

Tracks

Transport • Policy • Practice

Development around stations Exploring international experience and lessons for the UK

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Introduction

Several separate but related themes have prompted this report: the need for more houses; a requirement for Network Rail (NR) to reduce its debt; and the ever more urgent requirement for developments to be genuinely sustainable.

Sir Peter Hendy, NR's chairman, responded to the Treasury's pressure to reduce its debt by planning to sell £1.8 billion worth of assets. Choosing this short-term approach opens up a number of questions. It can be argued that a more considered approach could lead to a higher return for NR and wider benefits for the railway and society at large.

This report suggests that the experience of railway administrations in other countries shows that a longer-term approach has succeeded in addressing a variety of societal problems as well as providing greater revenues for the railway.

This report therefore looks at ways of maximising the economic, social and environmental benefits to be gained from treating railway stations as primary development hubs. It then offers a number of options for realising those benefits, and suggests ways in which their success can be measured. It describes how other countries have addressed this and makes recommendations on ways forward.

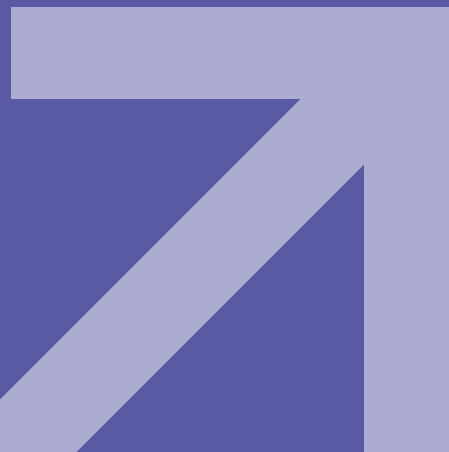


Benefits development around stations can bring

Rising populations, seemingly inexorable urbanisation and a health crisis caused by vehicle pollution and obesity make railway stations one of the most critical pieces of infrastructure for the functioning of cities. They therefore have huge value. This is widely recognised, but there is huge disparity between countries in the degree to which the opportunities have been embedded in national or local policy.

Successful long-term developments need 'place-making' based on thorough research, imaginative thinking about the needs of the

future, uplifting architecture and the engagement of a variety of stakeholders. Benign modes of transport are at the heart of the process, and many countries and conurbations realise that the future lies in creating attractive, multi-purpose and largely car-free spaces around transport hubs. By capturing the rising property values from the synergies of good place-making, public investment can be funded by commercial gain through such mechanisms as business rate supplements and developer contributions¹



Raise money for Network Rail

Commercial developments at stations and on railway land are as old as railways, but in Britain there was a presumption against railways becoming property developers; London's Metropolitan Railway had to develop 3,000 acres along its line at arm's length, but such restraints have disappeared in the quest for cash. Despite decades of sales by British Rail Property Board, there are still substantial amounts of railway-owned land, and identifying suitable sites for development has become a priority for NR and Transport for London (TfL).

The historic land-hungry nature of railways in urban areas provides the industry with a legacy that can be turned to great advantage. Changed logistics, coupled with the decline of traditional rail freight, has freed up land. This has most commonly been converted to station car-parks, but there are other activities that do not require a high land-value location, such as train maintenance. Equally, rising land and rental values make raft developments over stations increasingly feasible.

Sales of what was thought to be redundant railway land in Britain

have been carried out for decades, usually at the insistence of the Treasury. Little or no thought was given to future needs or the possibility of the revival of rail transport. Much of the low-hanging fruit has gone, so more creative ways have to be found to develop what remains.

One of the three areas that NR is focusing on in its attempt to raise £1.8 billion is understood to be passenger train maintenance depots. There is little justification for having such depots on urban land that could be redeveloped, apart from proximity to a workforce. Providing there are suitably located booking-on points and sufficient overnight stabling and cleaning facilities near stations where trains start their journey, the maintenance can be done on low-value land. Bombardier chose rural Barton-under-Needwood for its Central Rivers TMD to maintain Voyagers rather than an urban site.

Moreover, as many trains are lengthened to address rising demand, or new fleets introduced, the current facilities are often inadequate and would require significant investment to allow a whole train to be lifted, for example. It might therefore be

better to plan a bespoke depot on cheaper land and realise the value of the urban site.

East Japan Railway has also adopted this approach of relocating lower-value activities. For instance, a shopping centre was built at Hiratsuka station on land previously occupied by a warehouse, while the mall at Kawagoe was built on land freed up by building an elevated station. At Shinagawa a train depot was moved further out of the city and running lines realigned to release land for development.²

The benefits of developing brownfield sites rather than consuming more countryside has been emphasised by Swiss studies. As Jacques Herzog of Swiss architects Herzog and de Meuron said: 'in our urban planning research for Switzerland, which we conduct at the Federal Institute of Technology in Basel, we put a strong focus on already developed but now neglected sites: abandoned rail yards...rail and tram depots and the like. On these sites we can condense the construction to create new urban places and provide more residential and office space without consuming any more land.'

Meet housing goals

The urgent need for housing has led to an agreement between NR and the Homes and Communities Agency (HCA) to find potential sites, reflecting the government's wish 'to ensure further opportunities are grasped to put stations at the heart of wider community regeneration', as former Secretary of State for Transport Patrick McLoughlin expressed it. The National Planning Policy Framework³ looks to reduce the need for travel and to develop land around transport hubs, so housing around stations meets such policy criteria as using brownfield land and sustainable development.

The first fruits of the NR/HCA collaborations were announced in April, for three sites: 2,500 homes and 100,000m² of office space are earmarked for a 'sustainable new community' at York; a mix of offices, shops, restaurants, cinema, hotel and 49 homes at Taunton; and land around Swindon station has been identified for housing and commercial development.⁴

The recent £44 million modernisation of Manchester Victoria station, voted in 2009 'the worst station in the country', is the catalyst for a £185 million mixed-use development proposal by NR and Muse Developments for an adjacent 2.5 acre site on railway land currently used as a car-park. The development will include 150,000 square feet of floor space in an eight-storey office block and 520 new apartments in two buildings of 20 and 25 storeys.⁵

TfL owns 5,700 acres of land, owns or manages 400 stations, 61

car-parks and many other surplus or underused sites. Rather than selling land, TfL has chosen 13 partners, including house builders Barratt, Berkeley, Taylor Wimpey and Redrow, with which to develop sites in joint ventures. Initially 75 sites covering 300 acres are being worked on, of which two-thirds are in Zones 1 and 2. TfL's wider plan is to generate £3.4 billion in non-fare revenue by 2023 to reinvest in the transport network through its property development framework.

The first sites include a long-derelict depot site at Parsons Green, plans for 20 town houses on a strip of land close to fashionable Thurloe Square in South Kensington, land around Southwark and Bermondsey stations is earmarked for about 300 homes apiece and other locations under consideration are Harrow-on-the-Hill, Northwood and Kidbrooke. At Bond Street flats are being built above the new Crossrail station. Even TfL's Grade I listed headquarters building at St James's Park, designed by Charles Holden, is being converted into 89 apartments. But by far the largest current development is Earl's Court where TfL owns the land around the exhibition centre. A partnership with Capco will see 7,500 homes built on 77 acres.

The partnership approach has been welcomed by others. Peter Murray, chairman of New London Architecture, believes that 'if TfL adopts a long-term view and does not sell off the family silver, it could be a boon for the whole of London, not just for transport.'

New sites are also being developed. In May TfL was given planning permission for a new development

above and around Nine Elms station on the Northern line extension. The development will see the delivery of 332 new homes, 84 of them affordable. It will also provide 5,332m² of new office space, 902m² of retail and leisure space as well as a new public square, pedestrian and cycle connections, cycle parking and disabled car-parking spaces. The development will improve local facilities and provide new revenue for TfL to reinvest.

TfL is fortunate to still have sites on this scale to redevelop, but the ability to take a longer-term view is thanks to freehold ownership. No train operating company (TOC) has that benefit, and the principal attempt to overcome that handicap in Abellio's Greater Anglia franchise has not been replicated in more recent franchises (it did form part of the West Coast franchise until that collapsed following Virgin's successful challenge). Taking over in February 2012, Abellio Greater Anglia has stations on a 99-year full repairing and insuring lease (FRI), designed to facilitate longer-term and larger investments which would be passed on to successive operators at the termination of the franchise period.⁶

This laudable idea is still handicapped by unresolved issues over the degree of control and rights retained by NR and by the mechanism to assess the residual value of investments made. The latter is naturally complicated by the number of stakeholders likely to make a financial contribution to a station development. In theory, NR's interest is supposed to be passive, limited to ensuring a safe interface with railway operations. Greater

Case study: Switzerland and Geneva

control over stations is one of the main drivers behind regional calls for devolved powers.

Proposals for housing or commercial developments at stations should chime with the Development Plans of towns and cities if they are in accord with the National Planning Policy Framework prescription for densification around transit-oriented developments. In some cases, opening a new access point to a large station, or using a reconstruction as an opportunity to improve pedestrian links, as at Aberdeen (see Case study), can transform the prospects of a whole urban area. The new pedestrian southern entrance to Leeds station, opened in January 2016, was built to serve new office and hotel developments around Bridgewater Place. The strikingly designed entrance to the £20 million scheme is attractively sited overlooking a canal and is expected to relieve pedestrian congestion at the main entrance by giving an alternative access point to 20 per cent of station users.⁷

SBB Real Estate is one of Switzerland's foremost property companies with 864 employees looking after 3,500 buildings and 3,800 railway sites across the country. Part of its role is sustainable development of sites around its stations to generate income for reinvestment. It is currently working on about 100 sites, of which by far the largest in scale is the reconfiguring of the railway network in Geneva by a new link between SBB and SNCF lines.

Designed to cope with a huge increase in cross-border commuting, this project known as CEVA (Cornavin-Eaux-Vives-Annemasse)⁸ will link the main Cornavin SBB station with the former French terminus of Eaux-Vives and Annemasse. Much of the 16km line will be in cut-and-cover tunnel and five new stations will be built between Cornavin and Annemasse, creating new hubs with great development potential. Already the site around Lancy-Pont-Rouge station is ranked as one of the Geneva region's biggest real estate projects. The heart of this project focuses both on housing and five buildings for different activities. The 120,000m² will include office space, as well as complementary activities such as restaurants, cafés, small businesses, leisure activities, public facilities and a hotel complex. The adjoining public areas are reserved for pedestrian and bicycle traffic.

Located along the hillside of Lancy, a housing area will gradually complete the commercial development with the construction of 600 new homes, which will be completed gradually according to

the progress of CEVA and be a mix of social housing, council flats and condominiums.

Scheduled to open in 2018, the CEVA rail link is expected to carry over 240,000 passengers a day living or working within 500 metres of a station. The project is expected to stimulate the redevelopment of some living areas by providing them with new dynamism as well as housing and commercial development projects around the other station hubs.

The huge scale of work in Geneva illustrates the potential value of developments that can be unlocked by such an infrastructure improvement. There is hardly a city or large town in Britain without a closed or underused line that could be a candidate for revival for heavy rail or tram/trains, with new stations as hubs. The kind of cross-city services made possible by CEVA relieves pressure on main stations because it reduces the number of terminating trains and reduces dwell time.

RECOMMENDATION: Local, regional and national Government bodies should identify sites for housing along existing lines, and along closed lines capable of reopening.

New and reopened stations and lines as catalysts for growth

Though most of the focus has been on the regeneration of existing communities by enhanced gateways, it is equally important that no new communities are created without a station and a good train service. To build housing developments that rely on road links negates any rational transport policy.

Railway reopenings are often predicated on housing developments. The business case for rebuilding the East West Rail between Oxford and Cambridge is being calculated around the scope for housing developments adjacent to the railway. Because the trackbed has been built on at the eastern end of the Oxford-Cambridge line, the optimum route east of Milton Keynes is being identified by assessing the availability of land for housing.

Another possible reopening, as a result of developer contributions, is the Stratford-upon-Avon-Honeybourne line: one of the developers behind the planned construction of 5,900 new homes on two ex-military brownfield sites near Long Marston has offered £17 million towards the railway's reopening. As a rule of thumb, 3-4,000 houses are required to justify a new station without revenue subsidy.

New stations on existing lines can be used as catalysts for housing and commercial developments. Partners behind the new station opened at Kirkstall Forge in June were Leeds

City Council, Northern, NR and developer CEG which is building 1,000 new homes, 300,000 square feet of new offices and 100,000 square feet of retail, leisure and community space.

Cambridge's meteoric growth has engendered a new station at Cambridge North which is expected to attract new businesses to locate to the Science Park and St John's Innovation Centre.

Regenerate communities through improving gateways

The vital importance of stations as welcoming gateways to a place is now well recognised - compare the impression gained by arriving at King's Cross in 1980 and 2016. Consequently more attention is being paid to the experience of those arriving by train. What is their first impression as they leave the station? Are they confronted by an obstacle course of car-parking, busy roads and uninviting, even intimidating, subways? There are many ways to address such shortcomings (see Case study), though the most thorough ones can seldom be quick wins.

To address these issues, the Station Travel Plan concept was developed by ATOC, Campaign for Better Transport and Abellio and now forms part of British rail franchise commitments. Train operating companies are aware of the importance of promoting and easing door-to-door journeys to encourage greater use of their services. These Plans have focused mainly on cycle and bus access, but walking

routes are also being recognised for their contribution and targeted for improvements.⁹

An ancillary benefit of densification of residential accommodation and commercial activity around stations is the greater demand for bus and tram routes and better bike paths to serve them. Higher footfall around stations and along pedestrian routes enhances the sense of safety, encouraging the use of train travel in off-peak hours - it is all too common to hear women say they are reluctant to use public transport after a certain time.

An advantage of both bike and pedestrian access is flexibility. This is reflected in the fact that about 50 per cent of Dutch rail passengers do not travel via their nearest station. What influences that choice? It may be that they chose the shortest route to the nearest station when the weather was poor, but preferred a longer route through a more pleasant environment on clement days. Or they may choose a different route to shop or access another service. Dutch research has shown that distance and destination accessibility are the dominant influences on the choice of station, followed by bike-/pedestrian-friendly design, bike shelters and public transport connectivity.

As land values and passenger numbers rise, the physical and economic case for station car-parking diminishes. The space under the new monumental staircase and escalators at Holland's busiest station, Utrecht Central, has been used for a three-level bike park holding 4,200 bicycles. Using city-centre land for 4,200 cars is simply

Case study: Fixing the Link

unthinkable. Even this bike park will be overtaken in 2016 by the world's largest bike facility, on the east side of Utrecht station, for 12,500 bikes.

That rise in land values has also encouraged satellite developments which help to reduce the numbers using main stations. The largest urban regeneration project, at Salford Quays on the site of the docks, relies heavily on Manchester Metrolink and the bus link with Salford Crescent station. Cross-city services, most notably those through Birmingham, provide an opportunity for a proportion of passengers to reach out-of-centre work-places without the need to change. When many central stations are at or near capacity, developments around outer stations that help to spread the traffic are especially valuable.

Research by Abellio in the Netherlands showed that people arriving in a shopping area stayed longer and spent more if they had had a pleasant experience getting there. By the same token, almost every pedestrianisation scheme on shopping streets in Britain has increased retail turnover; conversely surveys of Leicester in the early 1990s found that there was a statistically significant correlation between streets with high motorised traffic and high numbers of vacant shops. The Dutch evidence encouraged Nederlandse Spoorwegen (Dutch Railways) and local authorities to work together to improve walking routes between stations and local high streets, using a methodology to measure and assess their quality.

In 'Fixing the Link',¹⁰ Abellio and Campaign for Better Transport have examined ways to apply this in a UK context with case studies in Ipswich, Colchester and Ely. The four criteria evaluated using the Abellio methodology are liveliness, human scale, legibility and safety and comfort, within which 12 characteristics are assessed. Some improvements are simple and inexpensive such as signage, benches and planters; others require a longer-term strategy - moving station car-parks, improving crossings of busy roads, encouraging more economic activity along the route, and reversing the planning priority given to cars.

Funding for these improvements has come from local authorities and Local Enterprise Partnerships, business rates, developer contributions such as Section 106, central government City Deals, the National Stations

Improvement Programme, cycle link funding and the Local Sustainable Transport Fund.

Since publication of 'Fixing the Link' in 2013, many of the report's criticisms in Colchester have been addressed. Colchester Borough Council responded to the challenge and worked in partnership with Abellio, Essex County Council and Colchester in Bloom to develop a wayfinding scheme. Silhouettes of an elephant, echoing the town's Roman past, have been used in conjunction with bright yellow signs to waymark the route into the centre. Attractive planting softens the setting beside the ring road, and the elephant reappears at various points on the pavement, sometimes highlighting local history.

The report has also been a catalyst for improvements elsewhere. At Bletchley, the growing prospect of East West Rail has focused attention on the station's poor links with the town centre. Plans to improve them and the bus/rail interchange were costed at £3.5 million and were implemented in the first half of 2016.

RECOMMENDATION: Encourage the roll-out of Station Travel Plans as part of a strategy to provide traffic-free or quiet routes between all schools, hospitals, civic buildings and major employers, as well as leisure routes into surrounding country, and promote 'fixing the link' projects at stations that act as gateways to the communities they serve

Case study: cycling to stations in the Netherlands

The country is famous for having the world's highest modal share for cycling, at 27 per cent of all trips, and 31.2 per cent of people seeing the bike as their main mode of transport for daily activities. In cities, it is even higher: 38 per cent of trips in Amsterdam, 46 per cent in Zwolle. Bike facilities are impressive: 35,000km of bike paths and some of the world's largest bike parks.

But there are some surprises about this success. First it has been demand- rather than supply-driven. The explosion of cycling over recent decades has created the high-class problem of how best to provide parking for thousands of bikes. Bikes deliver about half of rail passengers to the station of origin and 12 per cent of them have bikes at their destination station. These volumes stretch the capacity of facilities and the costs of addressing them have become something of a hot potato.

Transport analysts point to the growth projections for the next few decades and argue that cycling is the only transport mode capable of rapid scaling up at reasonable cost compared with the alternatives of metro, light rail and bus. Moreover a recognised benefit of bike access is its superior flexibility over car or public transport: it offers control over the choice of station and routes when wanting to combine a journey between station and home with errands, as compared with fixed public transport routes. Bike journeys are usually door-to-door (rather than car-park which may be some way from a destination) and allow easy diversions or overtaking when traffic is held up.

Cycling is also ideal for planning mobility over a mesh size of 3-5 square kilometres; only in cities with the density of London can one work to a mesh as small as 1km². The average journey distance by bike in the Netherlands is 3km, and reflects the distance between urban stations.

Though folding bikes have only 1 per cent of the market and are rarely seen on trains, it is a different story with bike hire for regular users. The OV-bicycle scheme was taken over by NS seven years ago and has 10,000 bikes for rent. Most railway stations offer a hire facility, those at smaller train stations have a self-service system, whereby you use a special pass to take the OV-bicycle out of a storage place or locker. There is a €10 annual subscription and the daily hire fee is €3. A major factor in the scheme's success – it is growing at 15 per cent per month and doubling every year – is that it takes ten seconds to get or return a bike by scanning a pass, and users receive an account every month.

This synergy between bike and train in the Netherlands is so strong, partly due to being consumer-driven, that it has been argued that the country wouldn't have the transit system it has without a bike culture and conversely it wouldn't have a cycling culture without the transit system. Nor would the country have an increasingly urban culture either. With the certainty that the 21st century will be characterised by the continued growth of cities and greater densification, the lessons of the Netherlands can be seen as especially prescient.

RECOMMENDATION: Increase awareness and visibility of Bike & Go, nextbike and other schemes, through National Rail and other websites. Fund a national app for bike hire. Use franchise Invitations to Tender to increase resources and incentives for self-service bike hire schemes.

Improve liveability

Cities the world over are competing for investment and high scores in the attributes that inform the annual Mercer Quality of Living rankings,¹¹ and similar guides to liveability. There is no doubt that time will have to be called on the place of the motor car in cities and many towns. Population pressure and soaring land values are likely to combine to make the use of urban space for the parking of cars, as well as multi-lane roads, look untenable. London's population is expected to reach 10 million before 2030, and if only 1 in 5 people owned a car, it would require an area ten times the size of the City of London just to park them. The futility of attempts at car-based mobility in megacities is writ large in the smog over Beijing, unfinished flyovers in Los Angeles and traffic speeds slower than a dawdling bicycle in almost every city.

This almost inevitable conclusion comes from analysing possible solutions to the combination of problems and opportunities facing cities throughout the world: funding pressures, rapidly increasing urban populations and housing shortages, rising awareness of the costs and consequences of traffic pollution, the time bomb of obesity, and demands for a more pleasant environment. In the UK, a 57 per cent growth in train passengers in ten years and a declining interest in car ownership among the young can be added to the opportunities.

The measures being taken in many cities to create inviting places puts stations centre stage. In Oslo there are plans to ban cars from the city centre by 2019, create more

bike lanes, subsidise the purchase of electric bikes and reduce automobile traffic by 20 per cent by 2019, 30 per cent by 2030. A core part of the strategy is 'concentrated development of businesses, dwellings and public services at the junctions of the public transport network'.

It is the ability of transport hubs to address a range of problems that has encouraged many city administrations to embrace their potential. Businesses are recognising that traffic and pollution damage their bottom line: retailers in London's West End have demanded that traffic be halved by 2020, though the fact that pedestrianisation almost invariably increases retail turnover has still to be absorbed by some retailers and authorities. The indirect costs of traffic pollution are now well understood. A February 2016 Royal College of Physicians report calculated that the cost of polluted air on the NHS, business and other costs in the UK came to more than £20 billion a year.¹²


The Foresight 'Future of Cities' report by the UK Government's Office for Science stressed that 'the quality of the physical environment plays an important role in mental well-being; among the significant factors are noise and light levels, building layouts and way finding, and access to nature. The design of everyday products, buildings, transport systems and information communications devices, all contribute to levels of stress or contentedness.'¹³

Imaginative ways of making stations an aesthetic as well as practical

pleasure to use date almost from the beginning of railways, but a nadir was reached in the 1960s and '70s when there was an incomprehensible disregard for the heritage value of the railways' inheritance. Consequently many good buildings were destroyed that could, with imagination and vision, have been adapted to modern needs. The legacy of that dismal period is still visible at many stations and a major reason why many regions want to gain control over station development.

Recognition of the importance of good design has been encouraged by passengers' response when they encounter it and rewarded by such schemes as the Brunel Awards, the triennial competition for international railway architecture and design. As the foreword to the last competition said: 'a sense of quality is shared more and more throughout the world by all those involved in infrastructure design. The basic needs of individuals regarding their travel experience don't differ so much worldwide. Everybody wants to feel safe and comfortable during their journey. It has been proven and widely accepted that an environment of good spatial quality shortens and improves the perception of waiting times; that a clear station layout guides the traveller to his destination naturally; and that the station area's ambiance adds to the city's quality as well as to the station's urban quality and activity.'¹⁴

The pleasure of joining or leaving Eurostar under the magnificently restored pale blue ironwork of Barlow's roof at St Pancras, or the dramatic roofs created by Santiago Calatrava at Liège-Guillemins or



Oriente station in Lisbon, gives train travel an uplifting quality.

The quality of stations on the eastern extension of the Jubilee line, with their cavernous, future-proof proportions and striking designs, was instrumental in making acceptable the idea of a business rate supplement to pay for public infrastructure, and specifically Crossrail. Quality design helps to increase the size of a windfall in property values around node points.

The ambience of a station can be given a different dimension with the inclusion of art. SNCF's Gares & Connexions Culture Programme introduced 60 contemporary artworks at 40 stations. The Stockholm metro system has been called the world's longest art exhibit because 90 of its 100 stations are decorated with sculptures, mosaics, paintings and reliefs by over 150 artists. Kungsträdgården station looks like an archaeological excavation, incorporating the remains of the city's old Makalös Palace. At Östermalmstorg the artist Siri Derkert highlights women's rights and peace and environmental issues.

In Hong Kong 'art in mtr' has brought artworks and performances into MTR stations since 1998, and the 'art in station architecture' programme continues to enrich the MTR network.

RECOMMENDATION: The Rail Delivery Group and Network Rail should promote and bring together examples of high-quality design at railway stations and of use of artworks in and around them.

Improving and investing in stations

Placing railway stations at the heart of the planning process is fundamental to realising the many benefits of sustainable transport. It not only creates demand for train services and feeder public transport to stations, but provides both the revenue and business case for improvements to passenger and ancillary facilities, often creating a local destination in its own right. Besides attracting more passengers, better stations generate more non-transport revenue, creating a virtuous circle.

As the President of the UIC, Jean-Pierre Loubinoux, put it, '[A] great challenge for the railways is to optimise the role of stations as places of convergence for passengers, places of activity where city dwellers spend time, and increasingly as their cities' economic and cultural centre. Stations, built and renovated in the context of increasingly well thought-out partnerships between railway operators, city or regional authorities, investors and all the economic stakeholders, have become much more than a transport hub. They have become a vital feature of urban planning which, while continuing to meet their basic requirement of supplying interfaces between modes of transport, also form part of the city's historical, cultural and economic heritage.'

In common with other aspects of the public realm, higher standards are demanded of the railway station. In the UK, one has only to remember the basic bus shelters

that replaced many a solid Victorian station building in the 1960s and '70s to realise how expectations have changed. As has the response, exemplified in the outstanding improvements at St Pancras and King's Cross at one end of the scale and Burnley Manchester Road or the eco-station at Accrington at the other. As NR observes 'successful stations add to the passenger experience and support the economic, social and environmental benefits of rail.'

Between the two is Wakefield Kirkgate, once dubbed by Lord Adonis as 'the worst medium-large station in Britain', which has been transformed by a £4 million scheme. Besides transforming the station's near-derelict appearance, it created revenue streams by incorporating units for new businesses, a café, a retail outlet that doubles as a ticket office, meeting rooms for community and local business use, and accommodation for Groundwork Wakefield which led the project with ten other partners and funding sources. More bus routes now serve the landscaped forecourt.

Improvements have been carried out at many stations under the National Stations Improvement Programme with supplementary funding from stakeholders. Though welcome, these have often done little more than improve waiting areas, lighting, information systems and signage. Rather more is required to make a significant impact.

The principal deterrent to doing more is the lack of the 'flexible and long-term stewardship' identified by RDG as a prerequisite for progress. The disincentive that

short franchises imposes is the reason why combined authorities are so keen to take over devolved responsibility for stations and create a structure for long-term stewardship. Part of city devolution settlements has been provision for the new combined authorities to take over responsibility for their railway stations in their areas – Transport for Greater Manchester (TfGM) and West Midlands Rail are keen to develop individual plans for their 97 and 110 stations (respectively).

By acting as the co-ordinator, regional and city authorities could make the prospect of multi-stakeholder station developments much less daunting for participants unfamiliar with the regulatory and railway environment. Ideas for underused station buildings include social enterprise café, skills centre, art gallery, start-up units and community centres. The potential for out-of-centre urban and suburban stations has yet to be examined in detail, but a comment by the former city planner of Vancouver, Brent Toderian, suggests that this will be a litmus test of future success: increasing densities in city centres is relatively easy; the real challenge is how well we do the suburbs.¹⁵ Creating well-designed satellite hubs with lower commercial and residential rents is an opportunity still to be explored, but as property values and population pressures increase, over station developments may become feasible.

Gares&Connexions is SNCF's arm's length business unit for stations and has carried out research into the design of a number of detailed station features (e.g. ticketing, waiting areas, children's play areas,

and the urban realm around stations – trees, shade, sitting, public transport integration, information provision). To create the bustling centres of urban life which it wants stations to be, it is focusing on: designing stations to provide better connections with other modes of transport; addressing the needs of local communities; making stations efficient and welcoming by keeping passengers comfortable, ensuring access for all, and providing multimodal information in real time; and administering stations and enhancing their value through a combination of shops, public services, programmes and events.¹⁶

The Rail Delivery Group (RDG) has set out nine principles in its 'Vision for Stations' document¹⁷:

- 1 Customer-focused
- 2 Intelligent use of technology
- 3 Seamless journey experience
- 4 Reflect local needs and opportunities
- 5 Safe and secure environment
- 6 Entrepreneurial spirit
- 7 Flexible and long-term stewardship
- 8 Shared industry know-how
- 9 Optimised network

As station hubs are increasingly regarded as the most important element in the efficient functioning of urban areas, it should become progressively easier to scale up developer contributions and finally achieve a more balanced relationship between public investment and commercial benefits.

Alternatively, business rates, a community infrastructure levy, a workplace parking levy (as in

Nottingham) and/or car-parking charges can provide financial support to create sustainable links such as light rail or tram/train developments, as pioneered by Karlsruhe. New stations can become new hubs for housing and other development. A similar idea is being developed as Swift Rail by Reg Harman and Nicholas Falk of Urbed, which won the 2014 Wolfson Economics Prize for its vision of a new generation of garden cities.¹⁸

At smaller stations the work of Community Rail Partnerships is well recognised for both improving the appearance of stations and injecting new life into underused buildings, with local cafés, community rooms, restaurants and bike hire. Such services help to tie the station into local communities, especially where local facilities are sparse or where, as at Gobowen, the station café has an arrangement with a local training centre to provide a skill to young people with learning difficulties.

Provision of a facility such as bike hire at Barnstaple station for the nearby Tarka Trail or Hassop for the Monsal Trail can make the difference to modal choice in getting there, especially when jointly promoted. As can provision of somewhere to work while waiting for a train; the Brunel Award-winning station at Nakamura in Japan used local cypress wood to create such a pleasing waiting area that it is used by many more students happy to work at its stylish wood tables while they wait for a train.

Tourism can shape the way a station is used. Bentham in North Yorkshire, run by the Friends of Bentham Station, has a strong

community presence, acting as a tourist information centre, local bus and taxi office and an education centre for school visits. The station is branded as 'The Gateway to the Forest of Bowland'.

RECOMMENDATION: Station investment plans, jointly owned with local authorities and others, should become parts of franchises. The Greater Manchester and other devolution and city deals that transfer control of local rail stations to combined authorities and local transport authorities should be evaluated and, subject to success, should be rolled out in future such deals.

Case study: Inverness and Aberdeen¹⁹

Abellio's success in winning the ScotRail franchise from April 2016 was partly due to its plans for stations. With only two conurbations exceeding half a million people and a background of extensive land disposal, options for substantial developments at its 355 stations are understandably limited. Moreover it does not have the advantage of its Greater Anglia franchise 99-year FRI station leases (see page 6)

However, during the bid process Abellio had identified five stations which justified significant investment: Perth, Stirling, Motherwell, Inverness and Aberdeen. A blank canvas was adopted: what does this station and town need? The ideas met with Transport Scotland's (TS) approval and became part of the negotiations, producing a commit by Abellio to invest part of the £9 million earmarked for a station fund in the projects and to source funding from others. These included the Scottish Station Fund set up by TS and administered by NR, with £32 million in Control Period 5.

Detailed business cases looking at the economic benefits to the areas were developed in Year 1 for Aberdeen and Inverness, involving many other parties. The level of detail and impressive visuals encouraged other stakeholders to invest. Inverness has moved quickly, thanks to a growing awareness of the importance of urban hub stations as economic generators. These stakeholders had found the railway difficult to deal with, and welcomed the opportunity to form a partnership, with Abellio dealing with NR and the regulatory and planning processes.

At Inverness Abellio worked with the local authority, Highland Council and the Highlands and Islands Transport Partnership (HITRANS) to develop a scheme that embraced the area surrounding the station. The historic square in front of the station no longer forms an impressive or welcoming gateway to the city; the station frontage is an ugly 1966-8 façade and the forecourt is cluttered with traffic. The plan is to improve the three pedestrian access points to the station, from Eastgate shopping centre, the bus station and by largely pedestrianising the square fronting on to Academy Street.

A new glass frontage will provide access to new double-height retail units, and there is a scheme to realise a long-held ambition to extend the Royal Highland Hotel and move the taxi pick-up point. Abellio is funding 30 per cent of the cost, 25 per cent is coming from the Scottish Station Fund, some from retailers and the remainder from the Highland Council with a possible Railway Heritage Trust contribution to work on the square.

In Aberdeen the city council has big aspirations in its Master Plan, though there is still uncertainty about traffic plans. The railway station is adjacent to Union Square shopping centre, which was developed by Hammerson, partly on railway land, within the last ten years and an expansion is planned despite the downturn in oil. The station has good links to the shopping centre but is rather overpowered by it. One of the main objects of the plans for Aberdeen station is to improve the very poor pedestrian links to Union Street, the city's main street. It is currently an unpleasant and confusing experience with heavy traffic and

underpasses on different levels. The Master Plan wants to address this.

The station plans are in two phases. The first will improve the impressive listed concourse area with better retail facilities, moving the ticket office and first class lounge from their current tucked-away position and improve the frontage on to Union Square. A new and larger Bike & Go hub will be created and areas landscaped. Funding is coming from the Scottish Station Fund and the city council as well as Abellio.

Phase 2 is a much bigger opportunity and probably the largest potential railway land development in Scotland. The £80-90 million scheme would create a new station frontage on to Guild Street, so that it would no longer be the poor relation to the shopping centre. The space over part of the station and taxi rank would be developed to provide office accommodation and a hotel as well as more retail space. The station's listed architectural features would be incorporated to create perhaps a restaurant. This opportunity for something transformational is being handed over to NR with continued support from Abellio. NR is also involved in the idea of a raft development over the railway to provide better walking routes, student accommodation, a hotel and some office space but this scheme is still at an early stage.

Motherwell and Stirling are next on the list. Neither has the retail opportunities offered by Inverness. A main object is better links to the town centre at Stirling where pedestrians currently have to cross seven lanes of traffic. Motherwell station has been badly neglected, and City Deal funding is available here for improvements.



Case study: Dundee²⁰

Dundee waterfront is undergoing a remarkable £1 billion redevelopment with various flagship projects such as the £76 million V&A Museum of Design. Complementing this is a new £29 million station incorporating a 120-room hotel, a new bridge under the station and in front of the station, public realm around the station, offices, retail units, café and bike hire. Due for completion at the

end of 2017, the crescent-shaped building will become a gateway to the adjacent waterfront though it remains surrounded by busy arterial roads. The station is expected to have a staffed 'ambassador desk', which might have touch screen maps on the counter, and a point where rail users can seek information about Dundee, the station and other travel modes.

Case study: Dudley Port²¹

This station represents many of the shortcomings that West Midlands Rail wants to tackle across the region. On the line between Birmingham New Street and Wolverhampton, and a former interchange with the freight-only Stour Valley line for which there are reopening plans, the station is the epitome of an unwelcoming

environment despite having almost half million users a year. The mesh-cage waiting room wouldn't look out of place in a prison, tickets are sold from a portacabin and paint on the seats is flaking. To reach nearby bus stops, one has to cross a busy road. Yet in a box-ticking exercise listing facilities, it would score well.

Case study: Switzerland²²

SBB Real Estate develops the company's stations and adjoining sites to create attractive service centres - sustainable development that is seen as being of major importance to Switzerland's future. Stations are more than just the start and end points of a trip, especially at 59 of the country's larger stations, where there are varied and substantial shops and other services of value to

passengers, from birthday cards to haircuts and chemists, often open for longer than most of the country's shops. One of the largest current developments is beside Basel station where a futuristic building designed by Herzog & de Meuron named SüdPark D houses the Coop's largest supermarket in the canton, the Basler Kantonalbank service centre and the SüdPark retirement home.



Options for institutional structures

Those charged with raising the money to build public infrastructure have long looked at the way speculators have been the principal beneficiaries of the hike in property values that new railways or enhanced stations generate. This is not a new concept: it was called the 'unearned increment' by a pioneer of garden cities, Ebenezer Howard.

The London School of Economics found that central London office properties within half a mile of projected Crossrail stations rose by 15 per cent over and above the rising price trend between 2005 and 2013. In the five years up to 2013, 40 per cent of planning applications within a kilometre of the central London Crossrail stations cited the new line as a reason for the proposal. This century 90 per cent of all London office developments have been within 500 metres of a station.

New transport hubs drive growth. Even though Crossrail 2 is barely on the drawing board, priority zones for entire new neighbourhoods have been designated around new stations along the route. It is expected to trigger construction of 200,000 new homes and is seen as making a much more significant contribution to London's housing shortage than the benefits of Crossrail 1, which has been based primarily on providing faster links and much-needed capacity increases for the capital's business districts. In its potential to stimulate residential building on a substantial scale, Crossrail 2 is a throwback to the construction of the Metropolitan Railway and Metro-land.

The impact on the principal intersections will be dramatic:

providing an interchange with Crossrail 1, Tottenham Court Road will become an even more significant transport hub, as Farringdon has on Crossrail 1.

The question is, how best to exploit such opportunities?

In house/public sector

In an ideal world, the railway would undertake the development and reap the full rewards, but capital for non-railway developments in Britain has generally been at a premium, and railway estate departments are generally ill-equipped to undertake large-scale projects. The vast 1929 Chiltern Court development of apartments above Baker Street station in London was a rare exception. Even after the establishment of British Rail Property Board in 1970, it relied on partnerships with the private sector for major commercial developments, most notably Broadgate at Liverpool Street with Rosehaugh Stanhope Developments.

It is impossible to see this situation changing, which is regrettable when seen in the light of overseas examples where revenue streams from property are substantial. One successful option is to create a fully state-owned company like Jernhusen in Sweden (see Case study). The exceptional geographical necessity of integrating land-use planning and transport in the Netherlands has influenced state retention of powers (see Case study).

Case study: Sweden, Jernhusen AB

This public limited company was created in 2001 as part of the deregulation and liberalisation of the Swedish rail market. It has a single shareholder, the Swedish Ministry of Finance, and is therefore entirely independent of the national state-owned operator SJ. It is a property company and owns 38 of the larger stations, as well as maintenance depots and freight terminals in growth locations and important transport nodes. The company develops new and existing station areas, maintenance depots and freight terminals. It also develops and delivers services in connection with these properties.

Jernhusen bought the whole real estate portfolio at market value on creation of the company and has been managing and developing that portfolio on a commercial basis. Jernhusen raises money through bank loans or by issuing bonds on the financial markets. The Ministry of Finance expects a return on sound investments because part of the rail infrastructure is financed through commercial operations.

Besides operational railway premises, it manages land formerly linked to the railway. It is free to make its own decisions independent of government. The board of directors approves big investment decisions and it is funded by the income from commercial leases to retailers and companies that have premises in its real estate, and through station fees that train operating companies and bus operators pay for such shared services as waiting rooms and concourses. Fees are also received per passenger on a scale that distinguishes their useage (bus, long-distance rail, etc.).

Though financially independent, Jernhusen is expected by the Ministry of Finance to encourage more people travel by train, partly out of self-interest: more station users means more interest from retailers and therefore higher revenues. It achieves this by developing infrastructure that promotes multimodal travel, creating station areas where it is easy for trains, buses, bicycles and cars to meet. It provides stations that function well: attractive, safe, secure, clean, with additional services that make the choice of public transport easier, such as a variety of shops, including practical services such as shoe repair and chemists.

Public transport has a 26 per cent share of motorised trips, so 74 per cent are by private car, leaving a big market to capture. That objective prompts questions such as what is missing in this area? Do we need more people in the day or the evening? Have we got the mix of activity right? The recipe for success is seen as making sure that the three key elements are all pulling in the same direction: high-quality public transport; a station with the requisite facilities and standards; and a surrounding area that is inviting. Get one wrong and the scheme is impaired. Success depends on getting the right balance of activities to create a vibrant and welcoming place, which in turn determines the mix of the development.

This leads to decisions about how surrounding railway land is developed. If more people are needed during the day, Jernhusen would create office space for leasing; in the evening, more housing or a hotel. This may

entail going through the planning process and bringing in a company specialising in housing to develop it. Jernhusen has the freedom to buy land to create a better development site if its railway inheritance is inadequate for the scale of a planned development.

Planning decisions are taken at municipal and local level, so the authorities are likely to have some preference for a type of housing, social housing or a mix of housing and offices. Local authorities also part-fund station improvements and sometimes become the tenant of an office building at the station on a 25-year lease, for example.

Jernhusen owns and manages only 38 of the country's 200 stations because it is not seen as the best owner for the majority. A small station with low footfall has little potential commercially, so Jernhusen would not be able to invest or maintain it in the best way. Consequently most stations are owned by over 100 municipalities and real-estate companies as well as private individuals who have a bought charming station in woods and live there, perhaps providing bed and breakfast on the upper floor. Jernhusen is required to offer an agreed level of facilities for train passengers so it becomes the tenant and manager of the waiting room and other designated spaces. The public see no change.

Naturally Jernhusen has to provide rail facilities for passenger and freight train operators and is in constant dialogue with them to provide, for example, a cost-efficient maintenance depot for particular rolling stock. It cannot close strategic sites.²³



RECOMMENDATION Improve the quality of place-making at large schemes by holding competitions between developers, following consultation with residents.

Case study: the Netherlands

The Netherlands is a highly urbanised country and has a policy focused on strong cities using a holistic, cross-sectoral approach. Land is scarce, reflected in Multi-annual Programmes for Infrastructure, Spatial Development and Transport to co-ordinate and optimise land use and infrastructure. This scarcity forced the country into adopting integrated planning much earlier than most other European countries: urban development has been concentrated around new stations since the 1960s and '70s when it became apparent that increasing car use was incompatible with 'liveable' cities. Huge opposition to arterial roads being built into cities encouraged a policy of creating 'soft' green cores in towns and cities that are accessible only to cyclists and pedestrians.

This coincided with a revival of both cycling and public transport. Dutch Railways (NS) developed a strong sense of the need to examine and improve the journey to the station and to have a voice in the development of local and regional plans. NS had and still has a spatial planning department though it is now smaller because the railway infrastructure has been managed since 2003 by ProRail, a government organisation comparable with NR. NS is involved with national five-year spatial plans and still provides advice to ProRail, representing the TOC point of view.

This includes the development of new cities planned around infrastructure such as Almere, now the seventh largest city in the country with almost 200,000 inhabitants. The city is on a

railway built in the 1980s between Weesp and Lelystad, and there are six stations within Almere. The population is expected to reach 350,000 by 2030.

Success in concentrating employment and housing around station hubs is reflected in a comparison between the number of stations on the similar lengths of the Dutch and Belgium networks: 381 on the 3,223km network in the Netherlands; 550 on 3,592km in Belgium.

Though all shares in NS are owned by the Ministry of Finance, the board of directors is independent and has tried to become even more involved in planning to take advantage of railway-owned lands around stations such as goods and marshalling yards. NS Stations business unit retained freehold ownership until 2012/13 when pressure from national government led to a focus on the core business of running trains and the sale of properties and land to raise money for investment in the railway. All main stations were rebuilt or refurbished, such as Utrecht and Rotterdam where the dramatic station won a Brunel Award in 2014 for acting as 'a catalyst for new urban developments'. It was also part of a policy of giving local councils more say in local developments, but in return NS joined project teams to develop railway land sites in partnership with property development companies.

Commercial activity at stations was retained, though that is now changing. NS used to run all retail station units in co-operation with

major retailers such as the AH To Go concept of convenience stores with ready-to-eat products or using its own brands. Since the beginning of 2016 the policy has been for NS to stay in charge of commercial outlets but only to operate small kiosks. However, NS will retain a say in the quality and quantity of units and both specify the mix and encourage local retailers rather than chains to add distinctiveness to stations. NS wants local communities to feel a sense of identity with the station as a consequence, something that has been picked up from NS's relationship and exchanges with East Japan Railway and which Abellio is looking to develop in Scotland.

In the Netherlands it is done by NS offering the basic operational features for local independent businesses (they call them 'local heroes') and it is up to the tenants/concessionaires to make the most of the station as they see fit. Tenants may also have some operational responsibilities, such as looking after the toilets. Part of a station might be used as a showroom by a furniture designer, and sometimes a regional dialect is used to give standard national signage a local flavour.²⁴

RECOMMENDATION Increase regional input into station retailing.



Private sector

This option requires either the freehold disposal of railway land or the complete privatisation of the railway network. The former is a one-off, short-term gain of the kind which appears to be proposed by Network Rail. The latter can only happen where urban densities and population are so high that train services run at a profit (ignoring freight-based exceptions such as the US).

Examples of profitable, private railways are found most commonly in South East Asia, and they have taken the synergy between railway and property development to a new level. An exemplar is MTR Corporation in Hong Kong where the potential for 'value capture' around stations is exceptionally high and there has been a long-term practice of doing this.

Case study: East Japan Railway

East Japan Railway (JRE) operates 7,457km of railway in the eastern part of Honshu and is used by 6.218 billion passengers a year. This private railway company has taken property development far beyond any equivalent in Europe, behaving more like a pre-nationalisation British railway company when they owned hotels, restaurants, housing, shops and warehouses.

JRE has adopted a policy of commercial development that would generate both revenue and passengers by providing a wide range of retail, residential, health, lifestyle and cultural amenities around a transport hub. It regards its stations as the group's biggest business resource, with the goal of maximising the synergies between railway operations and non-transport businesses.

Levels of investment are determined by passenger numbers. Stations between 30,000-200,000 people a day have had their operational requirements partially reviewed to see if space could be released for commercial activities requiring minimal investment and short construction schedules. Stations with over 200,000 passengers have had a full-scale review of the layout and existing facilities in order to create better or additional space, including construction of artificial ground for air-space development. For example, at Shinjyuku station, a commercial building and bus terminal were built on artificial ground above the railway station, providing government-encouraged improvements in connectivity.

Residential developments are a mix of site sales and the development

and lease or sale of houses and condominiums, primarily in the Tokyo metropolitan area. These developments meet three objectives: linking developments with railway operations; supplying high-quality housing by co-operating with the development plans of local government and others; and creating communities that are pleasant places to live and kind to the environment.

There is a wide variety of ownership arrangements, from 100 per cent to shared ownership, including a percentage of a building or even by floors, as is the case at JR Tokyu Meguro Building. Some of its own residential developments are on a huge scale. A condominium tower beside Saitama-Shintoshin station, 29km from Tokyo, has 31 storeys and 260 units with offices and restaurants in the lower storeys. Office buildings provide a steady, long-term income and JRE currently operates 280,000 square metres of leasable office space.

In the early 2000s it developed two brands of hotel: full-service Metropolitan Hotels, of which the flagship is the 815-room example in Tokyo; and Hotel Mets, which are smaller-scale urban hotels to the same standard but with fewer facilities. A third brand was added in 2004 with Hotel Dream Gate Maihama, offering 80 rooms aimed at families and tourist groups. Its construction underneath an elevated railway line was made possible by new construction techniques which not only overcame the obvious drawbacks of noise and vibration but incorporated a seismic isolation system.

By 2010 two new brands had been created: Familio, themed around sports and outside activities; and Folkloro which seeks to emulate a French-style auberge, using produce from an adjacent vegetable garden. JRE currently has 45 hotels with 6,690 rooms.

JRE has developed Dila, atré, ecute, S-PAL and LUMINE as brands for its shopping centres, each matched to the characteristics of their location. In 2002 JRE was operating 110 shopping centres where tenants are carefully chosen to provide a broad mix and reflect local demographics and needs. For example, child-care facilities at stations enhance the convenience of commuting by train. Today it operates 154 shopping centres with over 2 million square metres of floor space.

Besides operating its own convenience stores, JRE also forms alliances with other companies where tie-ups will accelerate development and address customer needs outside JRE's competence. JRE also operates sophisticated vending machines at its stations, stocked with top-selling lines from a variety of makers. By means of a 47-inch touch screen, it can determine the gender, age and other characteristics of the customer; these, as well as the time of day and the temperature, prompt the machine to switch menu displays.

It is worth noting that though Japan may lack large numbers of the kind of flagship historic stations valued by passengers in Britain for their character, such as St Pancras, King's Cross and Newcastle, JRE adopts a sensitive approach where a historic structure survives. The Marunouchi

(western) side of Tokyo station was completed in 1914 and was returned to its original state during a five-year renovation finished in 2012. The second to fourth floors of this Important Cultural Property of Japan have been turned into a 150-bedroom, European-styled hotel, and the open square in front of it has been landscaped.

RECOMMENDATION Examine the needs of station users in choosing tenants for retail and amenity outlets.

This is the most common approach and the one most likely to suit the majority of national railway structures. No two models are likely to be the same, since they will reflect the needs and circumstances of the country, the attitude of government towards public-/private-sector co-operation, and the commercial potential.

In Sweden, an unusual arrangement has seen MTR take over operation of Stockholm's Metro and suburban networks in separate deals, but the record of MTR in property development in Hong Kong was a factor in its success, as well as its ability to run trains efficiently (see Case study).



Case study: Stockholm

A central objective in handing over operation of the whole of the Swedish capital's metro and commuter rail networks to a private-sector operator was co-responsibility for property development and building in, around and above stations. The city's choice of MTR reflects the Hong Kong-based company's expertise in property development; profits from property outstrip those from fares even though its rapid transit farebox recovery ratio is a high 186 per cent. Developments at 39 of MTR's HK stations have created over 100,000 housing units and over 2 million m² of commercial space.

MTR is looking to apply its experience to the commercial and residential potential of existing stations and the creation of new communities on extensions to Stockholm's two networks. MTR has a concession to run the Metro until 2023, and successfully bid for the contract to run suburban rail

services until 2026. The chairman of the Stockholm transport authority, Kristoffer Tamsons, describes the object: 'Our model is to let in new ideas and new eyes. You need to lose some control to gain innovation.' MTR has even acquired 100 per cent ownership of the rolling-stock maintenance facilities on Stockholm's Metro.

Approval for the first project of homes, shops and cafés at an undeveloped station, with construction group Skanska as partner, is expected to form a conceptual approach that is being adapted for Sweden. By developing shared income streams from property, the need for government transport subsidies will be reduced.

Perhaps the approach being adopted in Wales, where bidders for the new franchise are teaming up with contractors to carry out infrastructure work, could be extended to property developments at stations.



How to judge success

Among the ways to assess the success of the initiatives described in this report are:

- 1 The increase in population density around a station hub.
- 2 The number of housing units built.
- 3 Modal share of journeys.
- 4 The increase in rental values around the development.
- 5 Air quality measurements.
- 6 Footfall through station retail areas.
- 7 Demand for station bike parking/bike hire.
- 8 Trees planted/landscaped areas.
- 9 Public art.
- 10 Crime statistics.

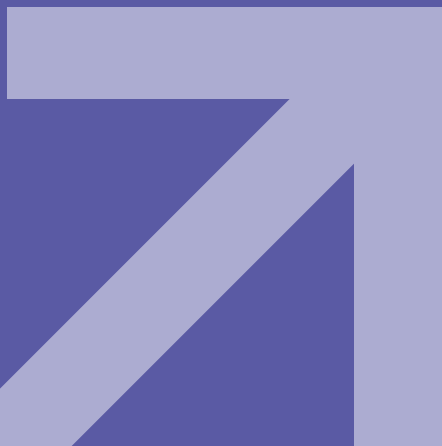


Policy recommendations

Throughout the world, city planners and transport professionals broadly agree the direction of travel because urban areas share the same problems of pollution, congestion, noise, rising population, poor design, declining resilience in the face of climate change. Many urban spaces are far from uplifting places.

Problems create opportunities, and the need for more housing and funding for rail and related sustainable transport improvements is an example. Development around stations tackles a number of problems simultaneously and establishes or reinforces good practice in an area. This requires:

- 1 Choice of model suited to the circumstances and objectives.
- 2 Involvement of local authorities and other stakeholders.
- 3 Consultation with local amenity groups and residents.
- 4 Incentives for all parties to deliver a high-quality development.
- 5 Clear planning and transport frameworks.
- 6 Incorporation and restoration of valued historic structures where feasible.
- 7 A balanced approach to place-making in the proportion of space devoted to different activities.
- 8 An agreed percentage of the budget to be devoted to landscaping/public art.





The specific recommendations in this report are summarised below:

- a Local, regional and national Government bodies should identify sites for housing along existing lines, and along closed lines capable of reopening.
- b Encourage the roll-out of Station Travel Plans as part of a strategy to provide traffic-free or quiet routes between all schools, hospitals, civic buildings and major employers, as well as leisure routes into surrounding country, and promote 'fixing the link' projects at stations that act as gateways to the communities they serve
- c Increase awareness and visibility of Bike & Go, nextbike and other schemes, through National Rail and other websites. Fund a national app for bike hire. Use franchise Invitations to Tender to increase resources and incentives for self-service bike hire schemes.
- d The Rail Delivery Group and Network Rail should promote and bring together examples of high-quality design at railway stations and of use of artworks in and around them.
- e Station investment plans, jointly owned with local authorities and others, should become parts of franchises. The Greater Manchester and other devolution and city deals that transfer control of local rail stations to combined authorities and local transport authorities should be evaluated and, subject to success, should be rolled out in future such deals.
- f Improve the quality of place-making at large schemes by holding competitions between developers, following consultation with residents.
- g Increase regional input into station retailing.
- h Examine the needs of station users in choosing tenants for retail and amenity outlets.

References

- 1 Funding and Financing Public Transport Infrastructure, Steer Davies Gleave and Campaign for Better Transport, April 2016, www.cbttthoughtleadership.org.uk/SDGFundingAndFinancingReport.pdf
- 2 East Japan Railway Annual Review 2015 and www.jreast.co.jp/e/press/2015/pdf/20150801.pdf
- 3 National Planning Policy Framework, Department for Communities and Local Government, March 2012.
- 4 www.gov.uk/government/news/regeneration-of-stations-set-to-deliver-thousands-of-new-properties-and-jobs
- 5 www.entirelyproperty.com/news/northwest/manchester/muse-and-network-rail-submit-detailed-plans-for-185-million-manchester-scheme7655
- 6 www.railpro.co.uk/railpro-magazine/march-2016/unlocking-the-opportunities
- 7 www.bbc.co.uk/news/uk-england-leeds-35221910
- 8 www.railway-technology.com/projects/cornavin-eaux-vives-annemasse-ceva-rail-link/
- 9 www.atoc.org/download/clientfiles/files/STP-Toolkit-low-res-web.pdf
- 10 www.bettertransport.org.uk/sites/default/files/research-files/13.11.04.fixing-the-link.pdf
- 11 www.imercer.com/content/mobility/quality-of-living-city-rankings.html
- 12 www.rcplondon.ac.uk/news/doctors-say-40000-deaths-year-linked-air-pollution
- 13 www.gov.uk/government/collections/future-of-cities
- 14 www.watford-group.org/brunel-award/
- 15 www.ideasfestival.co.uk/events/festival-of-the-future-city-launch-event/
- 16 www.gares-sncf.com/sites/default/files/field_files/2015-02/ra2011_va.pdf
- 17 www.raildeliverygroup.com/files/Publications/2015-10_vision_for_stations.pdf
- 18 www.tandfonline.com/doi/abs/10.1080/09540962.2016.1206759
- 19 Interview: O'Connell, P. and Lambert, A. 2016
- 20 Interview: O'Connell, P. and Lambert, A. 2016
- 21 Interview: Holmes, M. and Lambert, A. 2016
- 22 www.sbb.ch/en/group/the-company/organisation/real-estate.html
- 23 Interview: Van Doninck, P. and Lambert, A. 2016
- 24 Interview: Kager, R. and Lambert, A. 2016
- 25 East Japan Railway Annual Reports, 2001-2016, www.jreast.co.jp/e/investor/ar/index.html



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Tracks

Tracks is a dynamic Thought Leadership programme that reacts to contemporary issues in the transport sector. The annual programme comprises four themes, linked to current and evolving challenges. Development around stations is one theme within the 2016-17 programme.

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