LONDON
HUB CITY

'London: Hub City' sets out an ambitious and achievable vision for London as the most vibrant, vital and accessible city in the world. This vision sets the context for a new aviation strategy, a new approach to supporting London's role as a key aviation hub, and points towards radical solutions for the capital's transport network. It builds on Britain's pedigree of finding ingenious solutions that are pragmatic, creative and efficient, forming the basis for inherently sustainable infrastructure. It is intended to stimulate debate and act as a catalyst for more detailed investigation, towards a specific outcome: the best future for London and the UK.
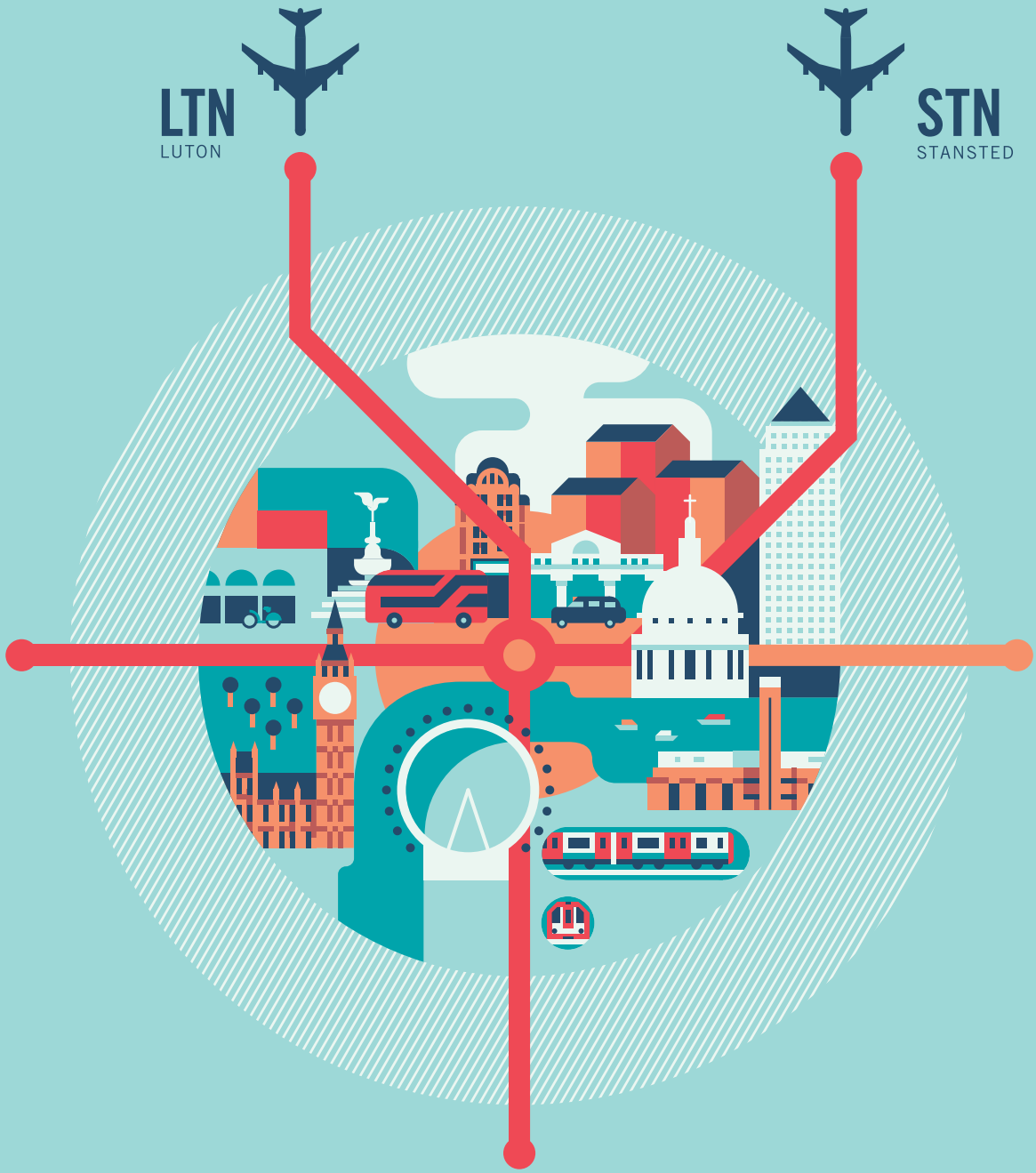
LTN
LUTON

STN
STANSTED

LHR
HEATHROW

ELN
EAST LONDON

LGW
GATWICK

LONDON
HUB CITY

Jolyon Brewis
Chief Executive, GRIMSHAW

A vision for London: the world's first Hub City

London could be the most accessible city in the world. In the decades to come London can develop an international reputation for being the easiest world city to visit; where it is possible to break a long-haul journey for less than an hour, but just as easy to choose to spend a few hours in the metropolis, knowing that London's commercial and cultural attractions can be accessed quickly and reliably.

London is already one of the most vibrant and vital cities in the world. It is an irresistible place for people to visit and, for many international visitors, the gateway to the UK. I am convinced that connectivity is central to maintaining London's position as a principal economic and cultural centre of gravity. But we need to focus on connectivity between the city, not just the airport, and the rest of the world. Our strategy for aviation needs to start with our vision for London.

Recent airport proposals

Much recent discussion about UK aviation has revolved around the best location for a single 'super-hub' airport with multiple runways and significantly expanded capacity. A number of proposed locations have emerged, with differing social, economic and environmental implications. Each existing airport is in the process of developing its own case for growth, or argument as to why it should be the singular UK hub airport; proponents of new airports, such as the Thames Hub, have emerged with the same agenda. Other proposals favour the creation of better connections between existing airports in order to make use of the potential capacity of existing runways.

In all cases, emphasis is placed on the technical capacity of infrastructure and the economic case for hub operation. Many focus, prematurely in my view, on architectural proposals for airport plans and terminal buildings, represented by the ubiquitous aerial view at dusk. In due course the solution will require some bold building, but ahead of that, it requires bold thinking.

London first

Most of these proposals effectively ignore London. They lack a singular vision for the city, building on the best of London's attributes, around which an integrated transport strategy might be formed. At best, they indicate ways to bypass the metropolis with transport connections between airports or to other UK regions. In effect, London is treated as a spur from the hub airport, perhaps on the basis of perceived congestion within the metropolis. This runs counter to a long tradition of the city as a meeting point for commerce and culture, and ignores the importance of London as a true 'world city'.

There is an understandable focus on the needs of airlines in delivering an economic model of hub operation. What is not considered, however, is the diversity of passenger needs and what those people might be looking for when deciding on the route of their journey. If we think more about the unique qualities of London, and what can be offered to a wide variety of travellers, I am convinced that a different type of aviation hub can emerge.

Redefining the concept of an aviation hub

Heathrow Airport Limited have defined a hub airport as "an airport where local passengers combine with transfer passengers to allow airlines to fly to more destinations more frequently than could be supported by local demand alone." Much is made of the narrow economic margins involved in airline business models. Some argue that, if a single hub model is not adopted, the UK will fail to connect to enough places around the world to support our economic well-being.

It is questionable, though, whether the current model of airline, alliance and airport economics should dominate the aviation strategy of London so completely. It is extremely difficult to predict what will happen to aviation beyond the next few years. Recent decades have demonstrated this. Stansted Airport was originally planned ultimately to accommodate four runways and a substantial proportion of long-haul, full service operation. The current situation, with a single runway dominated by budget airlines operating short-haul routes, was not the intention.

Looking ahead, we might confidently predict growth in aviation, and should provide fertile conditions for the UK to capture this growth. The operating models of aviation will change in the future as they have in the past, and will ultimately respond to passenger demand as markets always do. London has the opportunity to influence that demand by establishing a co-ordinated approach to its airports and transport connections and, crucially, project an image of accessibility to a world audience.

The right hub for London

Comparisons are made with other aviation hubs around the world and specifically in western Europe, with the inference that what is right for other locations around the world is also right for London. However, this potentially ignores a number of key commercial and cultural attributes that have made London such a powerful attractor for business and leisure travellers.

We may see two types of aviation hub developing in the future: 'Hub Airports' that are relatively remote from conurbations, offering

high throughput and quick transfer connections, and 'Hub Cities' where a variety of passenger demands is recognised, and a more integrated transport strategy is pursued. London has the opportunity to pursue the latter, and become the world's first Hub City.

Hub Airport or Hub City?

Hub Airports (Figure 1) will generally be remote from the 'host city', in order to maximise the potential for capacity growth; as a result, transport connections between the airport and the city need to be extremely efficient. Landside 'airport city' developments tend to emerge to capitalise on the economic power of the hub airport. Transport connections are often planned such that they bypass the host city altogether. The planning of a hub airport is dominated by the need to reduce transferring passenger connection times to a minimum, aiming for a Minimum Connect Time (MCT) of less than 1 hour.

Hub airports certainly deliver economic benefit, directly within the airport, indirectly through supporting greater connectivity to the rest of the world and, in the UK, through the taxation of transferring passengers. However, there is a tendency for the airport to become an independent economic centre that misses the opportunity to contribute to the city it serves.

A Hub City (Figure 2) is sufficiently attractive to persuade a significant portion of transferring passengers to extend their lay-over, leave the airport and spend time in the city. There are probably no more than a handful of cities around the world that have the right geographic location, the critical mass, and the integration of commerce and culture to work in this way.

A Hub City would prioritise fast and reliable transport connections between its airport(s) and the city centre in order that as many transferring passengers as possible enjoy the city centre. The focus would be on allowing passengers to reach the city centre less than 30 minutes after leaving the aircraft, meaning that passengers can choose a meaningful connect time that includes a number of hours spent in the city. Airports are therefore located in relatively close proximity to the city centre and, as a result are limited in their potential for expansion.

Recognising this, a Hub City is likely to

pursue a strategy where aviation capacity is split between more than one airport. Passengers are encouraged to connect through the metropolis, not around it or remote from it, and the economic benefit is delivered more directly to the businesses and people of the city.

London as a Hub City

London has the ideal characteristics to be a Hub City (Figure 3): it is geographically well-placed for aviation hubbing, commercially vital and culturally vibrant. To a limited extent, it works in this way already. Over 30% of international passengers transferring through Heathrow currently leave the airport and spend over £500 per head in central London. Making London's connections legible, fast and reliable could drive these figures much higher.

Why? Because London, like New York, Hong Kong and Singapore, is a city that large numbers of people want to be in. Virgin Atlantic recently commented on how their passengers prefer to transfer through Hong Kong rather than the Middle East. This demonstrates that airlines recognise that the city's business and leisure attractions change and increase demand .

Through adopting this vision, not only would the world's view of London be transformed, but

all of the economic and cultural benefits would be enjoyed by London, not just its airport(s). The result is a hub whose transfer lounge is no longer restricted to the airport, but includes all of central London's amenities. This would be achieved through major improvements to all modes of airport and city transport, and the design of an integrated system that is easy to use. In future, each transferring passenger's ticket could be an 'Oyster'-style smart card that also accesses all of London's public transport (Figure 4). London becomes the most accessible city in the world.

Our infrastructure capital

London is already served by a network of airports, and Heathrow Airport in particular is well-connected to the centre of London. Today, some journeys from the aircraft to the city centre take as little as 35 minutes. It is entirely possible to reduce this journey time and, critically, make it reliable. By placing a strong focus on radical improvements to transport links, other airports, existing or new, could add more effectively to overall capacity and better serve other areas of local population.

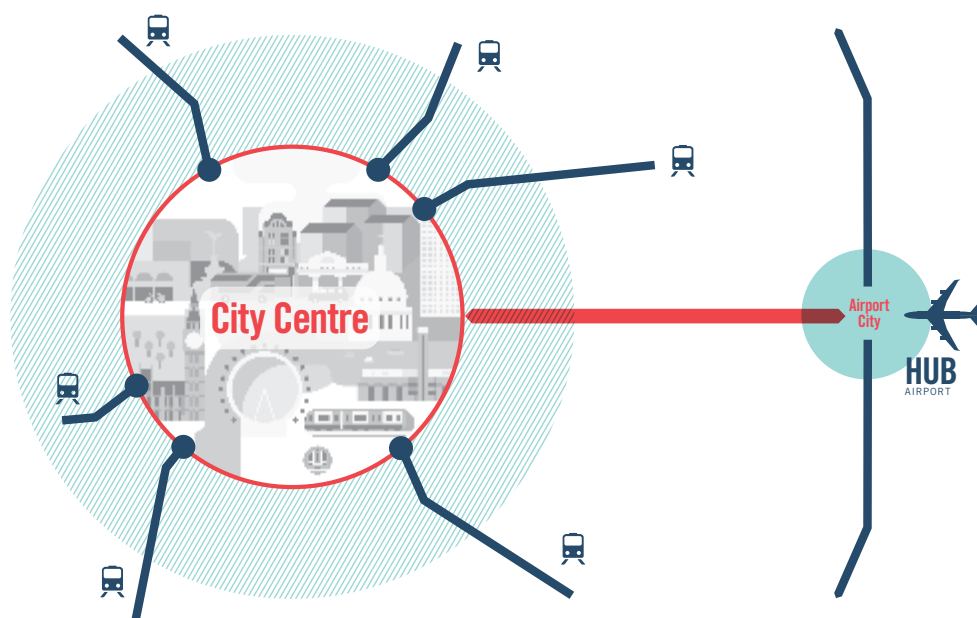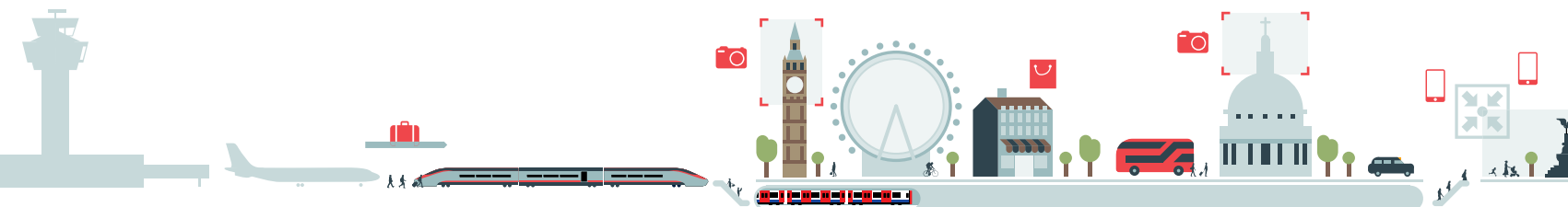This strategy would make continued and better use of existing and planned infrastructure
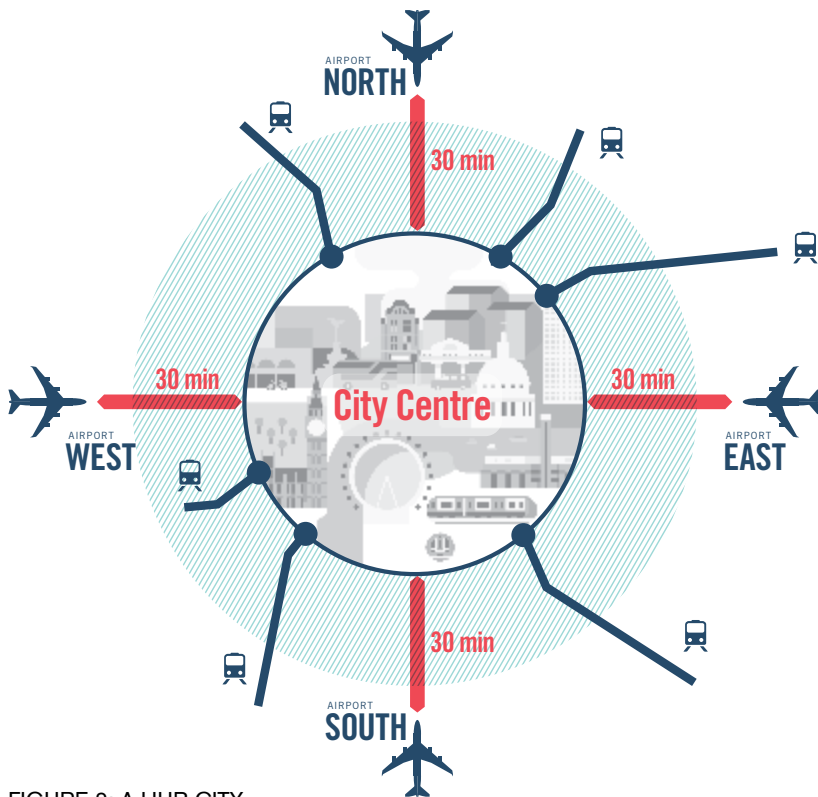

FIGURE 1: HUB AIRPORTS

FIGURE 2: A HUB CITY

work within a renewed vision for our capital city. We need to look at whether different airline alliances could potentially be based at different airports, and whether some aviation traffic could be redistributed to better utilise all of our airports.

Undoubtedly, a significant proportion of transferring passengers will seek a short connect time to make their journey as efficient as possible. This can be accommodated by the Hub City; Heathrow already offers transfer times as short as 45 minutes, and can, with further physical improvements and dispersal of some of its current traffic, provide this for more passengers in future. Others will want to take advantage of London's improved accessibility, and enjoy extended periods in the city. Our airport system should offer passengers a range of experiences of London, with 'minimum' and 'meaningful' connections.

A likely outcome might retain Heathrow as the principal 'short connect' hub airport, within a Hub City where passengers are offered unrivalled access through central London and greatly improved options for travel that include
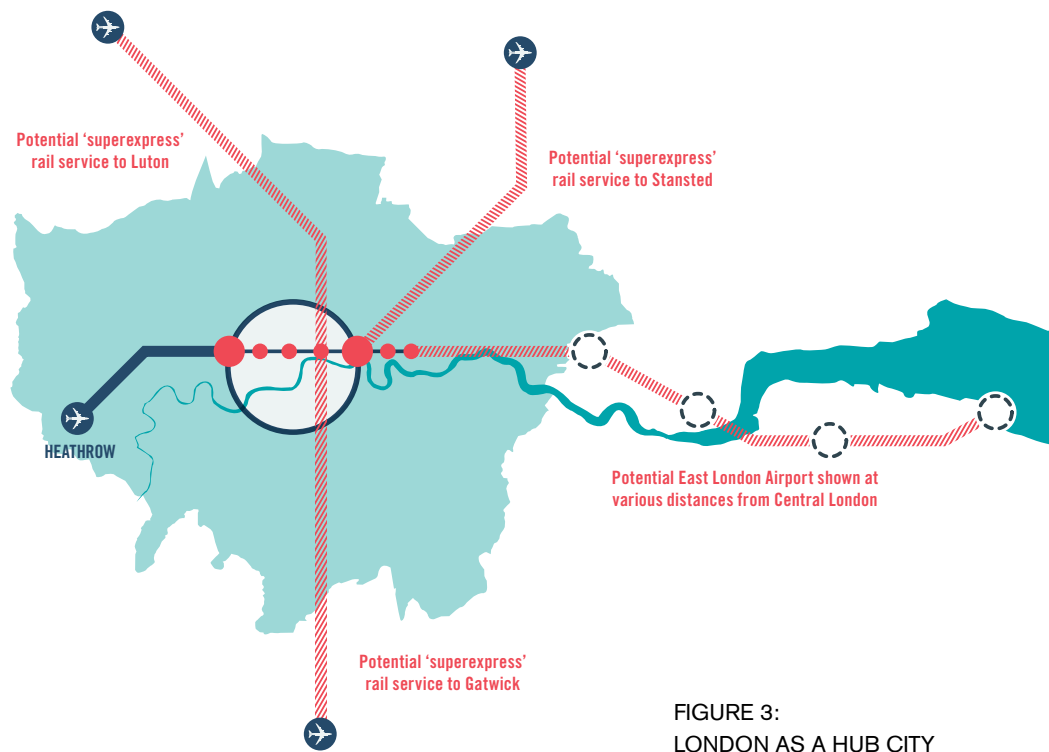
including Heathrow and potentially other airports, Heathrow Express, and Crossrail. Like much of London's existing infrastructure, the outcome is a transport system that has inherent resilience, and is not reliant on a single location for all connections.

A vision for London as a Hub City would help to direct decisions on other key infrastructure projects: connections to other transport modes (including conventional and high speed rail) should happen through Central London. Investment in improved transport links throughout London would benefit all Londoners, not just transferring aviation passengers.

The Hub City airport network

Strong arguments have been made, by Heathrow Airport Limited and others, for a single hub airport. Other cities, such as New York, operate with multiple large-scale airports. Rather than finding reasons why this cannot be made to work competitively in London, it must be worth actively trying to make our existing infrastructure

Potential 'superexpress' rail service to Luton

Potential 'superexpress' rail service to Stansted

HEATHROW

Potential East London Airport shown at various distances from Central London

Potential 'superexpress' rail service to Gatwick

FIGURE 3: LONDON AS A HUB CITY

NEW YORK

LONDON

POTENTIAL HUB CITIES

other airports, even a new 'East London Airport' if that proves to be the best option, and other modes of transport.

Impacts and benefits

Proposals for relocating the UK's hub airport away from Heathrow have profound implications for the people who use the airport, and for the Londoners whose livelihoods are reliant on the airport, both directly and indirectly. There are significant social and economic implications associated with airport location, and options to redevelop the land at Heathrow ignore the fact that its value is largely reliant on the airport's existence. Take away the airport, and the economic picture of West London will significantly change.

Having airports close to central London means that the impacts of aviation also remain relatively proximate. Many Londoners already feel the impacts of our airports, and may feel that a more remote airport would be better for them. It is perhaps less clear how these people would be adversely affected by the resulting economic changes. Nor is it generally understood how much better our existing airports can be.

Improvements to air quality and reductions in noise impacts are already underway, and, with the impetus of a large London constituency, could be accelerated.

Looking at London as a Hub City has the potential to disperse aviation benefits and impacts to a broader population, and avoid a wholesale shift in the socio-economic map of London. There will be greater potential for more Londoners to benefit from the economic and cultural benefits of the hub.

Typical British compromise or ingenious British solution?

It is tempting to look at 'super-hub' proposals as being inherently ambitious and visionary, whereas any proposal that 'tinkers' with existing infrastructure runs the risk of accusations of small-scale, parochial thinking. This is a gross simplification. In fact, there is a real risk that any 'super-hub' airport could become a white elephant or vanity project. Britain has a terrific pedigree of finding ingenious solutions that are pragmatic, creative and efficient. We should seek a similarly ingenious answer to our current aviation needs.

London: Hub City is an eminently achievable vision, which is inherently resilient and makes best use of existing and planned London infrastructure. It allows for incremental implementation, allowing us to build what is needed within the foreseeable future, rather than committing to enormous new infrastructure in anticipation of long-range and possibly unreliable forecast demand.

Such a holistic approach to London's needs is in itself hugely ambitious. It calls for a wide range of stakeholders to buy-in to an integrated vision for London, and a redefinition of what an aviation hub can be. However, if it is implemented within the context of a powerful unifying vision, it forms the basis for inherently sustainable infrastructure.

The Airports Commission, chaired by Sir Howard Davies, will evaluate many ideas for supporting aviation growth. Will its scope be sufficiently broad enough to include a confident vision for London's place in the world? I want London to find a unique solution that does justice to a unique city.
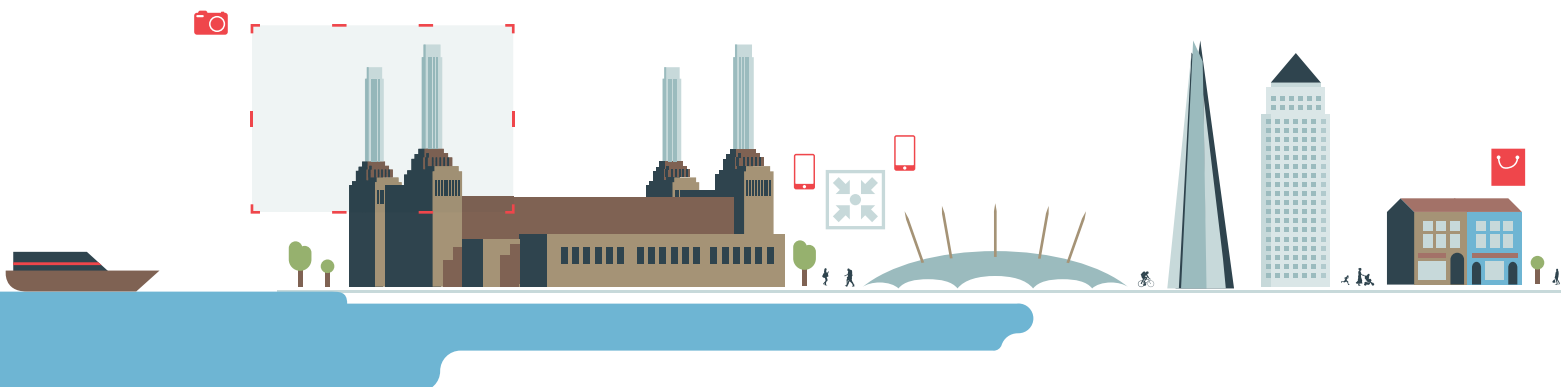
FIGURE 4:
A HUB CITY SMART CARD

LONDON HUB CITY PASS

HONGKONG

SINGAPORE

IMPLEMENTING THIS VISION

Transforming London into a Hub City requires a co-ordinated and integrated approach by a number of agencies, with major investment across a number of London's transport systems.

Of our existing airports Heathrow is currently closest to operating in the right way to support the Hub City, but punctuality and reliability of service need to be improved. Relaxing current restrictions on runway operations could achieve 10% additional capacity, allowing for improved reliability of service. Increased staffing for Border Control and baggage handling would help to ensure that passengers can negotiate airport processes as quickly as possible. Whilst much of the physical infrastructure at Heathrow is excellent, further improvements are needed, including a better transport interchange

in the central terminal area, faster development of the new Terminal 2 and reduced reliance on older terminals.

Improvements to the London transport network should be made, with new emphasis given to fast airport connections and unprecedented accessibility. Heathrow Express could offer a more frequent service, with faster trains and perhaps even allowing passengers to connect directly to each satellite pier. Crossrail might allow faster connections between its central section, currently under construction, and Heathrow Airport. Improvements to the London Underground network, and better staffing of key London transport nodes, similar to the approach taken during the Olympic Games, could transform the experience of the city for aviation passengers and Londoners

alike. Investigation of whether more security and immigration processing could take place 'en-route' might further streamline the experience for transfer passengers.

Additional aviation capacity will still be required to serve London and the UK. Priority should be given to capacity that can be delivered effectively and support the Hub City concept. All alternatives should be considered, including existing airports and potential new locations. A 3rd runway at Heathrow should form part of this consideration, with a focus on further improving resilience and reliability; it might also represent the quickest way to increase overall capacity in the medium term, but should be looked at in the context of a network of airports serving London.
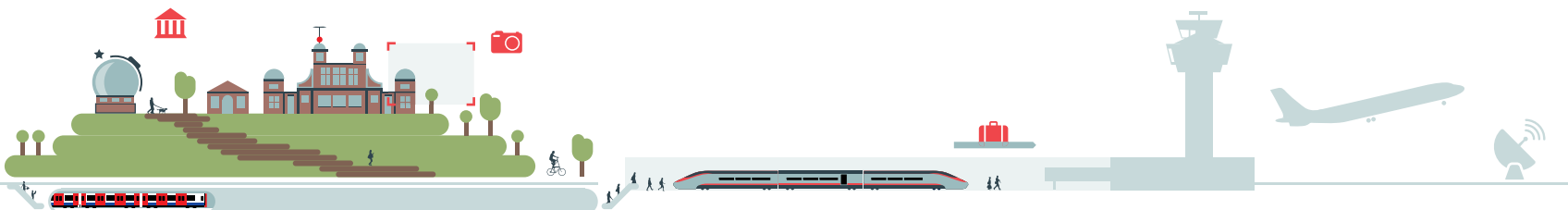
PROFILES

Jolyon Brewis
Chief Executive, Grimshaw

Jolyon is an architect skilled in finding creative, pragmatic solutions driven by a careful understanding of the client's requirements and the unique possibilities of each project. He has an exceptional ability to communicate ideas to a broad range of people, and win the widespread support necessary for the development of large-scale, complex projects. His architectural experience covers all of Grimshaw's principal sectors. Projects include all phases of the Eden Project, the headquarters for Rolls-Royce Motor Cars, masterplanning the expansion of Stansted and Heathrow Airports, an urban extension to the town of Harlow, and the Aerogenerator wind turbine. Jolyon believes that masterplanning and infrastructure design offer the greatest opportunities to improve the sustainability of our built environment. His work on the Eden Project exemplifies the practice's comprehensive approach to buildings, landscape and infrastructure, and has directly informed subsequent transportation and urban masterplans.

Grimshaw

Grimshaw was founded by Sir Nicholas Grimshaw in 1980. The practice became a Partnership in 2007 and operates worldwide with offices in New York, London, Melbourne, Sydney and Doha employing over 300 staff. Grimshaw's international portfolio covers all major sectors, and has been honoured with over 150 international design awards including the prestigious Lubetkin Prize. The practice is dedicated to the deepest level of involvement in the design of their buildings in order to deliver projects which meet the highest possible standards of excellence. The company's work is defined by strong conceptual legibility, innovation and a rigorous approach to detailing, all underpinned by the principles of humane, enduring and sustainable design.

Grimshaw's international reputation as transport architects and leaders in the planning and design of air projects dates from the early 1990s, beginning with the new concepts for air travel we exhibited at the Venice Biennale in 1991. Since then, Grimshaw has developed a thorough and worldwide understanding of the key drivers for airport owners and operators and is uniquely placed to deliver fast solutions to the growing needs of airports. This is characterised in the company's masterplan for the expansion of Stansted Airport and the design of the 3rd Runway at Heathrow.

Urban Research Unit

Grimshaw Architects and cultural placemaking consultants FutureCity have recently launched the Urban Research Unit (URU). URU is a one-year research project focused on issues related to urban design, masterplanning, and placemaking. Established in New York and London, this joint initiative will consider and challenge the conventional tools used to plan and build contemporary urban centers. The Urban Research Unit, in collaboration with the Fellows of the RSA, will host a series of eight events each exploring, through a targeted panel discussion, a different topic that shapes the public realm. Influential thinkers including designers, clients, academics and other industry experts will help enrich the panel discourse at each event, while relevant content will also be shared on a dedicated URU website. This project will culminate with a final document in early 2014 which will act as a toolkit of key issues and considerations to be applied as New York and London's urban environments prepare for the future.

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