was this made possible? Which role played building and engineering companies, banks, consultants? How did the mutual shaping of the practice of law and finance engineering answer to governance challenges in the successive stages of the fixed link?

- **Traffic forecast: why such a gap?** The overestimation of traffic in infrastructure projects is a general concern and the cross-Channel link provided no exception. Did earlier traffic studies made for the tunnel in the late 1970s and did the bank report 1985 contribute to the deviation? How was forecast elaborated and made persuasive by the actors? What were the circumstances then? Did these actors fall into line or not, and did they remain so through the successive stages - especially infrastructure builders *versus* rail operators? What do industrial decisions reveal (*e.g.* the undersized Eurostar terminal designed at Gare du Nord, which would never have coped with estimated traffic, compared to Saint-Pancras; rolling stock orders made by operators)? How do forecast justify the infrastructure and influence investment decisions?

  A special attention is expected on the comparison of traffic forecast *versus* realisation in these cases, in order to question the models applied and their consistency through the projects' lifetime (including stress tests): *e.g.* profit price-time model for air-rail modal shift, gravity model for creation of traffic. Research should here rely upon project management / finance and economic literature (e.g. Flyvbjerg, 2003; Winch, 2009).

  The analysis of vested interests, optimism and other biases should not leave aside the wider context, as analysed in the first conference of the **Twenty years under the Channel, and beyond** research programme (19 March 2015, Lille, available online at www.ahicf.com); travel patterns have changed dramatically over the last 20 years, with the unforeseen coming up of low-cost airlines, Spain preferred to France as a major summer destination, while cross-Channel ferries stood up the competition more than expected. In the field of trainload traffic, containerisation and the increasing role of Asia in world trade altered cross-Channel rail freight flows.

- **Interactions tunnel - HS1 - LGVs:** three components combine to form the cross-Channel rail system. The funding of complementary assets to the tunnel (high speed rail and road infrastructure) is decisive to reach the highest potential traffic. In such a system, the success of each component depends highly on the others. Could systemic strategies be identified, from the start (France Manche - Channel Tunnel Group consortium), up to Saint Pancras inauguration in 2007? Does the fact that a project is launched stimulate further developments to maximise benefits for each of its components?

- **Financial green light, contracts, floating (Capital 1, 2, 3), and banking syndication**. For both Eurotunnel and CTRL, the study should take into account the inflationary context during the construction phase and low to flat inflation during operations. This unfavourable succession led the debt burden to become increasingly problematic.

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- **Gains and losses: more complex than it seems?** Both lenders and shareholders suffered losses in Eurotunnel and, to a lesser extent, CTRL cases. Conversely, commissions and interests perceived by banks partly offset debt haircuts. The first Eurotunnel individual shareholders benefited from travel benefits, which proved substantial for some frequent cross-Channel travellers. As the companies now run on a more stabilised path, is it possible to draw the bottom line for investors?

- **Changing governance for a continuous service:** the governance of related parties - Eurotunnel, CTRL, Eurostar - was compelled to change over 20 years from specific agencies - Channel Tunnel Intergovernmental Committee and Safety Commission, national regulators for high speed lines - to a binational railway regulation. How did the governance for the system take into account its binational character and respective national components? How was regulation conceived in each country (UK, France, Belgium) and across the frontier to ensure service continuity? How was the Eurostar case (non-regulated monopoly at first) integrated in the system?

2. Public-Private Partnerships for major rail infrastructure projects in the perspective of the cross-Channel experience

A series of major railway infrastructure projects have been planned or realised in form of PPPs and project financing since the signature of the Treaty of Canterbury (1986), and when the flaws in the initial cross-Channel funding and governance scheme were being gradually identified. Among them are numerous tramways and urban light rail projects; Nîmes-Montpellier, Tours-Bordeaux and Bretagne - Pays de la Loire LGVs, CDG-Express in France; the Perpignan-Figueras and Lyon-Turin tunnel links; High Speed 2; California, Texas and Florida high-speed rail projects. The list is far from being an exhaustive one. Some of these projects experienced difficulties similar to those of the Channel rail link projects, a few went nearly bankrupt and almost all overestimated traffic forecast.

These attempts to fund privately major railway projects in the past three decades suggest that lessons from the Chunnel were not looked for nor systematically drawn. These case studies raise several questions which could only be answered by assessing to what extent the cross-Channel projects have been, or not, influential in the funding and governance of subsequent infrastructure. By way of example:

- Which specific innovations have been developed in financial engineering for major infrastructure, in the context of deregulated financial markets and the successive crisis of the 1990s and 2000s?
- Did expectations on return on investment change? Were externalities satisfactorily taken into account?
- Is decision time allowed to large infrastructure projects shorter? Have public consultations, launch and decision processes improved? How influential are they in the successful achievement of a project?
- How was regulation influenced by the Chunnel experience?
- How did concepts like “moral hazard”, “additionality”, risk sharing or transfers in each phase of the infrastructure life develop and change?
- What happens at the end of the concession-life?
- What do the US high-speed rail projects reveal, through their different stages in comparison with UK and other European projects?
- Did a corporate culture develop in major infrastructure projects? Has the management team in the starting phases of a project been addressed as a key challenge?
- Did the difficulties with ridership forecast met in early rail PPPs impact the choice between traffic-based and availability-based concessions?

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M. Christian CAMBIER

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