SMART CONNECTIONS:

The Essential Role of Transport for Borderless Business

A Report by Austin Smyth, Head of the Department of Transport Studies, University of Westminster for Invest Thames Gateway

About the Authors

Professor Austin Smyth, Head of the Department of Transport Studies at the University of Westminster, has more than 25 years experience in research and consultancy working for a variety of public and private sector clients, globally. He was joint author of the 'Importance of Transport on Business Location Decisions' commissioned by the Department for Transport (DfT); advisor to devolved governments of Scotland and Northern Ireland, Scottish Parliament, Welsh Office, Irish Government and various Middle Eastern and US Governments and public agencies on a variety of transport strategy developments and policy issues. He has also advised the European Commission on the cost effectiveness of a variety of major infrastructure projects.

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About The Report

Around the world, countries, states, cities and regions are fighting a fierce battle for investment spend. They must have appeal on a number of fronts to attract investment in today's highly competitive global environment and this report examines the role that transport plays in this fight.

There are many factors that investors and businesses consider when choosing an area to invest in such as technological development, the economic climate and market demand.

This report argues that although on the surface transport isn't the primary driver for investment, it in fact, influences many of the factors investors look to. The quality of transport infrastructure has the power to influence investors' perceptions and confidence, painting a picture of social and commercial success.

The report will explore this dynamic further as well as address more specific questions around the significance of transport to society in general and how its effectiveness can be improved to support the growth and success of the destination.

Methodology

This report brings together the research and view of Professor Austin Smyth, Head of the Department of Transport Studies at the University of Westminster, based on his knowledge and experience of transport networks and their impact on economic development. This was supported by proprietary research conducted using the YouGovStone panel of over 300 senior business people.

About Invest Thames Gateway

Invest Thames Gateway is the lead international inward investment agency for the Thames Gateway. Its aim is to market the Thames Gateway's unparalleled sector expertise and clusters of investment opportunity and is the first, single point of contact for new and potential investors.

It is supported by three of the UK's leading Regional Development Agencies (RDAs), the East of England Development Agency, the London Development Agency and the South East England Development Agency. Invest Thames Gateway also works in close partnership with the Communities and Local Government department (CLG), the Homes and Communities Agency (HCA) and UK Trade and Investment (UKTI).

The Thames Gateway is one of the UK's priority hubs for growth and has the ongoing committed support of the Government as well as a large number of private investors. It covers 40 miles of opportunity along the iconic River Thames from London's foremost financial centre, Canary Wharf, through the river ports of Thurrock, Medway and Sheerness as far as Southend-on-Sea in South Essex and Sittingbourne in North Kent.

Through its unrivalled access to mainland Europe, delivery of major initiatives and a dedication to sustainability and clusters of expertise, the region provides smart investors with huge commercial opportunities. The region is recognised as an innovative logistical and transport gateway for the UK, providing smart, rapid connections to London, Europe, international markets and the rest of the UK.

These, coupled with an outstanding commitment to quality of life and a focus on place making, ensures that the region presents a truly dynamic international investment location.

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London Southend Airport

Foreword

SMART CONNECTIONS: The Thames Gateway Opportunity

by Jeff Alexander, Chairman of Invest Thames Gateway

The Thames Gateway, one of the UK's priority hubs for growth, represents the most significant regeneration scheme in Europe and is emerging as a major driver for the future success of London and the Greater South East.

Priority Hub for Growth

Not only is the region recognised as a priority growth area for the UK, it has benefited from a dedicated government-funded programme to accelerate its regeneration. According to senior business people surveyed by YouGov as part of this report, access to integrated transport networks (a combination of road, rail, ports and air) and committed government support to infrastructure are seen to have the greatest impact on investment location decisions.

21st Century Connections

Central to the region's ongoing economic growth is its world-beating network of smart, efficient, effective 21st Century infrastructure and connections.

As a gateway to London, the rest of the UK and the major markets of continental Europe, it occupies a strategically important location central to the UK's international container traffic. It also has direct and efficient links to major European capitals via the greatly enhanced extension to Eurostar and as a major beneficiary of Crossrail, due to become operational in 2017, offering faster access to Central and West London.

The region is ambitious in its focus on providing unparalleled commercial opportunities to investors through smart, efficient effective transport solutions that deliver greater performance and drive commercial success.

International Investment

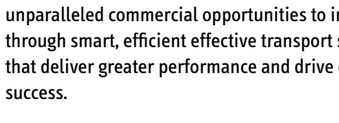
Invest Thames Gateway, as the lead international inward investment agency for the region, offers the first, single point of contact for new investors.

Its offer is based around a region that has great access to new markets and growing populations, deep expertise and experience around specific sectors, excellent infrastructure to help businesses do business, and support from positive, experienced people who know how to make things happen.

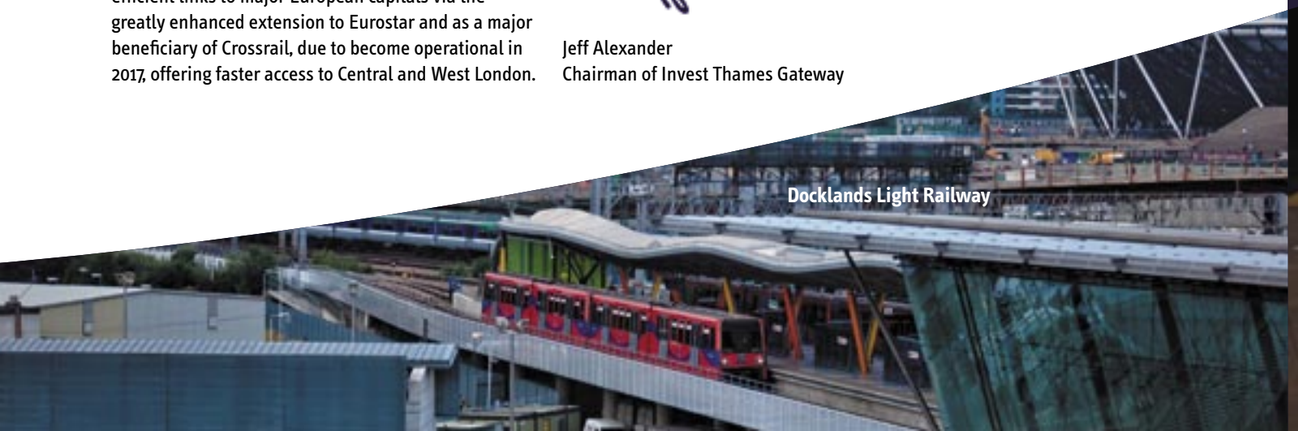
The Thames Gateway is a place where ambition, enterprise and creativity can grow.

I am delighted to introduce this report, which has been produced in collaboration with Professor Austin Smyth, Head of the Department of Transport Studies at the University of Westminster and provides valuable insight into global transport trends and best practice.

In addition, it importantly looks specifically at the key role transport has in investment decisions both now and into the future and the part the Thames Gateway plays in contributing to the economic growth and prosperity of London and the Greater South East.



Jeff Alexander
Chairman of Invest Thames Gateway



Docklands Light Railway

Executive Summary

SMART CONNECTIONS: The Competitive Edge

by Professor Austin Smyth

Today's cities, countries and regions compete to attract business owners, investors and a talented and skilled workforce.

This battle is intensifying as the face of the business world changes, globalisation takes hold and new location choices enter the market.

Understanding What Investors Want

In this competitive environment, the need for business locations to understand the vast range of factors influencing investment decisions is now more essential than ever before.

This report examines transport and its role in determining the competitiveness of a business location. It argues that, although on the surface transport isn't the primary driver for investment, it influences many of the factors investors look to. The quality of transport infrastructure has the power to influence investors perceptions and confidence, painting a picture of social and commercial success.

The Transport Effect

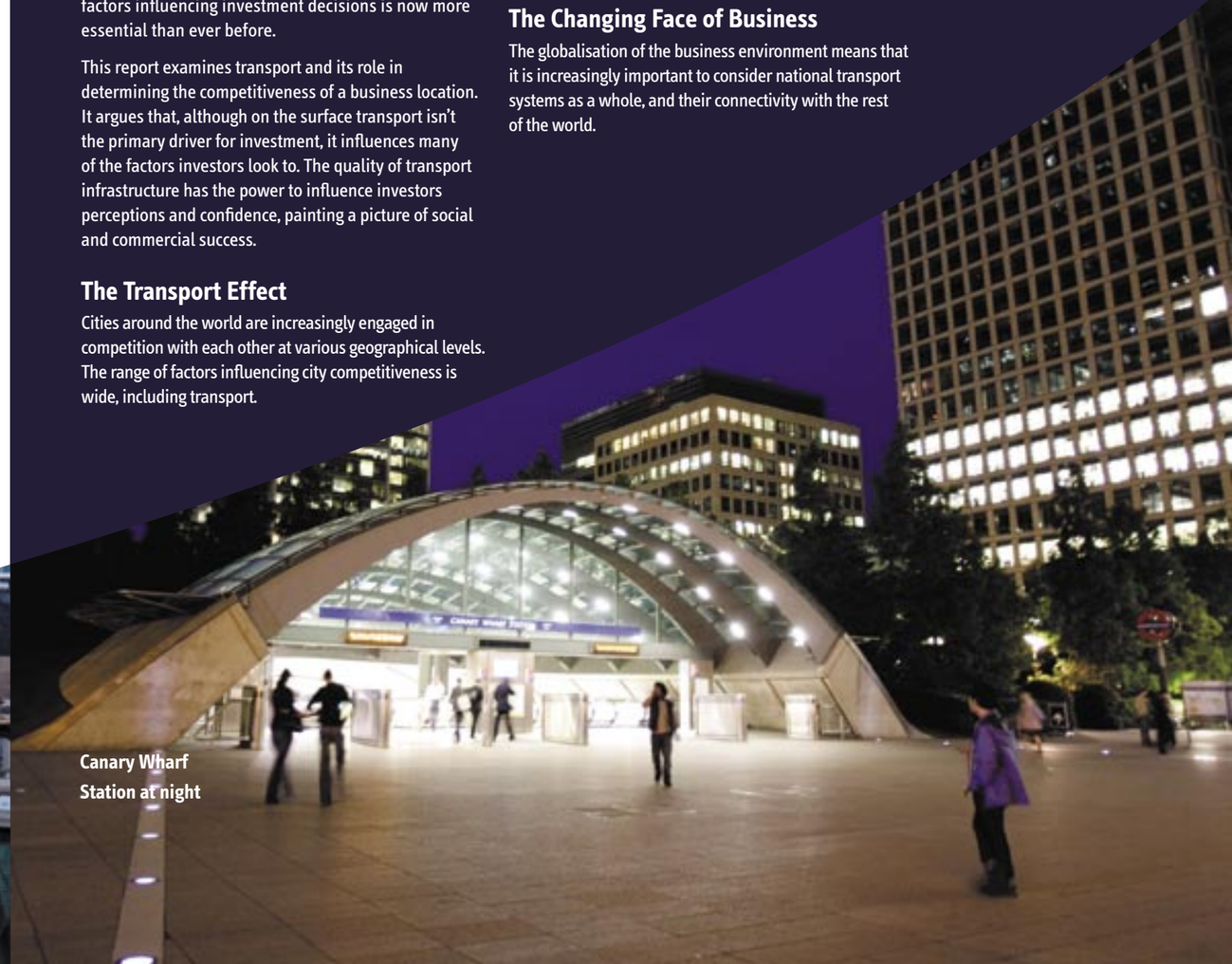
Cities around the world are increasingly engaged in competition with each other at various geographical levels. The range of factors influencing city competitiveness is wide, including transport.

Transport contributes to a city's business 'offer'. Their transport systems therefore contribute significantly to their levels of competitiveness. For major cities this competitiveness can be viewed to operate at a continental level and on the global stage in the case of so called 'world cities'.

The evidence suggests that transport remains an important driver for businesses at a local, national and international level. Transport systems not only facilitate mobility, but also have potentially significant indirect effects on land use, the environment, equity and economic growth.

The Changing Face of Business

The globalisation of the business environment means that it is increasingly important to consider national transport systems as a whole, and their connectivity with the rest of the world.



Canary Wharf
Station at night

Against this backdrop, the concept of a transport 'network' is becoming broader and the importance of being near transport hubs - be they air, sea, road or rail - is crucial. Good air and/or long distance high speed rail connectivity is vital to businesses operating on an international scale, and for the development of 'world cities' as business locations.

Sophisticated Infrastructure Translates as Accessibility

A sophisticated transport infrastructure translates as accessibility to other locations, cities, regions, countries and continents. It is relative accessibility that is the key to understanding the potential impact of transport on wider investment.

The ability of locations to attract inward investment is a function of their relative accessibility to the global network of production and consumption centres (in the main other large urban areas). New infrastructure can enhance relative accessibility, which provides the catalyst for potential increases in economic activity. If the background conditions are advantageous, then improvements in transport infrastructure may be the deciding factor in favour of some locations.

Agglomeration Matters

Globally significant locations which typically display features of agglomeration continue to drive economic activity. Agglomeration, it is frequently argued, increases the productivity of businesses and is dependent on a continually improving transport infrastructure. At the city level, urban structures are shaped by four main factors; geography of their situation and site characteristics, development control and planning systems/policies, specific dynamic factors and not least the relative accessibility of the local transport systems. Local public transport can assist in exploiting the potential benefits of agglomeration.

Face-to-Face Interaction Matters

High quality communications and transport infrastructure have promoted greater flexibility in business location for many organisations. However, agglomeration still matters. Face-to-face interaction, which depends on personal movement, is still critical and so high quality transport matters.

The View from Business: Some Key Findings

We commissioned the market research firm, YouGov, to conduct proprietary research on our behalf to explore the role transport plays in today's business location decisions. YouGov surveyed 301 senior business people through its YouGovStone panel of over 3,000 'influential people' which includes international business leaders and opinion formers.

The findings of this research are referred to throughout the report and highlighted below.

Of the senior business people we spoke to:

41% felt that the future growth and development of a business/investment location was among the most affected by the quality of transport infrastructure in a potential investment location

21% felt that the positive image of the business/investment location was among the most affected by the quality of transport infrastructure

44% viewed committed government support of infrastructure as having a significant impact on people's investment location decisions in the future

46% believed that, even with more sophisticated IT networks, there is no substitute for face-to-face contact with business partners, clients and other stakeholders

39% thought that the efficiency in company operations were among the most affected by the quality of transport infrastructure in a potential investment location

36% considered the competitiveness of the business/investment location was among the most affected by the quality of transport infrastructure in a potential investment location

34% viewed proximity to international markets as a major factor in the investment location decision

Connectivity: The Competitive Edge?

For the world cities and other major centres in North West Europe, international connectivity is a major competitive advantage. Their international air and rail hubs offer advantages to investors across these city-regions. For London, Paris and Amsterdam high speed rail is providing the next phase in enhancing their international connectivity.

The challenge that these cities have in common is to build intra-regional connectivity. For the new world cities, we might look for lessons in connecting new international hubs to the wider city-region through new metro systems. But there are also other lessons about the need for comprehensive approaches to transport and economic development planning.

Alongside expensive rail investment are perhaps less glamorous projects that attempt to manage road networks and the congestion problems that economic success brings. This comprehensive view is needed in the Thames Gateway.

Transport and The Thames Gateway

The major infrastructure improvements that this area has already experienced and will enjoy over the coming decade will translate into some significant accessibility gains for key locations, thereby enhancing its overall competitiveness and attractiveness to investors. Crossrail, coming after the other public transport improvements in East London and the development of London City Airport, will reinforce the relative accessibility of the Canary Wharf area.

Its enhanced links with Central London and Heathrow Airport will enable this location to access both in markedly reduced journey times, while at the same time, reinforcing the competitive advantage of the latter at the London wide level and on the global stage.

Crossrail and other transport improvements will also confer significant accessibility benefits on Stratford. These will greatly reinforce its emerging importance, something greatly increased by the catalytic effect of the 2012 Olympics.

QEII Bridge at Dartford

The introduction of domestic high speed rail services together with the new station at Ebbsfleet to serve Eurostar services, will significantly enhance the attractiveness of North Kent and the Medway towns as a residential location from which to access employment opportunities in Stratford and Central London. The potential of London Gateway and further significant boosts to Ebbsfleet, Dartford and Gravesend will come with greater co-ordination and integration of the transport facilities to serve these locations.

For the Thames Gateway, retaining and growing competitive advantage is not just focused on connections throughout the Gateway and with London. One of the region's unique selling points is its strategically important location as a gateway to Europe and its ability to link with major markets by high speed rail and air.

Section 1 Smart Connections: The Investment Decision

Transport's impact on the economy and wider society

What role can transport play in realising wider development aims and how can its effectiveness be maximised in addressing more specific objectives? Before we address these questions, it is important to recognise the significance of transport to society generally.

Rodrigue (Rodrigue et al., 2009) views transportation as a multi-dimensional activity, the significance of which embraces:

- **Politics:** Governments are an important source of investment and play a critical role as regulators
- **Economics:** The transport sector is an economic factor in the production of goods and services. It contributes to land value, facilitates the economies of scale and the geographical specialisation of regions
- **Social Conditions:** Transport provides accessibility to key facilities and promotes opportunities for groups and individuals
- **Environmental Effects:** Although transport offers many benefits its environmental consequences can be significant

It has long been argued that transport is the key to economic development, social progress and more recently environmental sustainability for urban and rural communities. Its importance arises from the close relationship that improvements to transport systems have with socio-economic changes; the mobility of people, freight and levels of territorial accessibility are central to this relationship. This points to the impact transport can have on economic development, social welfare and the environment (Gutiérrez et al.).

Transportation impacts the economy at many levels: global, transnational, national, specific locations, and across many sectors. At a national level, transportation is a key component of a country's economy. For instance in many developed countries transportation accounts for between six and 12 per cent of the GDP. In less developed countries, transport investment accounts for a major share of the capital formation, transport is viewed as critical to its development (Leinbach, 1995).

The impact of transportation on development is critically dependent upon the capacity of the local and regional economy to respond and reallocate resources (Leinbach, 1995).

These indirect impacts include the formation of distribution networks, the attraction and the accumulation of economic activities, an increase in competitiveness, growth of consumption and the fulfilment of mobility needs. The direct impacts and benefits from transport are more tangible, reflected by increases in markets and reductions in travel time and costs.

On the supply side, the impact of transport is evident in the income generated from transport operations or by access to wider distribution markets and niches. On the demand side, they are determined by improved accessibility, time and cost savings, productivity gains, division of labour, access to a wider range of suppliers and consumers, and by the economies of scale.

Of course, these effects are displayed in the geographical patterns of economic and social activities, land use and environmental impacts evident to even the casual observer. Transportation clearly plays a major role in spatial relationships between locations.

At a national level, transportation is a key component of a country's economy. For instance in many developed countries transportation accounts for between six and 12 per cent of the GDP

Transport, Spatial Scale and Economic Development: Differences in Perspective

At a national level major transport arteries shape the organisation of a country's economy. At a more local level they can shape the organisation of the activity of a city in terms of locations and relations between them.

Transport, economic activities and the built environment contribute to the development of locations. Costs, accessibility and agglomeration are the key factors shaping spatial structures. It is through its effect on accessibility, that transport, along with site characteristics and the socio-economic environment are the most significant factors influencing the development of locations.

Their relative importance varies depending upon whether the relevant economic activities are in the primary, secondary, tertiary or quaternary sector(s) of the economy.

Although many transport improvements encourage dispersal, some favour concentration.

The important factors influencing the outcome are transport costs, the existence of agglomeration economies and economies of density between economic sectors. The impacts of transport, however, can transcend purely financial incentives and extend to include creation of mobility gaps, significant cost differentials by location, congestion and environmental impacts.

There is a two-way relationship between transportation and spatial patterns in society; both impact the development of the other. At the national level considerations of strategic location-based decisions are influenced by the overall characteristics of the national transport system. Such considerations help to shape regional policies. For instance, transportation has a ubiquitous impact on the spatial organisation of a region through the fragmentation of production and consumption, the location concentration of resources, labour and markets which in turn generate the various flows of people and goods that the transport system serves.

Although the role of transport infrastructure is difficult to estimate quantitatively, the literature suggests good transport infrastructure is vital for regional development (Akinbami and Fadare, 1997, Fröidh, 2005, Graham, 1998, Gutiérrez et al., Holl, 2004, Leinbach, 1995, Vickerman, 1995). Most aggregate studies conclude that there is a positive relationship between the quality of transport infrastructure and the level of economic growth (Aschauer, 1989, Mas et al., 1996).

The increased level of accessibility brought about by better transport infrastructure enables businesses to benefit from the improvements, to access more materials leading to higher production and enhanced competitiveness. Proponents of this argument claim that, at a European level, enhanced accessibility will lead to greater integration and efficiency, resulting in lower costs and hence improving Europe's competitiveness globally (Vickerman et al., 1999).

The impacts of transport, however, can transcend purely financial incentives and extend to include creation of mobility gaps, significant cost differentials by location, congestion and environmental impacts

Lakeside Shopping Centre in Thurrock

There are three geographical scales at which the spatial organisation of transport can be viewed:

- **Global** (gateways supported by airports, ports and telecommunication activities)
- **Regional** (city level activities)
- **Local** (employment and commercial activities)

Each of these are linked by a range of movements from locally based commuting to global trade flows (Rodrigue et al., 2009). Each level has its specific impact on the economy, for instance, at a global level through international trade, transportation shapes and supports economic specialisation and productivity. The spatial organisation and structure of international transport systems are shaped by inequalities in the global economy.

The City Effect

The regional spatial organisation of transportation is formed around the urban system. At a local level cities are dependent on the mobility their transport systems provide to residents and visitors, and their access to leisure, work and freight movements.

Trends indicate a general movement of businesses locating away from large cities to the edges of major urban areas. This is in part facilitated by the development of technology, allowing the decentralisation and spread of organisations opening up choice of location (McQuaid et al., 2004).

A related factor which may explain an organisation's responsiveness to transport is the recent expansion in the logistics market. The increased complexity of distribution networks has meant a significant up-swing in the number of businesses outsourcing many of their transport functions to specialist companies. The reliability of the transport network has become an issue of increasing importance. A number of studies noted that it was not the amount of time taken that was important to logistics companies, but being able to deliver when scheduled.

In today's fast paced global business environment communication has become increasingly virtual; teleconferencing, e-mails and teleworking. Although these represent alternatives to 'face-to-face' working, there will always be the need for the 'human touch' (White et al., (forthcoming)). This supports the premise that effective transport links will remain one of a number of important factors for investment decisions.

Transportation Location Decisions: The Essential Principles

It has been claimed that enhanced accessibility, brought about by better transport infrastructure enables businesses to be more productive and competitive. This promotes a more successful region than those with inferior accessibility (Vickerman et al., 1999).

Understanding the role of transport in decisions made by businesses on where to locate or relocate is a crucial element in the ability to assess the impact of a transport system on people's lives and the performance of economies.

It is important to understand that different types of business have different levels of transport needs. There are wide ranging views on the overall effects of transport on business location and wider economic development. It is recognised that considerations need to be made almost entirely on a case-by-case basis.

According to location theory, location patterns are determined by transport and factor costs (Holl, 2004). Economic geography models emphasise transport costs along with imperfect competition, market size and economies of scale as key determinants of industrial location (Krugman, 1991).

Transport infrastructure can change the relative importance of market size. Through better transport connections areas of lower economic activity become more attractive for business locations; they acquire better access to markets in core areas. Simultaneously, by providing better access to supply locations at a distance, benefits from costs and demand linkages will cause an increase in competition (Puga, 1999, Venables, 1996).

The X-Factor: Transport and its Influence

A comprehensive overview of international literature (McQuaid et al., 2004) identified a consistent line-up of factors commonly cited during surveys of businesses and authorities with regard to business location including:

- The quality and scope of physical and business infrastructures
- Factor cost and supply, especially labour
- Market demand and links to international markets
- Institutional infrastructure and networks
- A 'culture' supporting 'civicness' and entrepreneurship
- Indigenous company growth
- Agglomeration economies
- Technological development
- As well as more social factors such as climate, lifestyle, image and crime rates

Transport has its part to play in a number of the above factors and indeed evidence suggests that it has become an increasingly important driver for businesses on both a local, national and international level.

The View from Business

We commissioned the market research firm YouGov to conduct proprietary research on our behalf to explore the role the transport plays in today's business location decisions. YouGov surveyed 301 senior business people through its YouGovStone panel of over 3,000 'influential people' which includes international business leaders and opinion formers.

The findings from these senior business people include:

When this was explored a huge **81%** of respondents believed that the quality of the transport network in an investment location has become more important to the decision to locate. Reasons for this include:

- **63%** Efficient transport hubs are essential to attract an increasingly mobile and demanding workforce
- **52%** Felt that the globalisation of businesses and the dynamics of modern supply chain management have increased the need for efficient networks
- **46%** Even with sophisticated IT networks, there is no substitute for face-to-face contact with business partners, clients and other stakeholders

In response to the question on which factors most influence investment location decisions:

- **24%** of respondents cited pre-existing international transport infrastructure and services
- **19%** cited pre-existing domestic transport infrastructure and service
- **9%** Almost one in 10 of the respondents pointed to planned major transport infrastructure projects

Our respondents also confirmed the importance of transport to all major aspects of today's business:

- **56%** Access to potential clients and customers
- **41%** Access to relevant labour pools
- **41%** Future growth and development of the business/ investment location
- **39%** Efficiency in company operations
- **36%** The competitiveness of the business/ investment location
- **28%** Quality of life

Finally, respondents were asked to identify what aspects of transport would have the most significant impact on location decisions in the future, highlights included:

- **62%** Access to integrated transport networks (a combination of road, rail, ports and air)
- **44%** Committed government support to infrastructure
- **34%** Proximity to international markets
- **31%** Proximity to a major city
- **31%** Access to international airports and their services
- **29%** Access to sophisticated road and rail networks
- **17%** Green credentials

The globalisation of the business environment means that it is increasingly important to consider the national transport system as a whole, and its connectivity with the rest of the world

Transport systems not only facilitate mobility but also have potentially indirect effects on land use, the environment, equity and economic growth. Transport infrastructure is a prerequisite for development but it is not a sufficient condition for growth. It may not be as significant (in terms of first order effects) as the presence of positive economic conditions (e.g. agglomeration and labour market economies) or indeed political circumstances within which transport decisions must be taken. Transport infrastructure investment complements these other conditions, which must also be met if further economic development is to take place.

The globalisation of the business environment means that it is increasingly important to consider the national transport system as a whole, and its connectivity with the rest of the world. It is recognised, however, that the importance of transport for an area or country's international competitiveness is a subject poorly understood.

The Importance of Connectivity

Against this backdrop, the concept of a transport 'network' is becoming broader and the importance of being near transport hubs - be they air, sea, road or rail - is crucial. A conclusion to be drawn from the available evidence is that the reliability and connectivity of the transport system is a key concern.

Good air connectivity is vital to businesses operating on an international scale, and for the development of 'world cities' as business locations. It is suggested that air transport per se is not a necessary condition, but what is important is the extent to which an area is plugged directly in to other major international hubs. This is a key consideration in the level of foreign investment into an area and is most important for firms with international trading or contacts such as, high-tech firms, financial services and pharmaceutical firms.

Relative Accessibility: A Barometer of Competitiveness

A sophisticated transport infrastructure can primarily attract investment and business. Its quality translates as its accessibility to other locations, cities, regions and even countries. New infrastructure can enhance accessibility, which provides the catalyst for potential increases in economic activity. However, it is relative accessibility that is the key to understanding the potential impact of transport on wider investment. Infrastructure improvements which benefit a particular location do so at the relative expense of competing locations.

The ability of locations to attract inward investment is a function of their relative accessibility to the global network of production and consumption centres (in the main other large urban areas). At the city level, urban structures are shaped by four main factors; geography of their situation and site characteristics, development control and planning systems/policies, specific dynamic factors (both positive and negative) and not least the relative accessibility of the local transport systems.

Transport: Finding the Tipping Point

If the background conditions are advantageous for organisations to set up their business in a specific area then improvements in the transport infrastructure may give one location preference over another. In short, transport infrastructure may "tip the balance" for some locations.

Some claim that infrastructure investment leads to positive returns, in terms of economic growth and productivity enhancements. Some argue any contribution to the economic growth in a mature economy, with a well-developed transport system is likely to be modest.

For businesses, the pool of labour and raw materials may be increased. Consumers benefit from lower prices as businesses become more competitive.

Globally significant locations which typically display features of agglomeration continue to drive economic activity. Agglomeration, it is frequently argued increases the productivity of businesses and is dependent on a continually improving transport infrastructure.

Local public transport can assist in exploiting the potential benefits of agglomeration. However, in some cases the importance of physical location and nearness has been weakened by factors that suggest that in a well-connected society information can be exchanged electronically and proximity to market may be less important.

Transport infrastructure may reinforce this trend. Businesses can move to the edge of cities without losing access to labour and materials. High quality communications and transport infrastructure have promoted greater flexibility in business location for many organisations. However, agglomeration still matters. Face-to-face interaction, which depends on personal movement, is still critical and so high quality transport matters.

An increase in office rents at transport hubs can be the most visible manifestation of the potential for growth. This also reflects the implicit benefits of agglomeration. Growth can occur where the accessibility of particular locations is enhanced, for example, in the case of the high speed rail networks (Hickman and Banister, 2003, White et al., (forthcoming)).

Land value increases can be expected around transit hubs and on this assumption the area may benefit from increased development (Hickman and Banister, 2003). However, the effect is not automatic. The state of the local economy, planning policy, land availability and the market value of the adjoining area are significant in determining outcomes.

Positive effects on jobs are frequently asserted by sponsors of transport schemes, in part reflecting increases in the size of accessible labour market. The evidence base is much less conclusive except possibly for central business districts benefiting from major high capacity improvements to their transport systems. Airports too can act as 'growth poles' at a regional or local level. However, the impact of transport infrastructure may be to re-distribute employment rather than create new jobs.

Large-scale Transport Infrastructure Policies

New transport infrastructure may influence business location, but this can often involve displacing business from one area to another. This can be beneficial if redistribution is away from congested areas. However, evidence suggests that transport investment will tend to displace business activity towards congested areas. Nevertheless, as noted above, recent trends indicate a general movement of businesses locating away from large cities to urban fringes, in part facilitated by the development of technology.

London Southend Airport

A key benefit of improved transport infrastructure can be enhanced connectivity. It opens up new avenues, possibilities for business expansion, connection to other services/suppliers, different market and labour forces

A key benefit of improved transport infrastructure can be enhanced connectivity. It opens up new avenues/ possibilities for business expansion, connection to other services/suppliers, different market and labour forces. For instance, in 1997 high speed trains were introduced on the Svealand line in Sweden. This significantly boosted regional use of public transport (seven times as many trips by high speed train on the Svealand line in 2001 compared to on the old line in 1993) and increased market share for regional travel (from 6 per cent to 30 per cent) (Fröidh, 2005).

Travellers were attracted to this mode of transport, preferring train travel to car over longer distances. Consistent with theory, the encouragement given to travelling longer journeys has also resulted in many commuters obtaining higher incomes due to the improved accessibility of jobs in more distant locations. This has led to a change in the regional travel market and promoted greater regional integration. The benefits of high speed trains were more prominent for medium to long distances.

Transport Competitiveness and Economic Development – The Role of Governance

As major cities focus on their economic competitiveness, the structures of government come under review. National governments regard their world cities as major assets and city-region wide planning is a priority everywhere.

There is also a widespread (promoted by the Organisation for Economic Co-operation and Development (OECD) and others) adoption of new models of governance, reviewing historic relationships between national and sub-national scales of government, and experimenting with new ways of engaging local populations in the big decisions about infrastructure and urban growth. All of these changes present major dilemmas and no one city can claim to have got its governance right.

Governments know that their decision making processes and their plans and investment programmes need to be clear and engaging. Cities respond to these challenges in different ways with different governance cultures and ways of working.

The Investor's Checklist

Other factors which influence the decision to invest or locate in a country or area highlighted by 301 senior business people surveyed through YouGov include:

Tax regime	61%	Committed government support	30%
The skills level of the workforce	50%	Governance structure - public sector decision making	28%
Quality of telecoms, infrastructure and services	47%	Cost of living	24%
The strength of the economy	45%	Pre-existing international transport infrastructure and services	24%
Cost of doing business e.g. business space rental	40%	Pre-existing domestic transport infrastructure and services	19%
Access to relevant markets	40%	Planning regulations	13%
Labour costs	38%	Diversity of the economy	12%
Quality of life in the area	33%	Green credentials	12%

Eurostar at Ebbsfleet

Conclusion

To conclude Section 1, we have identified key themes and issues which are likely to impact on an investment decision:

Transport and Location Development

- Transport is a key factor to economic development, social progress and environmental sustainability for urban and rural communities – it effects the economy at many levels: global, transnational, national, specific locations and across many sectors
- The impact of transport on development is critically important upon the capacity of the local and regional economy to respond and allocate resources
- The development of locations is dependent on transport, economic activities and the built environment
- Land value increases can be expected around transit hubs and on this assumption, the area may benefit from increased development

The ' Face-to-Face' Imperative

- Increasingly virtual communication in the business environment will not replace the need for the 'human touch' of 'face-to face' working – effective transport links will remain an important factor for investment decisions

The Changing Face of Business

- It is increasingly important for businesses to consider the national transport systems as a whole and connectivity with the rest of the world
- The concept of a transport 'network' is becoming broader and the importance of being near transport hubs - be they air, sea, road or rail – is crucial

The Tipping Point: Connectivity and Accessibility

- The quality and extent of connectivity is a key consideration in the level of foreign investment into an area – it is most important for businesses with international trading or contracts such as, high-tech companies, financial services and pharmaceutical firms
- The ability of locations to attract inward investment is a function of their relative accessibility to the global network of production and consumption centres

Canary Wharf

Section 2 Smart Connections: The Thames Gateway in Perspective

The Thames Gateway: Current Infrastructure and Planning

New investment in transport infrastructure sends positive messages about the vitality of major cities. In this section we examine the connections and accessibility of the Thames Gateway and what this means for international investors.

The Thames Gateway represents the most significant city-region development in Europe extending eastwards for 40 miles from Canary Wharf along the northern and southern banks of the Thames Estuary.

It is a major housing and economic development project (the Government's medium-term targets are for 225,000 new jobs and 110,000 homes by 2016) and includes the site for the UK's largest port and logistics location, the core facilities for the 2012 Olympics and is a focus for innovative policy such as the Eco-Region (HM Government, 2008).

The Department of Communities and Local Government's current priorities (Hudson, 2008) include encouraging development for the 1.5 million people who already live in the Gateway, working on the roles of local authorities and delivery partnerships, prioritising investment in fewer, bigger schemes, community schemes and improving the functioning of town centres.

At the heart of government thinking is the relationship between development and transport infrastructure. Transport infrastructure investment so far includes:

- Crossrail (£16 billion) linking Heathrow to the City and on to Canary Wharf and destinations north and south of the Thames
- High Speed 1 (£6 billion) with stations (open) at Ebbsfleet and (planned) at Stratford
- Domestic high speed services (£5.8 billion) giving north Kent fast connection to London.
- Extensions to the Docklands Light Railway (DLR)
- New sub-regional investment in bus networks - Fastrack – Dartford/Gravesend/Ebbsfleet, and South Essex Rapid Transit (£51 million 2011-16)

As it continues to develop, the Thames Gateway represents one of the most sophisticated global transport propositions for international investors

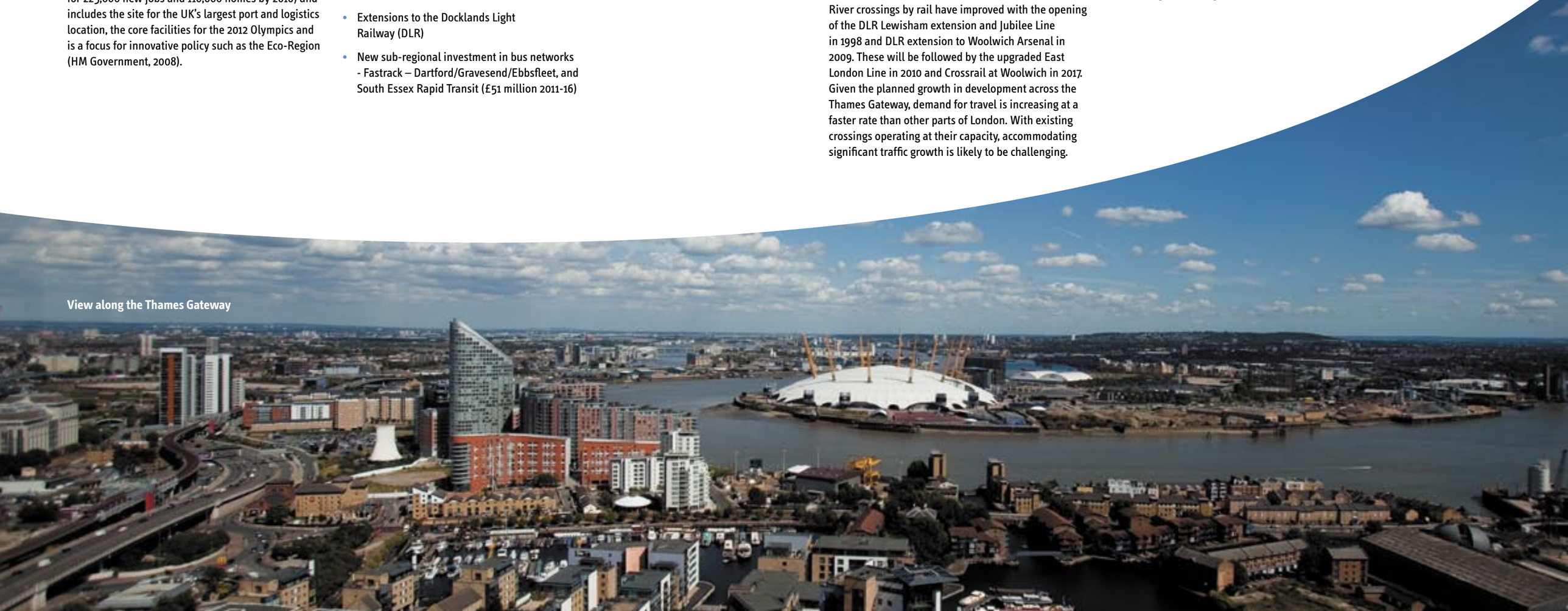
It is the Government's belief that better transport connections will help economic growth. This gives a priority to links between the Thames Gateway's four 'spatial transformers' (HM Government, 2007) (Canary Wharf, Stratford, Ebbsfleet Valley and London Gateway) identified in the Delivery Plan and the wider Gateway.

As the economy of East London has developed with the growth of Canary Wharf, patterns of demand for travel along and across the River Thames have both changed and increased significantly. Many of the new economic drivers for London are located to the east - Canary Wharf, ExCeL, London City Airport and the Olympic Park. Opportunities for travelling to these new destinations from some areas south of the river such as North Bexley and parts of Greenwich have been limited. The lack of crossing points has been reflected in the limited interaction between the residential and employment populations on either side of the river.

River crossings by rail have improved with the opening of the DLR Lewisham extension and Jubilee Line in 1998 and DLR extension to Woolwich Arsenal in 2009. These will be followed by the upgraded East London Line in 2010 and Crossrail at Woolwich in 2017. Given the planned growth in development across the Thames Gateway, demand for travel is increasing at a faster rate than other parts of London. With existing crossings operating at their capacity, accommodating significant traffic growth is likely to be challenging.

Enhanced river crossings in East London will address (TfL, 2009):

- Traffic congestion at existing crossing points
- A lack of spare capacity in the existing road network to deal with unusual events
- Physical limitations on access for large vehicles at the Rotherhithe and Blackwall tunnels and Tower Bridge
- Difficulties for residents south of the river who find it difficult to access new jobs being created on the north side
- Unlocking the potential for further opportunities for development on both sides of the river but particularly around the Greenwich peninsula, Royal Docks, London Riverside (in Barking) and North Bexley
- Crowding on existing rail lines



View along the Thames Gateway

A Global Perspective:
A Case Study Review

As it continues to develop, the Thames Gateway represents one of the most sophisticated global transport propositions for international investors. In this report we will also look at a number of other highly competitive investment locations and identify the innovative techniques applied to deal with infrastructure demands and challenges.

We can usefully look at other fast growing locations to see how investment and transport are interlinked and include a brief review of transportation planning in Abu Dhabi and Dubai. We also draw on the Thames Gateway's immediate international context in North West Europe by looking at Paris and the Dutch Randstad.

Dubai, United Arab Emirates

Dubai is part of, and the most densely populated state (population density is 408.18/km² more than eight times that of the entire country), of the United Arab Emirates (UAE). Current problems with the economy have led to Dubai diversifying into real estate, construction, trade, trading post (Entrepôt) and financial services, which are heavily reliant on adequate transport facilities.

The high level of population density and the needs of key contributors to the Dubai economy are the main reasons that Dubai is faced with high levels of congestion and reliability problems with the transport network. This problem has galvanised a large investment programme, worth over AED70 billion, to implement plans for improving the whole transport network.

Dealing with the Challenges

Ports and Logistics: Responding to the demands of the modern international investor to efficiently move goods at low cost.

- Dubai's status as a key global sea-air hub has come under threat from falling air freight rates. The air freight being cheaper than sea-air rates, over capacity at airlines and low fuel prices has made the all-air option more attractive to shippers
- To ensure its attractiveness to international shippers, Dubai has enhanced its ports and diversified business practices by offering the location as an Entrepôt (free port/trading post) to encourage shippers. This enables commodities to be imported and exported without paying duties
- For sea access there are two major ports in Dubai: Port Rashid and Jebel Ali Port which are operated by the Dubai Port Authority. The Jebel Port is the largest port in the Middle East; however Port Rashid dominates shipping activities in the UAE due to its position and modern facilities

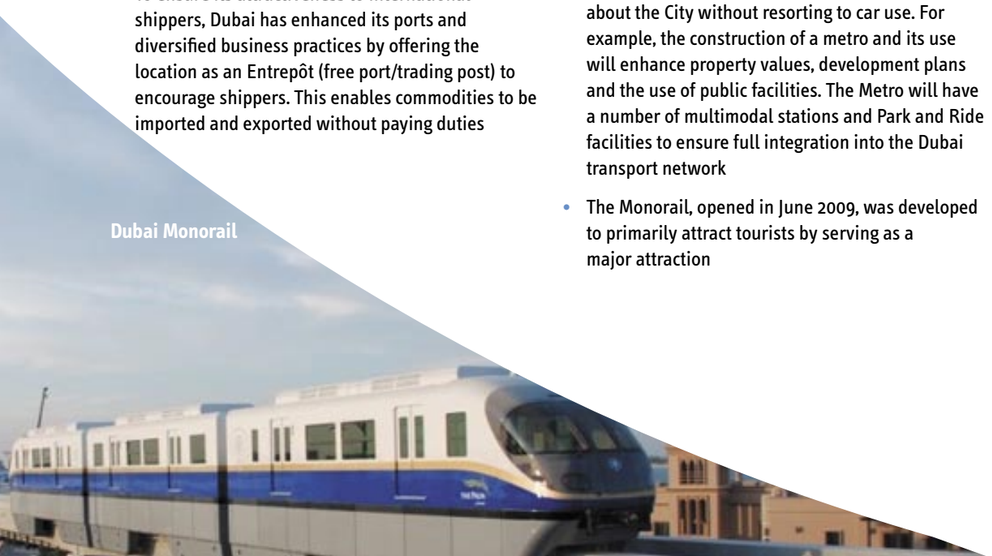
Air: An accelerated pace of development to remain competitive on a global scale.

- The Dubai International Airport is the hub for Emirates Airline and is considered to be the 20th busiest airport in the world (in 2008)
- To enhance and maintain Dubai's international competitiveness, plans are being implemented for the construction of the Al Maktoum International Airport in Jebel Ali (Dubai)
- Al Maktoum Airport will boost the economy not only through international passengers and cargo but also through state-of-the-art facilities. It is also expected to create approximately 15,000 jobs. The airport will also be linked to Dubai International Airport though an express rail system

Roads/Rail: An integrated response to rapid population growth.

- Although the Government has invested heavily in Dubai's road infrastructure, this has not kept pace with growing issue of congestion. The Road and Transport Authority is implementing plans which will enable both commuters and tourists to move about the City without resorting to car use. For example, the construction of a metro and its use will enhance property values, development plans and the use of public facilities. The Metro will have a number of multimodal stations and Park and Ride facilities to ensure full integration into the Dubai transport network
- The Monorail, opened in June 2009, was developed to primarily attract tourists by serving as a major attraction

Al Maktoum Airport will boost the economy not only through international passengers and cargo but also through state-of-the-art facilities



Dubai Monorail

Abu Dhabi, United Arab Emirates

Abu Dhabi is the second largest city and the capital of the United Arab Emirates. It has grown to be a cosmopolitan metropolis through its rapid development, high urbanisation and the relatively high average income of its population. It is the centre of the country's political, financial and industrial activities (both national and international) and generates 15 per cent of the GDP of the United Arab Emirates by being one of the world's largest producers of oil. Attempts are being made to diversify Abu Dhabi's economy through investments in financial services and tourism.

Dealing with the Challenges

Population Growth and Urban Planning: Planning for Change.

- Abu Dhabi's rapid population growth led to the development of the Abu Dhabi Urban Planning Council (UPC) in 2007, which is responsible for the future of Abu Dhabi's urban environments and the expert authority behind the visionary "Plan Abu Dhabi 2030, Urban Structure Framework Plan" (UPC, 2007). The rapid development of Abu Dhabi has triggered many problems, which need to be addressed through urban development:
  - Population has exceeded the City's original designed capacity resulting in traffic congestion and overcrowding
  - The City's postal addressing system is not widely used, leading to problems for describing business locations, whereby directions are often based on landmarks
  - The inadequacy of public transport has ensured the high level of dependence on private cars and taxis as a means of transport

Road/Rail: Enhancing Connections.

- To alleviate the problem of private car dependency and congestion on the roads the zero-fare public transport scheme was introduced, which offers free travel on a network of buses. The scheme proved to be very popular
- To enhance connectivity, light railway connections between the centre and the airport, and onwards towards Dubai and the Abu Dhabi Metro, are being put in place. The Abu Dhabi Metro, which will extend to more than 130km, will be linked to the Dubai Metro. Other rail links are planned to other cities in the UAE and to other GCC states
- The light railway, which is expected to be operational by 2014, is considered to be one of the most important means of public transport for the capital thanks to large capacity, cost and energy efficiency, and ability to operate in densely populated areas
- The transport system is expected to contribute to the Emirate's economic development and ease traffic congestion, as the 'Abu Dhabi Plan 2030' estimates the City's population will increase to around three million people by the year 2030
- The Plan identified that provisions for walking are key to any transport plan and include wide sidewalks, regular grid boulevards, rather than streets with dead-ends. Traffic will be able to disperse when congestion builds up on a particular area of the network

Integration by Design.

- Abu Dhabi is achieving success through the integration of its transport policies with urban design policies, for instance:
  - The implementation of the Abu Dhabi Metro
  - Designing streets as grids to enable congestion to disperse
  - Mixed widths of public ways for optimal public and vehicle access within the larger grid of commuter routes
  - Ensuring streetscape design offers optimal comfort and convenience for pedestrians, such as, ensuring shade, minimising pedestrian crossing distances
  - Designated lanes for specific services, e.g. bus and taxi lanes, truck lanes

Abu Dhabi

The Randstad, The Netherlands

The Randstad is a conurbation in the Netherlands consisting of the four largest Dutch cities: Amsterdam, Rotterdam, The Hague and Utrecht. The population is approximately 7.5 million, which is almost half of the Dutch population. Of these cities, Amsterdam, (located in the north wing of The Randstad) is considered to be the main centre. The Randstad is the economic, cultural, political and demographic focus of The Netherlands.

The rapid population growth rate has lead to concerns on space shortages and urban sprawl. Contributors to this comprise of growth in infrastructure, room for employment (especially for seaports), water storage and recreation.

Spatial issues are also becoming more complex: developments are increasingly expanding across municipal and provincial borders.

Dealing with the Challenges

The Dutch Government has recognised that the key to creating an attractive environment is to put in place an appropriate transport network. Improving international (train) connectivity is part of the City's economic strategy to maintain and extend its attractiveness for (international) companies and institutions to settle, and tourists to visit.

Transport and Global Competitiveness: Staying One Step Ahead.

- The Randstad is facing an increasing level of competition as a transport hub from surrounding countries especially eastern markets resulting in a change in cargo and passenger flows leading to new hubs and new competition
- The combination of good connections with the rest of Europe and good domestic infrastructure provides an economic impulse for The Randstad and The Netherlands as a whole
- To strengthen The Ranstad's economic position and to consolidate the international competitiveness of the The Netherlands, nationally and locally, new infrastructure and improvement plans are being implemented for:
  - Amsterdam-Schiphol Airport
  - Amsterdam-Paris high speed railway line
  - Rotterdam Harbour
  - Rotterdam-Germany freight railway line
  - New highway cross-river connections in The Randstad
  - The Randstadrail connecting Zoetermeer, Rotterdam and The Hague. The network consists of a metro-like line between The Hague and Rotterdam and two light rail lines between The Hague and Zoetermeer
  - A new high speed rail (between Amsterdam and Belgium) which is, also, being used to provide better suburban links
- Improved transport connections have opened the way for investment, not only in the development of Dutch hospitality and leisure projects which contributes significantly to the tourism industry in The Netherlands, with a turnover of 35 billion Euros. It is believed that the number of tourists to The Netherlands is expected increase 30% by 2020 to a total of 14 million
- Dutch ports regarded as gateways to Europe are a key factor which enables The Netherlands to retain its strong competitive edge largely due to its geographical location in the European delta

Retaining a Competitive Edge: Leadership and Governance.

- In line with the Government's objective to ensure its high level of competitiveness, the governing of The Randstad has been completely restructured to overcome issues of inefficiency. Originally, The Randstad was governed by at least five ministries, four provinces, 200 municipalities and a dozen water management boards

The Dutch Government has recognised that the key to creating an attractive environment is to put in place an appropriate transport network

IJ Bridge in Amsterdam
The Netherlands

- Similarly, public transport was in the control of a mix of municipal, private and state transport companies and infrastructure providers. The restructured measures implemented resulted in a decrease in the number of formal bodies, e.g. merging of small municipalities and water boards, and the creation of regional authorities
- The new Dutch Spatial Planning Act, July 2008, introduced a three tier government structure (national, provincial and municipal)

Paris, France

Paris is the major priority in national and regional investment in France. Government argues that economic success at the centre brings benefits to the rest of the country. In Paris governance, like London, is complex and there is an 'east-west' imbalance in prosperity and investment. Current projects in Paris offer some valuable comparisons to London and Thames Gateway.

Dealing with the Challenges

Remaining Competitive: The Governance of Transport.

- The governance of transport is shared between national, regional and sub-regional scales of government. Public transport is managed by the state dominated STIF, and relative fiscal independence gives the region a leading role in transport investment. There are well established traditions of concerted planning and co-investment between the scales of government
- Government has been seeking a new set of administrative arrangements for the inner part of the Ile-de-France region to facilitate integration between richer and poorer districts and to develop economic opportunities
- The 35 billion Euro investment in the Grand Paris transport network project was announced by the President this year and a bill is currently before the National Assembly. The project aims to reinforce the position of Paris as a world city, respond to local needs and bring wider national benefits:
  - New rail and metro lines will link the core of the region to main suburban poles, to the airports, and the existing TGV stations. To drive this through the Government will set up a public company, Société du Grand Paris (with the state having majority control that has powers of appropriation of land and the ability to develop the new lines)
  - Regional (SDRIF), sub-regional (SCOT) and local (PLU) plans will be brought into line with the new routes and development around new stations. The projects will be delivered through the CNDP process. It bears comparison with the UK Government's IPC process and has had some proven success (or at least the avoidance of major disputes) in TGV projects

Government argues that economic success at the centre brings benefits to the rest of the country

The Seine, Paris

A Global Perspective: Assessing Case Study Locations

We have continued our analysis of the four global case studies to assess their future potential on a national and international scale. In this case, we have employed a benchmarking tool informed by the UK's Institute of Civil Engineers (ICE) 'State of the Nation' approach to assessing this country's infrastructure to assess the state of infrastructure across a range of criteria.
In this case our four locations have been assessed across four key criteria: accessibility, efficiency, environment and equity.

The following table is intended to illustrate the trends in performance in each case study location. Land use strategies and transport systems are assessed in terms of impact on:

- **accessibility** ('ease of reaching' destinations)
- **efficiency** (the efficiency of allocation of resources and connectivity)
- **environment** (how land use and transport policies reduce its level of impact on the environment)
- **equity** (the benefits of transportation strategies being reasonably distributed amongst groups in society) both today and with their culmination of their respective plans. Assessment is on the basis of an informed rating scale:
  - A = Good
  - B = Fair
  - C = Average
  - D = Poor
  - E = Bad

Table 1: Indicative assessment of the Case Study's locations both current and post-implementation of new transport infrastructures and land use strategies

		Measures		Accessibility	Efficiency	Environment	Equity
Abu Dhabi	Current Position	Land Use		D	E	E	D
		Transport Infrastructure	Regional	D	D	D	C
			Global	B	B	C	C
	Post Implementation of Strategic Plan	Land Use		B	B	B	C
		Transport Infrastructure	Regional	A	B	A	C
			Global	B	B	C	C
The Randstad	Current Position	Land Use		A	A	B	A
		Transport Infrastructure	Regional	A	A	A	A
			Global	A	B	C	B
	Post Implementation of Strategic Plan	Land Use		A	A	A	A
		Transport Infrastructure	Regional	A	A	A	A
			Global	A	B	B	B
Paris	Current Position	Land Use		B	B	B	B
		Transport Infrastructure	Regional	B	A	B	B
			Global	A	A	B	B
	Post Implementation of Strategic Plan	Land Use		B	A	A	B
		Transport Infrastructure	Regional	A	A	A	A
			Global	A	A	A	B
Dubai	Current Position	Land Use		E	E	E	D
		Transport Infrastructure	Regional	E	C	D	C
			Global	A	B	C	C
	Post Implementation of Strategic Plan	Land Use		C	C	C	C
		Transport Infrastructure	Regional	B	B	B	C
			Global	A	A	C	C

North Kent

A Global Perspective: In Summary

This indicative assessment highlights the rapid progress being made by the newly emerging global business centres in the Gulf Region and the strength of performance of the mature major economic centres in The Randstad and Paris.

It is important to emphasise the rate of progress for key business centres in the Gulf Region, but keeping in mind the relatively uncompetitive position from which they started. Leadership and streamlined decision making are the hallmarks of those internationally oriented major urban areas, both in the Middle East and North West Europe. They are implementing visionary infrastructure projects to bolster their competitive position in the global economy.

Thames Gateway in Perspective: Delivering the Vision

London and the development of the Thames Gateway as a key growth driver for the capital faces challenges of metropolitan governance (which are shared with other European world cities and major developed cities around the world). Whilst the ideal for transportation planning will be a regional scale body with comprehensive powers, major cities have to find answers to the challenges they face through more complex, multi-scale and multi-actor institutions.

The next 12 months offer an exciting opportunity to prioritise development. The Mayor's decision to revise the London Plan kick-starts that process. The London Plan will also have to say how aspirations within Greater London match up with wider regional plans including the Thames Gateway.

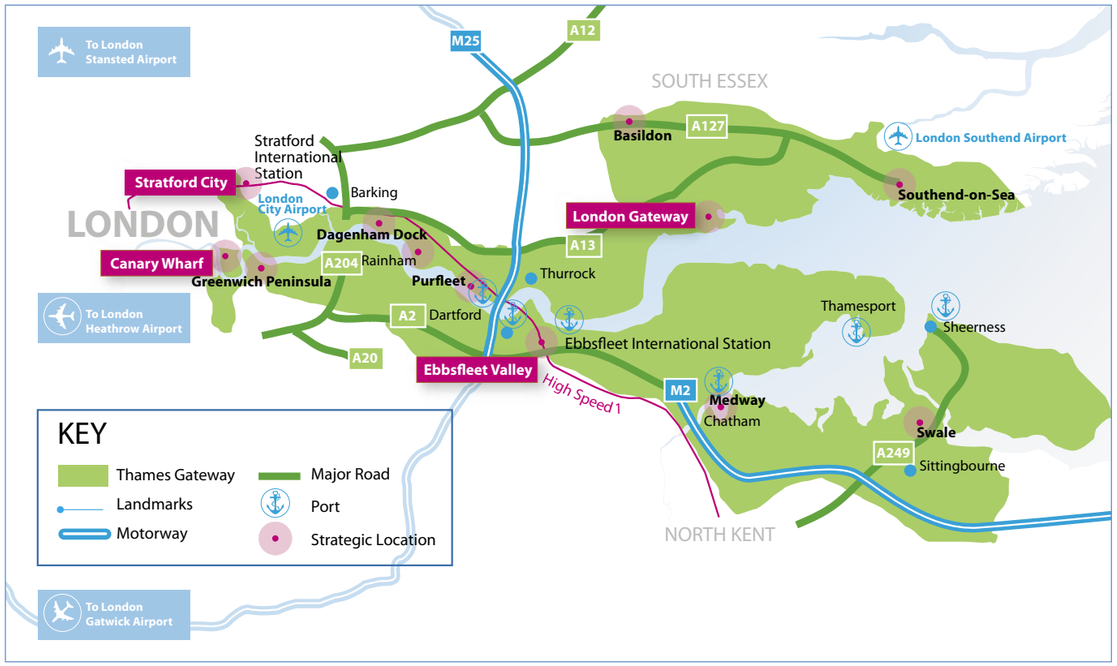
Change is underway in the institutions of regional governance as the regional economic development agencies take on more responsibility. It will be for the Regional Development Agencies (RDAs) to make a case for integrating regional transport planning with business investment.

Co-ordination at regional scale is tackled in the current Local Democracy, Economic Development and Construction Bill. This will bring regional plans and regional economic strategies together in the RDAs of the South East and Eastern regions. Such changes will bring about some of the benefits realised within Greater London where the Mayor is responsible for planning, economic strategy and Transport for London (TfL).

The unique institutional arrangements in London make for stronger connections between infrastructure investment and economic development. The current review of the London Plan gives the opportunity to keep the links between business investment and transport infrastructure at the centre of debate about the future of London Thames Gateway.

The 2008 Planning Act (Newman, 2009) introduces new procedures to clarify government policy and speed up procedures for major infrastructure. Government will publish National Policy Statements on rail, ports, airports etc. and an independent Infrastructure Planning Commission will advise on location issues. New rail, airport or bridge construction in the Thames Gateway will be determined in this way. We can expect greater clarity in government investment plans and speedier decisions. Confidence in infrastructure investment at each of the key locations in the Gateway can also be reinforced by attention to the funding mechanisms for major projects.

The next 12 months offer an exciting opportunity to prioritise development. The Mayor's decision to revise the London Plan kick-starts that process. The London Plan will also have to say how aspirations within Greater London match up with wider regional plans including the Thames Gateway



The Thames Gateway in Perspective: A 21st Century Location

The South East is the UK's most successful region and the Thames Gateway occupies a strategically important location in the region accessing London, the rest of the UK and as a gateway to Continental Europe. It has the connectivity needed to keep business and people in close contact with the vast European consumer and business market.

It is critical to the UK's international container traffic through ports at Sheerness, Chatham and Tilbury and the planned new deep water port technology at Shell Haven.

Transport links are greatly enhanced with extensions to the Eurostar line - it will be quicker to get to European capitals than many other UK regional cities and the new High Speed Domestic Rail service - a journey time to London of 17 minutes. Crossrail is due to become operational in 2017 and will bring the region 'closer' to London and access to skilled labour will also be improved.

The Gateway is also home to two business airports, London City Airport and London Southend Airport, making access to international travel fast and convenient.

Connections to the UK's motorway network puts 30 per cent of the UK population in reach in two hours or less.

Canary Wharf - where the Thames Gateway begins - is one of the foremost financial districts in Europe, and home to many of the world's most successful companies like HSBC and Reuters. Crossrail, coming after the other public transport improvements in East London, and the development of London City Airport, will further significantly enhance the relative accessibility of the Canary Wharf area. The introduction of an air service from London City Airport to New York also has the potential to reinforce the position of Canary Wharf's role in international finance and services.

Crossrail and other transport improvements will also confer significant accessibility benefits on Stratford. From late 2009 Stratford will also enjoy vastly improved access to North Kent brought about by new High Speed Domestic Rail Services and with the coming of Eurostar services in 2010, direct access to Brussels, Paris and other mainland European business and cultural centres. This will underpin its emerging importance, something that will be greatly increased by the catalytic effect of the 2012 Olympic and Paralympic games.

Some suburban business, research and residential locations will also become relatively attractive as current plans are implemented. The introduction of domestic high speed rail services on the HS1 line, together with the new station at Ebbsfleet to serve Eurostar services, will significantly enhance the

Connections to the UK's motorway network puts 30 per cent of the UK population in reach in two hours or less


The Financial District at Canary Wharf

attractiveness of North Kent as a residential location from which to access employment opportunities in Stratford and Central London.

The potential of London Gateway and further significant boosts to Ebbsfleet Valley, Dartford and Gravesend will come with greater co-ordination of their transport facilities. Ebbsfleet Valley could become a blossoming business centre with access not only to Central London but other key European capitals based on highly competitive rail journey times. It would not be dependent on air travel.

Alongside expensive rail investment are perhaps less high profile projects that work to manage road networks and the congestion problems that economic success brings. London Gateway's competitive position will be greatly enhanced by progress on cross-river transport improvements across the lower Thames. Other riverside locations south of the river, west of Gallions Reach will also benefit. Access to these locations from either side of the Thames will be dramatically improved by enhanced river crossings to serve local movements.

The Future

Quality of life plays a key part in the region's identity as described in the Thames Gateway Core Vision by Sir Terry Farrell. Key areas of focus include making connected, accessible places across the region but also to enable the people of the Thames Gateway to have access to London's opportunities.

This report recognises and underpins the need for comprehensive approaches to transport and economic development planning – the Thames Gateway has a coherent delivery framework in place. The area is home to major public sector landholdings in East London, North Kent, Basildon and Medway that provide a workable platform for co-ordinated and coherent development across public and private sectors to deliver on the vision of a smart, connected and accessible location.

Nature watching at Rainham in Essex

Bibliography and Sources

AKINBAMI, J. F. K. & FADARE, S. O. (1997) Strategies for sustainable urban and transport development in Nigeria. Transport Policy, 4, 237-245.

ASCHAUER, D. (1989) Is public expenditure productive? Journal of Monetary Economics, 23, 177-200

FARRELL, SIR T. (2009) The Thames Gateway Core Vision

FRÖIDH, O. (2005) Market effects of regional high speed trains on the Svealand line. Journal of Transport Geography, 13, 352-361

GRAHAM, B. (1998) Liberalisation, regional economic development and the geography of demand for air transport in the European Union. Journal of Transport Geography, 6, 87-104

GUTIÉRREZ, J., CONDEÇO-MELHORADO, A. & MARTÍN, J. C. Using accessibility indicators and GIS to assess spatial spillovers of transport infrastructure investment. Journal of Transport Geography, In Press, Corrected Proof

HICKMAN, R. & BANISTER, D. (2003) Transport and city competitiveness. ETC Conference. Strasbourg

HM GOVERNMENT (2007) Thames Gateway Delivery Plan. London, Communities and the Local Government

HM GOVERNMENT (2008) Thames Gateway Eco-Region: A Prospectus Communities and Local Government.http://www.communities.gov.uk/documents/thamesgateway/pdf/1074037.pdf

HOLL, A. (2004) Manufacturing location and impacts of road transport infrastructure: empirical evidence from Spain. Regional Science and Urban Economics, 34, 341-363

HUDSON, P. (2008) The Thames Gateway: building a new city within an old one? London London School of Economics

JUDGE, E. J., WERPACHOWSKI, K. & WISHARDT, M. (2004) Environmental and economic development issues in the Polish motorway programme: some findings on local authority attitudes. Journal of Transport Geography, 12, 287-299

KRUGMAN, P. (1991) Increasing returns and economic geography. Journal of Political Economy, 99, 483- 499

LEINBACH, T. R. (1995) Transport and Third World development: Review, issues, and prescription. Transportation Research Part A: Policy and Practice, 29, 337-344

LEITHAM, S., MCQUAID, R. W. & D. NELSON, J. (2000) The influence of transport on industrial location choice: a stated preference experiment. Transportation Research Part A: Policy and Practice, 34, 515-535

MAS, M., MAUDOS, J., PEREZ, F. & URIEL, E. (1996) Infrastructure and productivity in the Spanish regions. Regional Studies: The Journal of the Regional Studies Association, 30, 641-649

MCQUAID, R. W., SMYTH, A. & COOPER, J. (2004) The importance of transport in business' location decisions. IN DEPARTMENT FOR TRANSPORT (Ed.) London, Napier University.http://www.dft.gov.uk/162259/163944/The_Importance_of_Transport1.pdf

NEWMAN, P. (2009) Markets, experts and depoliticising decisions on major infrastructure. Urban Research and Practice, 2, 158-168

PUGA, D. (1999) The rise and fall of regional inequalities. European Economic Review, 43, 303-334

RODRIGUE, J.-P., COMTOIS, C. & SLACK, B. (Eds.) (2009) The Geography of Transport Systems, New York, Routledge

TFL (2009) Agenda Item 6: Update in East London River Crossing Review. Transport For London.http://www.tfl.gov.uk/assets/downloads/corporate/Item06-EastLondonRiverCrossings.pdf

UPC (2007) Plan Abu Dhabi 2030, Urban Structure Framework Plan. Abu Dhabi, Abu Dhabi Urban Planning Council (UPC)

VENABLES, A. (1996) Equilibrium locations of vertically linked industries. International Economic Review, 37, 341-359

VICKERMAN, R. (1995) Location, accessibility and regional development: the appraisal of trans-European networks. Transport Policy, 2, 225-234

VICKERMAN, R., SPIEKERMANN, K. & WEGENER, M. (1999) Accessibility and Economic Development in Europe. Regional Studies: The Journal of the Regional Studies Association, 33, 1-15

WHITE, P., CHRISTODOULOU, G., MACKETT, R., TITHERIDGE, H., THOREAU, R. & POLAK, J. ((forthcoming)) The impacts of teleworking on sustainability and travel. IN MANZI, T. & ET AL (Eds.) Social Sustainability in Urban Areas. London Earthscan

WILLIGERS, J., FLOOR, H. & VAN WEE, B. (2005) High speed rail's impact on the location of office employment within the Dutch Randstad area. European Regional Science Association. ERSA conference papers ersa05p308.http://ideas.repec.org/p/wiw/wiwrsa/ersa05p308.html