

THE LIGHT RAIL VISION

There's a long road between the vision of a proposed new light rail scheme, and the reality. Richard Foster considers how those early proposals match up to the schemes that emerge.



VISION VS REALITY

The announcement of a new stretch of tramway is always exciting. But what is it about the announcement that excites? Is it being able to travel on rails down streets where there were no rails previously? Or is it that there is more to building a tramway than simply laying those rails?



A new light rail scheme is more than a way of getting people from 'A' to 'B'. It's a vision of a new way of life for those who live and work in its vicinity. It's the promise of a future with sustainable, environmentally friendly public transport and urban spaces where people want to spend time.

At least, that's what the artists' impressions of the proposed schemes tell us. As the saying goes, a picture is worth a thousand words and what better way is there to convince people to adopt a new tram scheme than by using evocative imagery to help sell its benefits? It's due to that ability to transform urban environments that it seems every issue of TAUT includes at least one announcement of a new tramway – sometimes more than one.

In TAUT 1031, Paolo Marchetti, Technical Director for SYSTRA's Italian arm, described what Bologna's new tramway will bring to the city. He cites Via Riva di Reno as a place where the tramway will have a big impact. It's an elongated square, full of cars flanked by post-war multi-storey dwellings.

The tram lines will run either side of a restored canal. According to mock-up images, the water, the greenery and the pedestrian areas are to combine to form something quite beautiful.

Helsinki plans to take this urban regeneration a stage further. It's embarking on a process of 'boulevardisation', where inner city motorways and road arteries are turned into mixed developments, complete with green spaces and public transport. One of the highlights is the Western Boulevard City, a 4km (2.5-mile) stretch of dual carriageway that could, by the 2030s, boast eco-housing, office and retail space. The Western Helsinki Light Rail is to be at its heart. The image that shows the most dramatic change is one depicting new eco-housing built around the inside of what was once clearly a roundabout.

The issue is that these are projects that are either under construction (Bologna) or quite far off in the future (Helsinki). Are there urban places where you can now stand and be left speechless if someone showed you an image of what was there before?

Bologna's tramway project is one of Italy's most significant – set to transform the city with greater accessibility, lower levels of traffic, and greener landscapes. Intermodal hubs and interchange stations, such as that pictured, have been integrated into the main light rail project. SYSTRA



A pool of inspiration

The proposals for Bologna drew inspiration from several European cities, including Amsterdam, Manchester and Florence, Marchetti describing the latter as a “great example of placemaking and urban renovation”, describing how changing the roadway, kerbs, pavements and other urban furniture is “a must in such an architectural sensitive city”.

Martin Fleetwood, consultant for law firm Addleshaw Goddard, points to West Midlands Metro as a good example of how placemaking has transformed an urban environment.

“When you put in a tram system... there are all these streetscape enhancements,” he said. “So, in Birmingham, for example, around Snow Hill, you’ve got the grass track [area]. [It’s] carbon absorbing, it looks nice and you’ve developed the streetscape as well.

“A number of parts of cities where there have been trams, you look at the pictures of what the cityscape looked like before the tram system went in and compare with what it looked like after the tram – and it is a total transformation.”

How does that transformation actually take place? And at what point in the development process does the placemaking start?

“What is specific with tramways is that it’s an agreed project and, from the very beginning, it requires that the place of each transport mode and activity within the city be rethought,” says SYSTRA’s Aurelie Jehanno. “So you’re thinking about and dealing with placemaking from the very beginning of a project.”

It’s well documented that having a tramway or light rail on the doorstep drives an increase in house prices. And that’s before you start to consider the environmental or connectivity benefits.



Artists and designers often have an influence in the appeal and beauty of the tramway and its surroundings. Here, the T1 tracks in Nice, France, pass by the ornate Fontaine du Soleil at Place Masséna. Neil Pulling

The real strength of tramways, says Jehanno, is that they help to re-think the shape of the city and to reallocate urban space.

But where is the driving force behind that change? Does it come from consulting and engineering firms such as SYSTRA? Or much higher up?

Placemaking, says Jehanno, starts with the local authorities. “SYSTRA is providing expertise,” she explains, “[but] the vision is a political one.”

Jehanno points to Bordeaux as a good example of how a tramway can transform urban spaces. La Belle Endormie or ‘The Sleeping Beauty’, is what the French call Bordeaux because its beautiful and historic architecture was described, on one travel website, as “derelict, dark and lacking in dynamism”. Cars choked the banks of the river Garonne.

It was Mayor Alain Juppé who kick-started plans for a tramway, which could help free-up its transport network.

“It was a political vision to re-think the shape of the city, to provide a better quality of life there,” Jehanno explains.

The tramway was not an easy sell to Bordeaux’s inhabitants but construction started in 2000. The first section of Line A opened in 2003, followed by Lines B and C in 2004. Since then, the system has grown into a 77km (48-mile) network.

But what of the transformations the tramway brought? A 1990s photograph of the space that separates the Place de la Bourse from the river shows a sea of cars. Cars driving, cars parked. Pedestrian spaces were minimal.

Compare that with a view from 2024. “Car lanes are reduced,” Jehanno says. “You have broad space for leisure activities. People can walk, run or have a beer with friends. It’s a total change, a real transformation.

Bordeaux’s city centre has been, since 2007, a UNESCO World Heritage Site. It was, Jehanno explains, the first city to use Alstom’s catenary-free APS system through the most historical and sensitive areas. This was a political choice to “enhance urban landscape and architecture”.



BEYOND THE POLITICS

Once there is a political desire to transform an area, the actual placemaking is an involved process. Jehanno lists the different disciplines that have to be brought together to act as a team: “Architects, urban planners, programme managers, landscape architects, sociologists and engineers with specialties such as pedestrian modelling, also experts in public consultation”.

Sometimes, placemaking requires a little extra something. And here SYSTRA is proud to partner with artists and designers. “Local authorities... like renowned architects who can be a bit original,” Jehanno smiles.

Tours is one of the most extreme examples where you can really see the influence of French conceptual artist Daniel Buren. Its 21 Alstom Citadis 402 vehicles were especially designed for the city, their mirrorlike finish “reflect[s] the [city’s] heritage”. “They say it symbolises architecture on the move,” says Jehanno.

Another example is Nice where local authorities wanted something a bit extra in front of the town hall. Artist Jaume Plensa designed a piece called ‘Conversation between Continents’. Seven illuminated figures atop poles represent the seven continents. “It’s something [that enhances] the beauty of the tramway and also of the place.”

Given that urban placemaking involves multi-disciplinary teams working together, have there been cases where plans to transform an urban environment have not come together? Happily, Jehanno says, no.

Jehanno adds that there are times when the urban environment needs changing after work is complete. She points to Porte de Versailles in Paris as a good example.

This is already the site of a major exhibition centre but work is underway to build a 180m (590ft) pyramid-shaped Tour Triangle skyscraper here. Not only is the site connected to Metro Line 12, but it’s on tramway Lines T2 and T3a. There are also connecting buses too. SYSTRA is working with metro operator RATP to improve facilities at the station, which can no longer cater for traffic demands. This is hampering future developments and can, if things go wrong, cause major delays on Line 12.

Jehanno explains that French tramways have followed a philosophy called Un Tramway À La Française, which loosely translates as the ‘tram made by France’. “We are a country where tramways, like those in Italy or Denmark or Sweden, disappeared during the 1940s, ‘50s and ‘60s,” he explains. “But it was agreed to renew all cities since 1978. SYSTRA was at the forefront.”

The year 1978 was when the contract for a new tramway in Nantes was signed. This was the first of France’s second generation tramways to be built and it opened in 1985. “It meant not just new tram lines,” Jehanno says. “It was also the architectural renewal of the cities. The concept of Un Tramway À La Française has been a conclusion of this mode of work.”





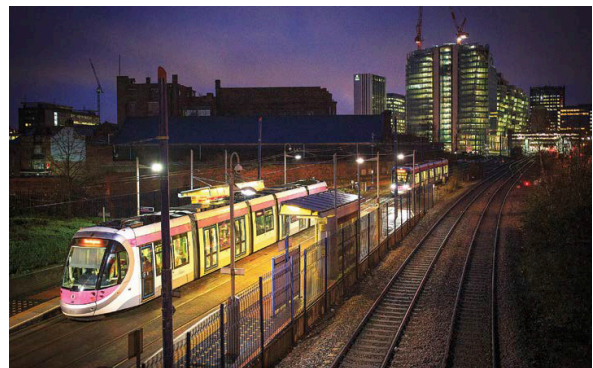
In Tours, France, Alstom Citadis 402 vehicles were especially designed for the city, their mirror-like finish "reflect[ing] the [city's] heritage". Here a Citadis 402 on line A is at the Pont Wilson entering Place Coiseul. Boris Arbogast/ Flickr CC BY-NC 2.0



Bordeaux is a good example of a how a political vision can transform an urban space - areas that once were choked with cars are now broad and open, so visitors can enjoy the beautiful and historic architecture. The tramway, originally 'not an easy sell', runs seamlessly through the centre and has since grown into a 77km network. Getty Images



Place de la Victoire on line B in Bordeaux is a clear visual beneficiary of ground power supply, and a good example of how a tramway can transform urban spaces. Neil Pulling



Birmingham's Midlands Metro system, which has helped to develop the streetscapes around it. Damien Walmsley/

Examples can be found throughout France, Jehanno citing Le Havre, Le Mans and Brest. The most recent example of this concept can be found on the T3 tramway extension in Paris. "T3 west to Porte Dauphine was built in a place where there were road lanes and not really [any space for] walking and cycling. Now it has become a place to live."

Un Tramway À La Française is how tramways used to be built. But times are changing, particularly when it comes to meeting the challenges of climate change. SYSTRA, in particular, has developed its Sustainable Design & Construction Framework. As the company's Mike Muldoon explained in TAUT 1031, this document explains "how we are going to bring sustainability into consideration around carbon efficiency, operational efficiency the use of materials on the network [and] how we can put those into every step of the design process to drive down the overall carbon content of this system."

SYSTRA now analyses the environmental impact of every project, from how much carbon is emitted during construction to how excess rain water is managed.

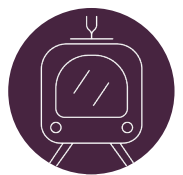
This is likely to have an impact on urban placemaking. For example, grassed track is good for carbon capture; trees provide shade and regulate temperatures.

"This implies a real change in culture and a way you are thinking your project [through]," Jehanno says. "This is the main challenge for the years to come so we've started [to implement] it on several projects - Line T10 [in Lyon] but also in Nantes, on a bridge project for a new tramway line."

A quick online search of various learned sources reveals one consistent theme: good placemaking drives economic growth... and driving economic growth was one of the themes that emerged from the UK Light Rail Conference (see p.328).

Placemaking will, therefore, continue to be an important part of the many new tramway and light rail projects. Such announcements are likely to continue to fill the pages of TAUT.

Hopefully, some future issue will be able to look at places such as Bologna or Helsinki to see how what was built matches those inspirational mock-up images.



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