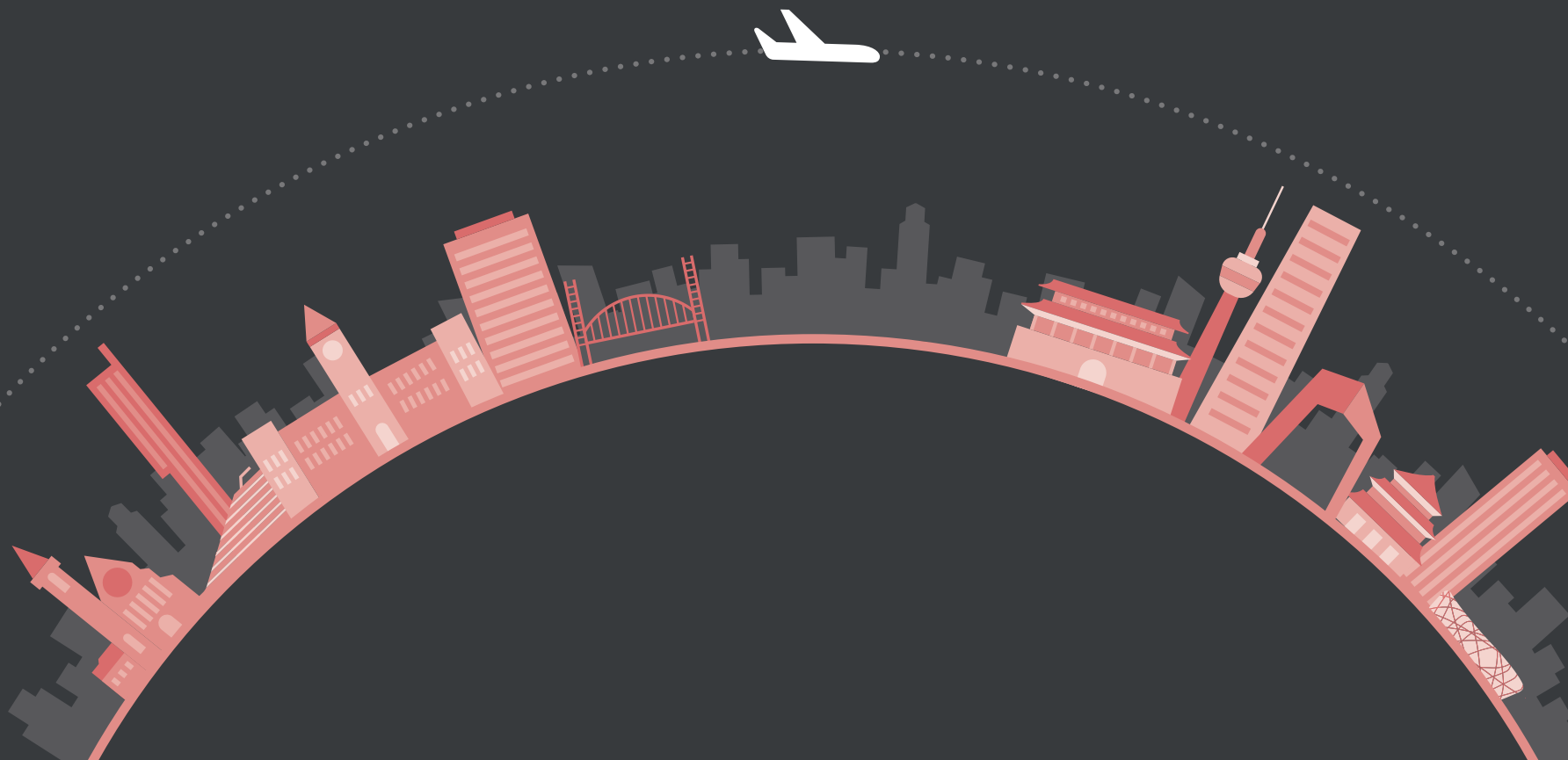


THE CHINA DIVIDEND ONE YEAR IN

November 2017



Prepared by:

SDG Economic
Development

61 Mosley Street
Manchester
M2 3HZ
United Kingdom

+44 161 261 9154
www.sdgED.com

Prepared for:

Manchester China Forum

Lee House
90 Great Bridgewater Street
Manchester
M1 5JW
United Kingdom

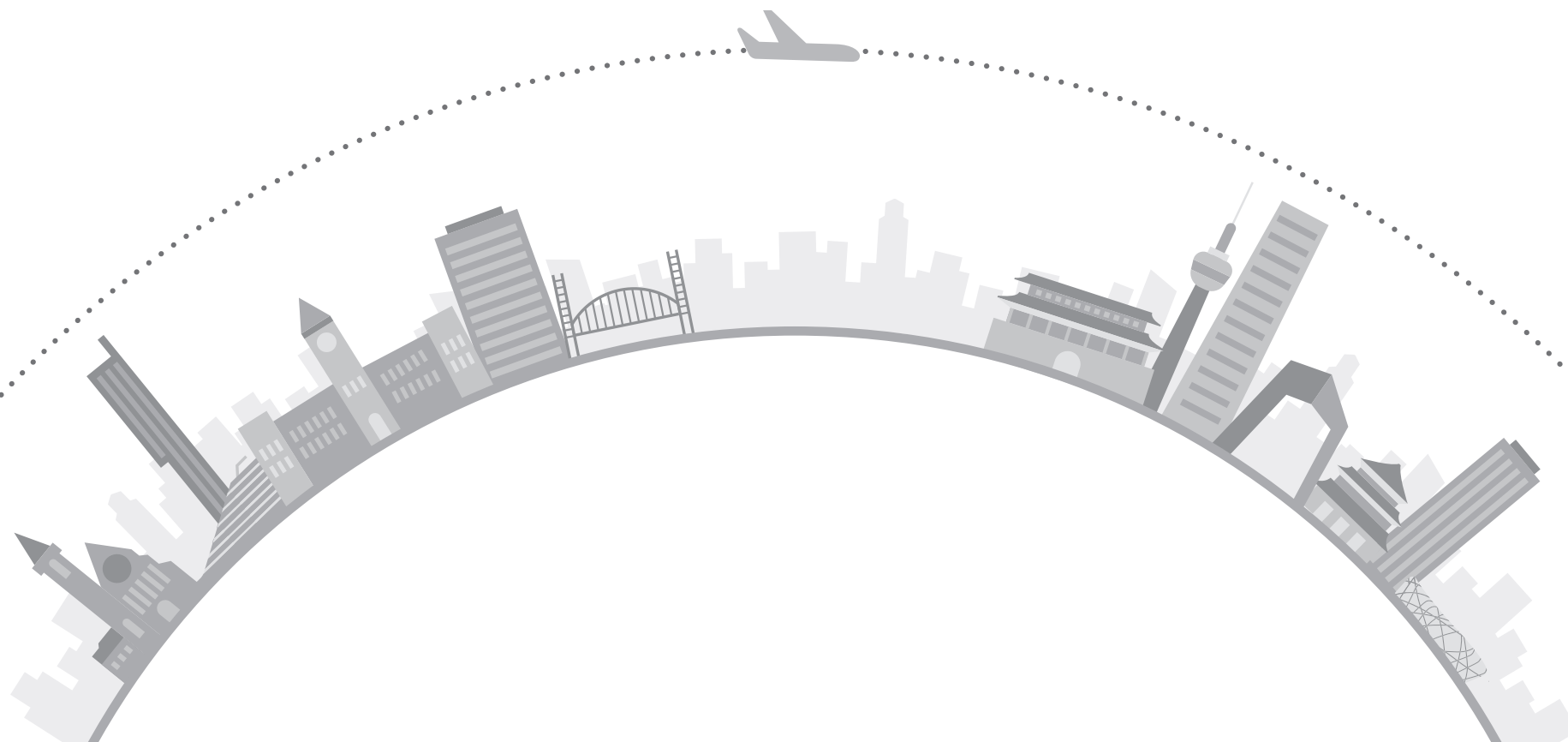
This report has been produced for the Manchester China Forum by SDG-Economic Development (SDG-ED). Formed in Autumn 2016, we were established to build on Steer Davies Gleave's founding strengths in transport and movement, and enhance its offer by diversifying into adjacent areas such as enterprise, science and knowledge, skills, and wider enabling infrastructures. Many economic development consultants exist, but we are working genuinely to be independently-minded, evidence grounded, and innovatively insightful.

From offices in Manchester, Leeds, and London, we help clients improve the economic competitiveness and potential of their organisations, sectors, markets and places. The team provides a 'whole spectrum' offer, ranging from policy development and analysis, to strategy and action planning, and on to evaluation and impact assessment.



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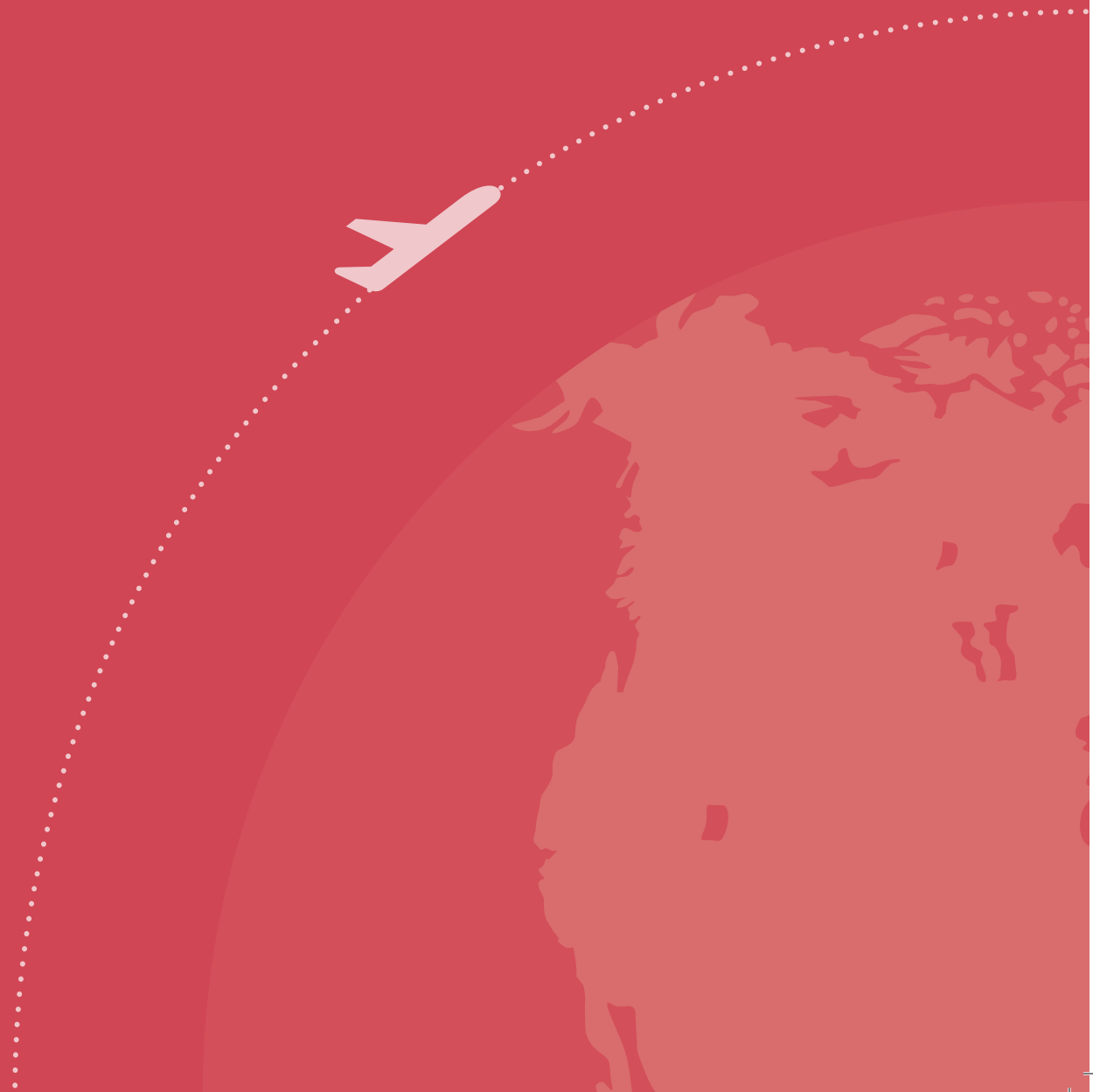
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EXECUTIVE SUMMARY



CONTEXT

This report considers how the long-term economic impact of direct flights between Beijing and Manchester can be demonstrated and understood over the long-term. It covers both the city itself, and some of the implications for the Northern Powerhouse in general.

The emphasis is on a ‘developmental’ approach – articulating how, over time, the connectivity derived from direct flights contributes to economic growth and development. This is through a wide range of impact ‘pathways’, which include the Airport Campus itself as the primary agent of (and enabler) of change, the quality of the wider infrastructure and asset base, business and enterprise capability, knowledge and innovation, and people, skills and cultures. These impact pathways are pervasive and not always easily measurable – but, in combination, they can have a profound and sustained effect on income and prosperity. Consequently, any assessment of these impacts must not shy away from aspects that are hard to measure or for which evidence is not currently available.

These direct flights are important because the global economy is, to a large extent, a network of major cities and their supporting local regions. The bulk of global GDP is generated by this network. As recent work by the McKinsey Global Institute highlights, there are 600 globally significant cities that account for 60% of global GDP. Given that

global GDP is around US\$75.5 trillion, these 600 cities account for US\$45.3 trillion in collective GDP. This is four times the size of China’s GDP and more than 17 times UK GDP. Manchester is one of these global cities. Indeed, with a GDP of £350 billion the Northern Powerhouse is equivalent to the 21st economy in the world. The global value chains that span the world and that drive economic growth link these cities, and their firms, together. The ‘high impact firms’ that drive and exploit these global value chains also tend to cluster in these major cities by virtue of their skills and knowledge bases. Each city, therefore, both benefits from its own economic clout, and also from the links and contributions of the other cities and their businesses across the globe. This means that some industry sectors are better positioned than others to exploit this global connectivity. These will be an eclectic mix of industries able to lift their participation in global value chains, prosper from inward investment in infrastructure and thrive in the creative and innovative environment being created by stronger UK-Chinese engagement. Indeed, a core objective of the Northern Powerhouse Independent Economic Review was to create a pan-Northern cluster of internationally significant high value-added sectors. These are sectors that are likely to rely more than most on international connectivity and, therefore, the findings of this report should be taken into account when devising strategies for their development.

International connectivity is central to the effectiveness of these inter-city networks, and direct flights, as opposed to indirect flights, can have an especially important contribution. Business opportunities may be opened up by modern digital communication – but face-to-face contact and trusted relationships drive actual investments, trade and innovation. Air cargo also now plays a key role in ‘high speed’ supply chains that link cities. The better these flight connections are, the stronger the ability to leverage this role as a major (city-based) node in the global economy.



WHY THIS REPORT MATTERS

This report tells the story of the economic impact of Manchester's direct flights to Beijing one year on. It breaks new ground by attempting to capture the full range of benefits that direct air services create, how they can grow over time, and what we should put in place now to track and capitalise on these unfolding benefits in the future. As such, it provides a rare opportunity to grasp and communicate the transformational economic impacts of improved flight connectivity. It has been published at a time when a number of policies that are key to the UK's ability to secure more such direct connectivity are being shaped (Aviation Strategy, Industrial Strategy, Brexit and major land transport investments) – with major opportunities to be seized when it comes to forging closer ties with China.

As such, this perspective reflects the work of the Manchester China Forum, which has taken a holistic approach to engaging with China has been key. Prioritising air routes into China has been at the centre of the Forum's work given the recognition that connectivity impacts so many areas of its engagement agenda with China.

The report assesses the economic benefits that have been, or will be, derived from the route by systematically gathering, organising and analysing data on the features of this service and its effects.

The impact of direct connectivity to China is assessed from five perspectives summarised in the figure overleaf and described as follows:

- » The Airport Campus
- » Infrastructure and Asset Bases
- » Business and Enterprise
- » Knowledge and Innovation
- » People, Skills and Culture

Understanding the nature of these impacts is always important, but especially as the UK develops its post-Brexit strategy and tactics. Assessments of economic impacts focus commonly on aspects that can be easily measured and for which data is readily available. The 'developmental' approach taken here is longer-term and more strategic. It focuses on potential impacts irrespective of how hard they are to measure and is not deterred by gaps and shortcomings in currently available data. In economic development, the most powerful transformational impacts are often found in these 'hard to measure' dimensions – not least because creativity and innovation drive economic growth but are, by definition, hard to measure and frequently hard to predict.





The Airport Campus:

The primary agent and enabler of change and impact. Impacts here include change in passenger and cargo flows, and the growth of associated services. The Airport Campus is the epicentre of the ‘ripple effect’ of spreading economic impacts in the Northern economy.



Infrastructure and Asset Bases:

Impacts included here take in both tangible effects (such as uplifts in land, buildings and equipment use and values) and intangible assets (such as brand recognition).



Business and Enterprise:

Effects considered under this domain include widening access to markets, products and services, both in terms of short-term transactional improvements and longer-term changes in entrepreneurial cultures and relationships.



Knowledge and Innovation:

Considerations here take in enhancing knowledge by facilitating collaboration and increased research and development and therefore innovation across all domains.



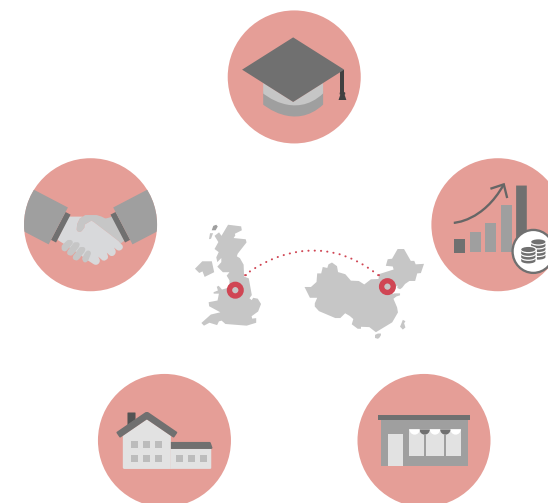
People, Skills and Culture:

Impacts reviewed under this domain include the development of cultural and social capital and more explicit people-related effects (such as tourism and employment).

WHAT WE DISCOVERED

Viewed from this global perspective, it is no surprise that the UK's first ever scheduled direct flights to mainland China outside of London are proving to be a great success. This success is reflected in the following key findings – outcomes for which the new route has been a major contributor.

- » The route has carried 90,000 passengers between Manchester and Beijing, 15% higher than planned for. This has driven a 21% uplift in total UK-China air passenger journeys compared to the previous year, total growth excluding the route would have equated to 5%.
- » Manchester is now the second largest UK air route for exports to China, accounting for 13% of all air exports in 2016, a value of £601 million. The monthly values of exports from Manchester Airport to China have also seen substantial growth, from £49.7 million in June 2016 to £181.3 million in March 2017 – a significant rise of 265% in the value of exports since the route began.
- » The pipeline of inward investment projects is increasing. Inquiries from China to Manchester agents have doubled in the year following the launch of the route, and current opportunities on the table could create 850 new jobs in the City Region. A similar picture is likely in the other cities of the North.
- » Department for International Trade data demonstrates that the Northern Powerhouse is experiencing a marked uplift in inward investment projects (a 24% increase in 2015/16 over the previous year), and in 2016 accounted for 25% of total UK exports to China (£12.7 billion for the UK as a whole, £3.1 billion for the Northern Powerhouse).
- » The Chinese student population at the University of Manchester alone is increasing at twice the rate of Chinese students in the UK as a whole, and the City Region is becoming increasingly a place for aspiring young Chinese people to study at both undergraduate and post-graduate levels (other Northern universities report a similar trend).
- » A contribution to the Visitor Economy of around £138.68 million annually and £626 million on a Net Present Value Basis looking five years into the future. This is twice the projected value before the scheduled flights commenced (£67.6 million annually).
- » The enabling of business and civic links is already leading to an increasing number of senior delegations visiting Manchester and the North, which in turn will lead to new partnerships and investments.
- » Chinese tour operators such as Nanhu are now incorporating Manchester and the wider North as a core component of their UK leisure tour programme.
- » There has been a 54% increase in Chinese interests in property in Manchester in 2016, compared to 2015. The investments in the City Region that followed the launch of the Cathay Pacific direct service to Hong Kong in 2014, and have continued since the launch of the Hainan route, are anticipated to continue as Manchester's prominence as a desirable investment location with direct connectivity into the Mainland grows.
- » The total number of people travelling from the area defined as Manchester Airports' catchment area (either directly or indirectly in both directions) has risen by 20,415 (+38% uplift) to 74,055 since the introduction of the route.



Crucially, the report concludes that these impacts will not just multiply in line with increased passenger volumes, but will interact with each other to deliver a long-term and sustainable set of benefits that will make a major contribution to the creation of both a prosperous Northern economy, and a balanced and outward-facing UK. The flow of goods, services and people in both directions is further enhancing the perception among Chinese officials, businesses and individuals that Manchester – and the wider Northern Powerhouse – is an attractive place to visit, invest in and trade with.

The positioning of the North and its economic ‘Powerhouse’ as a business centre on the global stage was specifically noted by Chinese President Xi Jinping in his launch of China’s One Belt One Road strategy in 2016. This report charts out an appropriately ambitious response to the opportunity highlighted by President Xi Jinping – a response that adopts the same sort of global impact focus that is driving China’s integrated strategic approach to trade, investment and innovation.

This prominence means that not only is a direct service from Manchester Airport to China both viable and sustainable, it is having the effect of stimulating fresh demand for additional frequencies or services to this key market. In doing so, it is proving that the UK’s primary gateway outside of London – Manchester Airport – can play a critical role in bolstering the international connectivity of the nation as a whole in the years to come.

HOW THIS APPROACH CONTRIBUTES TO POLICY THINKING

Looking to the future, the long-term significance of the new direct flights between Manchester and China is best grasped by considering the two major transformations underway in this system of major cities. First, the centre of gravity of the global economy is shifting to the east and to the south as Asia in general, and China in particular, grow in economic importance. Second, global economic growth is now being driven by the middle-sized cities (the 600 cities that account for 60% of global GDP referred to earlier), more so than the so-called ‘mega cities’. This means that the network of cities that comprises much of the global economy is becoming more complex and inter-dependent. Consequently, direct flight connectivity is evolving to reflect this need to improve links between the middle-sized cities in the global economy.

The benefits that we are currently seeing stemming from the Manchester-Beijing route will be multiplied as more direct flights to other major cities worldwide are added in the future. These benefits will be especially important to the Northern Powerhouse as a whole via improved direct flight connections to this network of other global ‘powerhouse’ regions.

Therefore, Manchester Airport’s distinctive role as the long-haul flight gateway for the Northern Powerhouse will act as a major enabler for future trade development, infrastructure planning and investment and innovation facilitation. Looking at innovation and growth in more detail, the performance of global cities is strongly dependent on ‘high impact firms’,

businesses that have a strong intention, the capability, the right leadership, market positioning and access to finance to grow rapidly over a sustained timeline. China is well-endowed with these types of businesses and experienced entrepreneurs. Closer connectivity via Beijing to China will greatly enhance Manchester’s capacity, and that of the wider North, to link with and benefit from these sorts of firms, particularly as they ramp-up their international ambitions over the coming years. As such, direct flight connectivity has the clear potential to improve Manchester and the Northern Powerhouse’s ability to play into global innovation networks and value chains, both of which assume very much greater significance in a post-Brexit world.

As the gateway for the Northern Powerhouse, Manchester Airport is well-placed to become one of two primary transport hubs for the UK by virtue of its role as :

- » A prominent transport hub in the north of England (with connectivity to HS2 and other transport modes, and especially the proposed Northern Powerhouse Rail Network) – and the interface for international business connectivity; and
- » A catalyst for the growth of the high-performance firms that benefit from this international connectivity; and
- » A globally connected innovation capability well-placed to benefit from, and contribute to, the network of 600 major global cities and the associated web of global value chains that links these cities.

RECOMMENDED ACTIONS TO AMPLIFY THESE SUCCESSES

The following recommendations are made:



Reflect the contribution of Manchester Airport's direct flight connectivity in the Northern Powerhouse strategic agenda.

The Northern Powerhouse strategic agenda, and broader strategies aimed at rebalancing the UK economy, should place a strong emphasis on the contribution of Manchester Airport as the main long-haul direct flight gateway for the Powerhouse. The evidence and insights contained in this report can be used to understand this contribution and as a result, this perspective will help policy-makers to make informed decisions about the interventions needed to maximise the value derived from enhanced international connectivity. As additional direct flights to other major world-wide cities are added, the benefits generated can be captured by using the comprehensive approach piloted here.



Improving long-haul connectivity to the North, by overcoming barriers to the attraction and retention of new services, should be prioritised in the Government's new Aviation Strategy.

The new Aviation Strategy being developed provides an opportunity to re-consider the benefit-cost relationships associated with innovative reforms to Air Passenger Duty (APD). The broad nature, and long-term extent, of the economic benefits generated by direct flight connectivity suggest that innovative temporary reductions in the level of APD for new routes have the potential to stimulate dis-proportionally larger economic growth contributions – including innovation performance. More progressive APD arrangements aimed at stimulating economic growth via temporary

reductions may be attractive in this context, and as such should be considered by the Aviation Strategy.

Similarly, international connectivity needs to be a priority when decisions are being made around improving domestic transport infrastructure. Whilst APD regulation adjustments can attract new services into the UK, improved transport links in the North could expand the economic benefit of these routes to other connected regions. The framework laid out in this report can serve as one input to this analysis by emphasising the importance of strong flight connectivity to strategic investments in re-shaping regional economic geographies. The combination of international flight and local ground transport connectivity reduces overall journey times and extends the functional geographies that drive economic growth.





Explore joint UK-China initiatives to identify and progress collaboration and confidence-building opportunities between the Northern Powerhouse and Belt and Road initiative.

Given the clear synergies between these two Government-backed strategic initiatives, a more formal framework for supporting joint collaboration in this space should be explored. The Manchester China Forum should therefore explore interest in both the UK and China in forming a joint working group to explore collaboration between these two initiatives, looking at developmental approaches to improve multi-modal transportation links as well as broader collaboration opportunities around infrastructure, innovation and education.

The attractiveness and the feasibility of launching post-graduate scholarships for gifted Chinese to study at Manchester's universities should be explored as part of this initiative. Scholarships of this type have an important significance in China because they are a clear demonstration of Manchester's long-term commitment to the reciprocal relationship with China. These scholarships would be a particularly effective way of spending some of the additional income from the visitor economy created by the direct flights, with a dis-proportionally high return on the investment in terms of profile, mind-sets, credibility and reputation in China.



Develop an improved understanding of the China outbound market growth potential to pro-actively raise ambitions around the North's connectivity with China.

The stimulation of direct connectivity between key markets, such as Manchester-China, should be key features of the UK government's diplomatic and economic discussions with China. Chinese airlines will fly 140 times more passengers in 2017 than they did 35 years ago (IATA)¹. Less than 10% of the Chinese population currently own passports. As passport coverage increases, and the growth of second tier cities and investment into airports improves, the China tourism and trade market is expected to become the largest in the world.

Recognising that this report has focused on the UK side, a better understanding of this demand-side within China now needs to be developed in order to better anticipate, and facilitate, the benefits of this growth potential for the Northern Powerhouse and the UK as a whole.

¹ *What has driven the outperformance of Chinese Aviation? IATA Economics, October 2017.*



Disseminate and promote this developmental assessment approach elsewhere in the UK.

It would be useful, from a national perspective, to raise awareness of the advantages of adopting this 'developmental' approach to assessing the economic impacts of flight connectivity. This 'rounded' assessment, with a clearly articulated 'theory of change' based on synergies between people, skills and culture, knowledge and innovation, business and enterprise and infrastructure and assets, aims to actively increase the economic multipliers that apply at a local level – not just assume these factors as 'a given.'



FOREWORD



LORD JIM O'NEILL OF GATLEY

MANCHESTER AIRPORT AND CHINA

What a pleasure and honour it is for me to write this foreword. I grew up a couple of miles down the road from Ringway Airport. As a kid, I would occasionally get dragged on a lunch time visit with my parents to one of those posh pubs - as I used to think of them - that circled its perimeter, to marvel at the wonders of those planes landing and taking off. When I got to my latter teens and early 20's, I even remember trying to impress girlfriends with the same experience. If my memory serves me rightly, most of the same pubs exist today, and I must make a point of revisiting them.

My deceased parents would be shocked to know that in 2017, I was writing a foreword for a report about the airport's role being the gateway for the Northern Powerhouse and its links to China. They, of course, had witnessed me being able to write, and were around for the earlier part of my professional career. But, chairing an advisory board on the economics of Greater Manchester, leading the Cities Growth Commission, which led to me joining the government, the House of Lords, and the whole Northern Powerhouse idea; they saw none of this. And, of course, there has been the whole BRIC thing, and China's central role in it.

Sadly, they passed away before all the fame that came with that. So, what a great excuse to talk about all these things linked together.

Let me start with the modern-day airport, which is now clearly established as effectively the Northern Powerhouse airport. I am sure on the occasional day, those with ambition from other parts of the north might make some claim as a competitor, but I think this is not often, and for good reason, because as time creeps by Manchester Airport's role in the North of England - and indeed the nation as a whole - becomes more and more self-evident.

I often describe the core area of the Northern Powerhouse as Man-Sheff-Leeds-Pool, as each of Sheffield, Leeds and Liverpool are within 40 miles of Manchester. With the right state of the art affordable modern transport, especially road and rail, this hub of the Northern Powerhouse, along with all the other towns and cities within the area bounded by these proud cities, is close to eight million people. Extending this envelope up to Newcastle, east to Hull, North West to the Lakes, south to Stoke, and it increases to at least 12 million. This is the sort of number that if it can truly function as an economic hub, is up there with London and other great urban based areas around the world - as one of the key hives of activity that drive the global economy.

From this global perspective, Manchester Airport, at the heart of the Northern Powerhouse, must continue to be encouraged and supported as the main air gateway to

the rest of the world for all these people. We also need to make sure that all the key road and rail links function seamlessly to connect the airport to the key centres of population density around the rest of the North. This is an opportunity to progress exciting plans for the coming years...and beyond. It is particularly important both with HS2 and the emerging east-west focussed plans to implement a state-of-the-art and affordable Northern Powerhouse Rail system. Encouragement and support is needed from our government to ensure that policy thinking reflects this ambition, and that it remains at the forefront of the political agenda. This was already massively important before Brexit, and it goes without saying that post Brexit, it is crucial.

LET ME NOW TURN TO CHINA

I could spend pages writing about this. But I shan't because I will try to be succinct. The very notion of policy helping to build a different pattern of geographic economic growth by undertaking ambitious projects to both strengthen and link up urban areas is at the heart of China's astonishing success of the past 30 years and more. As a result, it is easy for me to explain the significance of the Northern Powerhouse to my Chinese colleagues. Thankfully, I have such opportunities through my many points of contact with China, via direct visits or through their Ambassador and his staff, or the many others that visit

me. They "get" the Northern Powerhouse because the concept of transformation via investing to create a new and better economic geography is so familiar.

But what of the Chinese economy itself? These days, a lot of commentators seem to worry endlessly about so many aspects of China, including the fact that real GDP growth has slowed to a 6-7% growth rate, way down from the double-digit rates of the previous decade. Well to me, and those others that have mapped out a path for China's future before, some slowing was highly likely. Indeed, in this regard, I like to point out that China is the only one of the four BRIC countries- Brazil, Russia, India and China- that has grown in line with my predictions this decade. Indeed, all four of them surpassed my expectations in the first decade, which is partly why the BRIC idea became so famous. Let me give more context. China is bigger than the other BRIC countries, in aggregate. It is nearly five times bigger than India. Even if India grows by more than China for the rest of this decade, say even 8%, China growing by six to 7% will create another equivalent of today's India before the decade is over. This growth contribution creates another South Africa or Greece every three to four months.

China has become Germany's number one overall trade partner in terms of exports and imports, at the end of 2016. And so on....

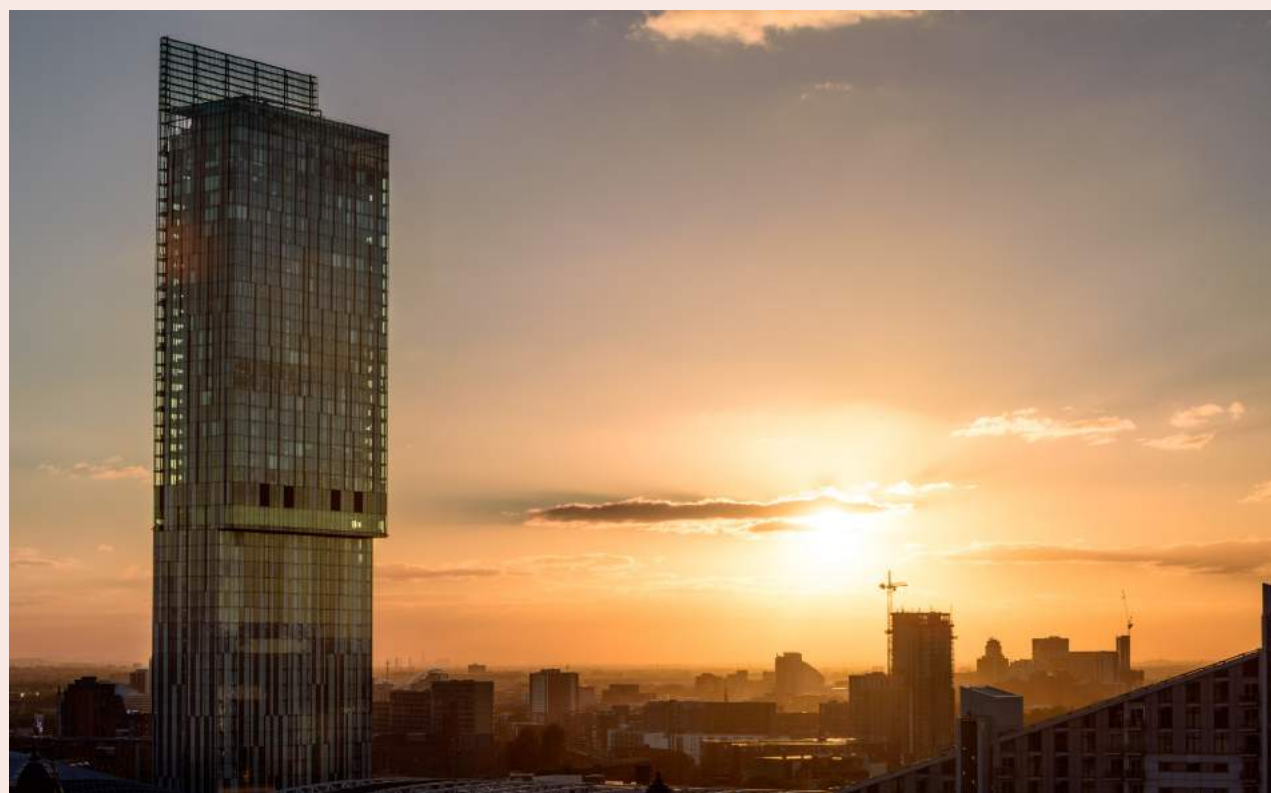
Under the previous Conservative Party Government that I was briefly part of, we set a goal for China to become one of Britain's top three trading partners within 10 years. This was part of the golden relationship being established, and I was a proud member of the team that invited President Xi to Manchester in late 2015 to experience the exciting developments going on, even in those early days of the Northern Powerhouse. I have been to China many times since that visit and have many business contacts in the Far East. Let me tell you, the concept of the North presenting a wealth of opportunities to Chinese investors and visitors has very much landed. The Chinese very much "get" the Northern Powerhouse opportunity and so it is vital that we also "get" the China opportunity, not least by facilitating further direct air connectivity with it, and by focusing on building the trust, mutual understanding and reciprocity to prosper together.

I recently took a trip to Switzerland and spent some time walking in the Bernese Oberland, and passed by the mountain rail station at Kleine Scheidegg, the station that takes the train up to the Jungfrauoch station, the highest in Europe. It was the first time I had been there in more than 35 years. In those days, there were many Japanese boarding those tiny trains. Today, it is dominated by the young, ambitious, enquiring Chinese.

If China reaches the BRIC type dream that my ideas suggested; by becoming as large as the US by 2027, and by helping all the BRICs to be as large as the G7 economies by 2037, Switzerland may have to build some new mountains! If the UK wants a slice of this action - and still wants to realise its ambition for China to become a top 3 trading partner, further direct connectivity is needed at the earliest opportunity and this report makes clear why that is the case. This report shows that this direct connectivity has more benefits and 'reach' than one may think. These pervasive impacts help to boost skills and knowledge, strengthen civic ties, as well as grow the economy in more obvious ways.

There is an opportunity immediately before us to do something about this. As I write this foreword, the government is bringing to a close the initial call for evidence for the UK's new national Aviation Strategy, which will cover the period from now until 2050. This is an opportunity to be ambitious and maximise the economic and social benefits delivered by aviation in the way set out by this report. Such a strategy should explain how we can write the next chapters of the story that has begun with the Hainan Airlines route to Beijing.

If that is done properly, one thing is for sure - by the time China and its fellow BRICs match the G7 in terms of economic weight, Manchester Airport will have a lot more direct flights, with a lot more airlines to a lot more places in China. The North, and the wider UK, will prosper as a result.



01

**THE START OF
OUR JOURNEY**



On 10 June 2016 at 6:05am, the first scheduled flight from Beijing to Manchester landed on runway one at Manchester Airport, opening a new chapter in the city's long-standing relationship with China. As the first scheduled service from mainland China to the UK to land outside London, the opening of the route was a strategic priority not just for the Airport, but for the City Region and the North of England as whole.

Marking the first anniversary of the launch of the service operated by Hainan Airlines, this report looks at the story of economic impact since that inaugural flight; what direct connectivity between Manchester - and the wider North - and mainland China has already stimulated and how the scope and scale of benefits might grow in the years to come. In doing so, it looks at the impacts felt in a range of different domains, starting with the Airport Campus itself and then considering Infrastructure and Assets, Business and Enterprise, People Skills and Culture and Knowledge and Innovation.

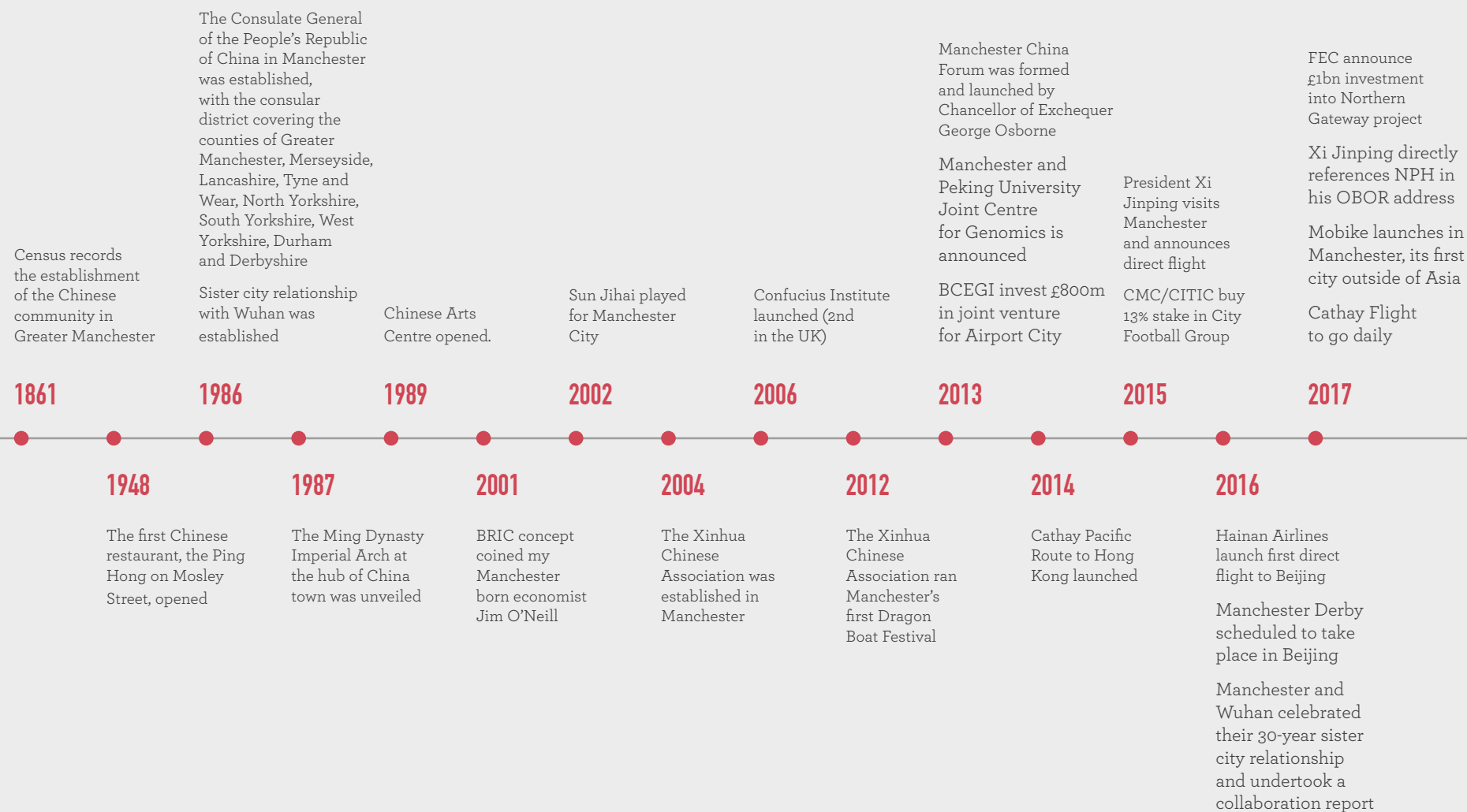
THE MANCHESTER-CHINA CONNECTION

As the world's first industrial city, Manchester's history is intertwined with the history of many other countries around the world; including a deep and long-standing partnership with China, with trading relations going back more than 150 years. The city also enjoys one of the earliest formed UK-China civic links with Wuhan, established in 1986.

Its Chinese community - home to the second largest Chinatown and the third largest urban Chinese population in Europe - has a long and rich history allowing it to celebrate Chinese New Year and Dragon Boat festivals on a scale rarely seen elsewhere in Europe. This vibrant and dynamic Chinese community has presented an ideal platform for the new wave of Chinese professional migrants relocating to the UK as part of the continued global expansion of its leading commercial players.



THE MANCHESTER CHINA TIMELINE





The direct flight between Manchester and Beijing started at the right time and continues to increase and develop cooperation between Manchester and China. The direct route is a perfect example of the 'One Belt One Road' and Northern Powerhouse policies interconnecting. After one year of this flight, the Consulate General of China in Manchester has seen continued growth in trade and communication between China and the North of the UK, with Manchester becoming the most significant investment location in the UK outside of London.

I hope that inter-communication between the UK and China continues to encourage more cooperation between China and the North of England, and hope that more Chinese people come to Manchester, the 'Economic Capital' of the North of England, to set up business, study, travel, and have first experiences in this unique and charming region.

Sun Dali – Consul General of People's Republic of China in Manchester

The city places a great deal of emphasis on its relationship with China, so much so that it formed a Manchester China Forum in 2013. The rationale for the Manchester China Forum was based, in part, on thinking by world leading economist Lord Jim O'Neill. Manchester-born Lord O'Neill coined the Brazil Russia India China (BRIC) epithet and was also involved in devising a growth strategy for Greater Manchester. The Manchester China Forum was established to drive forward long-term, strategic development, acting on the recommendation to bring focus and coordination to engagement with China in Lord Nat Wei's Growing East report.²



² Lord Wei (2012) Growing East: A strategy for Greater Manchester's engagement with China



The Manchester China Forum was not only established to deliver a step change in the city's engagement with China but also to set in place the foundations for long-term partnership and collaboration with the world's most important growth economy.

At the heart of this vision was delivering new air routes, which we recognised were key to realising our ambitions around all our commercial, educational and cultural priorities. When, in years to come, we look back at the establishment of the Manchester-Beijing route; it will undoubtedly be regarded as one of the most significant milestones in anchoring the city region's relationship with the world's global superpower.

Rhys Whalley, Executive Director, Manchester China Forum

One of the key aims of the Manchester China Forum has been to secure and sustain direct air routes, with the objective of enabling economic growth through improved relationships and business connectivity between Manchester (and in turn the North of England) and China. This objective was at the core of the Manchester China Forum's early work to secure Chinese investment in Manchester, with an early success being the selection of Airport City as Chinese construction firm Beijing Construction & Engineering Group International's (BCEGI) first UK investment in 2013. Growth in Chinese inward investment into the city-region has contributed significantly to securing the direct flight connectivity between Manchester and Hong Kong with Cathay Pacific, and subsequently the direct flight to Beijing with Hainan Airlines.

A turning point in the Manchester-China relationship came with the visit of President Xi Jinping to Manchester on October 23 of 2015, the first by a Chinese Head of State. The visit, which culminated in his announcement of the non-stop direct service between Manchester and Beijing, also marked the start of a "golden-era" of bilateral engagement between the UK and China. While the city itself, and the North, has benefited significantly from greater access to the Far East; the UK as a whole, also stands to feel the positive impact of this enhanced connectivity.

CONTEXT

The context within which the Hainan Airlines' direct flights between Beijing and Manchester have been introduced is influenced by China's extraordinary and sustained economic growth, which is shifting the centre of gravity of the global economy to the east. Some estimates put this centre of gravity in the mid-Atlantic in 1980 and anticipate that it will lie between India and China by 2050.

These shifts are reflected in air transport. Over the 10 years 2006 to 2016 Chinese air passenger numbers tripled and air freight (measured on a tonnes-km basis) went up by over 2.7 times. Most significantly, over this period China's share of world air freight on a tonnes-km basis accounted for 5.165% of the global total in 2006 and 10.87% in 2016 – a trend that is likely to continue.³

More generally, the web of flights that span the globe is shifting to align with, and support, this changing economic centre of gravity. We are witnessing new direct flights (such as the Manchester-Beijing route) driven by these transformations to the global economy. This provides major cities with an opportunity to use networks of direct flights between major cities world-wide to strengthen their prominence in the global economy (the bulk of world GDP is generated in these major cities and Global Value Chains loop through these cities). As the McKinsey Global Institute has put it: there are 600 cities that

account for 60% of world GDP. Given that this is around US\$75.5 trillion, these 600 cities account for US\$45.3 trillion in collective GDP. This is four times the size of China's GDP and over 17 times UK GDP. Manchester is one of these global cities.⁴

As an example, Manchester's Chinese sister city Wuhan, which recently opened the new international Terminal 3, has seen its passenger numbers rise from five million annually five years ago, to 22 million last year. It is anticipated that this figure will hit 40 million by the end of the decade. Similarly, from a base of just seven international routes five years ago, Wuhan anticipates having more than 60 by 2020. Whilst rapid economic growth and the emergence of an increasingly affluent middle-class have been key drivers; China's investment in high speed rail infrastructure also means that regional hub airports like Wuhan are now able to tap into catchment areas incomparable in scale to anywhere else around the globe.

Technological advances in aircraft support this global prominence opportunity by allowing longer flights between re-fuelling stops (e.g. the new non-stop flight between London and Perth). These advances will cascade down to smaller aircraft over future decades, re-configuring the global 'hub and spoke' flight network to allow more (smaller)

hubs and more spokes to emerge. In the future, a major city like Manchester stands to gain from this confluence of continued innovation in aircraft, a more diversified set of direct flights, and the changing centre of gravity of the global economy.

This major transformation means that the UK's Industrial Strategy, Aviation Strategy and efforts to foster the Northern Powerhouse have the potential to address, and to benefit from, this major re-orientation of the global economy. As the major gateway for the Northern Powerhouse, Manchester Airport can help to strengthen the Powerhouse's economic connectivity with many of the other major cities that generate 60% of global GDP. This gateway therefore provides a tangible infrastructural contribution to UK Industrial Strategy, the future success of the Northern Powerhouse and the government's Aviation Strategy should recognise and support this role.

This profound shift in the global economic centre of gravity associated with China's rise has been reflected in recent developments. In May 2017, at the Belt and Road Forum in Beijing President Xi Jinping described a wide range of coordinated initiatives some already well-established and others planned for the future, highlighting an integral and ambitious agenda for China in international collaboration (see next page).

³ Data from World Bank air traffic database.

⁴ Dobbs et al (2011) *Urban world: Mapping the economic power of cities*. McKinsey Global Institute. GDP data from the World Bank economic database.

THE 'ONE BELT AND ONE ROAD' INITIATIVE

The 'Belt and Road' initiative provides a visionary blueprint for China's role in global economic development. With \$900bn of planned investments, ranging from ports in Pakistan and Sri Lanka to high-speed railways in East Africa, and on to gas pipelines crossing central Asia, it is arguably the largest overseas investment drive ever launched by a single country.

Drawing on the historic Silk Road, which transformed the nature of international trade links in ancient times, the 'Belt and Road' Initiative offers a modern-day solution focussed on inclusive growth and development in the 21st century. The 'Belt and Road' refers to the land-based 'Silk Road Economic Belt' and the seagoing '21st Century Maritime Silk Road'. The concept covers more than 60 countries and regions from Asia to Europe, accounting currently for some 30% of global GDP and more than 35% of the world's merchandise trade.

The initiative aims to reinvigorate the flow of capital, goods and services between Asia and the rest of the world, by promoting further market integration and building new ties among communities. It aims to offer businesses opportunities to tap into new markets

along the 'Belt and Road' and gain deeper access to markets in the Chinese mainland, South East Asia, the Middle East, and Central and Eastern Europe.

The UK was the first developed country to support the Belt and Road Initiative, and the first to join the Asian Infrastructure Investment Bank as a founding member. The North of England is an important player in the initiative, with President Xi Jinping referring explicitly to the Northern Powerhouse in his speech at the BRI opening ceremony on 14 May 2017:

"Initiatives of relevant countries, such as the Eurasian Economic Union of Russia, the Master Plan on



ASEAN Connectivity, the Bright Road initiative of Kazakhstan, the Middle Corridor initiative of Turkey, the Development Road initiative of Mongolia, the Two Corridors, One Economic Circle initiative of Vietnam, the Northern Powerhouse initiative of the UK and the Amber Road initiative of Poland."

Since January 2017, the UK has become the westernmost link of the Belt and Road after the first China-UK direct freight train service successfully departed from Yiwu on a 12,000km roundtrip lasting 18 days. The train returned in April 2017, loaded with UK goods destined for the Chinese market.

Sources: China encircles the world with One Belt, One Road strategy, The Financial Times 4/5/17, <https://www.ft.com/content/0714074a-0334-11e7-aa5b-6bb07f5c8e12?mhq5j=e1>, The 'Belt and Road' Portal, Hong Kong Trade Development Council beltandroad.hktdc.com/en, XINHUANET Full text of President Xi's speech at opening of Belt and Road forum http://news.xinhuanet.com/english/2017-05/14/c_136282982.htm - Last accessed 22 June 2017

Strong Global Value Chains⁵ are crucial in this international future vision. Increasingly participation in Global Value Chains is key to the economic performance of city regions, allowing places to capitalise on their specialisms by trading with suppliers and clients across the globe. The greater the connections between cities, in this case Manchester and Beijing, the stronger the potential for enhanced wealth creation and economic growth. This emerging model for what can be thought of as ‘transnational industrial strategy’ is already reshaping the geopolitical landscape. China’s demonstrated capability in strategy and organisation, together with appropriate inter-governmental agreements, has the potential to re-configure entire sections of existing Global Value Chains. Given this, improved Manchester-China connections, facilitated by direct flight connectivity, create a channel of engagement for Manchester (and the wider North of England) with the world’s most important growth market and the most ambitious geopolitical strategy of our generation.

⁵ *Global Value Chains reflect the stages of activity within processes of production (of either goods or services) located in different countries. For more see: <http://www.oecd.org/sti/ind/global-value-chains.htm> - Last accessed 22 June 2017*

OBJECTIVES & APPROACH

OBJECTIVES

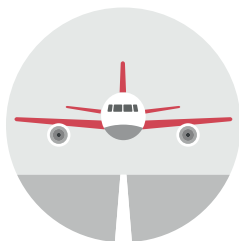
Much has previously been written about attaching economic value to new flight services, with an emphasis on immediate impacts on spend in the visitor economy. This report seeks to break new ground by demonstrating the wider economic value of direct flight services; capturing the immediate economic impacts felt since the Manchester-Beijing route launched, but going beyond a ‘one-off’ calculation of impact to describe logically how direct connectivity can and is acting as a catalyst for further economic growth. In doing so, the report considers those impacts which have been realized quickly since the new service was introduced and anticipates those which will follow.

A wide range of partners and stakeholders have perspectives on the benefits that direct connectivity is providing and this study has aimed to systematically gather, organise and analyse different types of data to produce a holistic view of the short, medium and long-term benefits of the route. The study uses a theory of change approach to trace through the logic from the inputs that direct flight connectivity will encourage, through to outcomes and impacts.

APPROACH

This report aims to capture the various ways in which increased passenger and freight traffic, brought about by the launch of direct flight services, delivers benefit to an area. Based on the data collected, these benefits are organised into a series of domains, which are set out below. Crucially, by mapping how these domains interact with each other, the report also illustrates how direct connectivity can lead to broader, sustained economic benefits. Substantial increases in benefits of this type can, with the right strategic response, result in a range of transformational linked effects that can permanently lift both the city’s and the broader Northern Powerhouse’s income and prosperity.

Many economic impact assessments focus strongly on the direct, indirect and induced impacts associated with the consumption of a new product or service. This report goes beyond this, analysing the broad economic and social impacts of the route. This breadth is achieved by recognising that there are many ways in which assets can be enhanced; some are tangible (for example, new building construction and renovation) whilst others are more intangible in nature (such as relationships/trust and cultural linkages). The approach characterises impact across five inter-connected domains, which together form the economic ‘ecosystem’ which direct flight connectivity has the potential to influence:



The Airport Campus: The Airport Campus is the environment in which change brought about by the launch of a direct service will be immediately felt. This means there are several areas in which direct impact can already be measured and captured, for example through change in passenger and cargo flows, and growth in associated services. At the same time, the campus serves as a barometer for the benefits that will be felt further afield and how these may increase in scope and scale in the future.



Infrastructure and Asset Base: Covering both the tangible (such as land, buildings and equipment) and in-tangible (such as brand recognition and prominence), this domain considers how direct flight connectivity is driving changes in the availability, suitability, cost, and value of Manchester and the wider North's infrastructure and asset bases.



Business and Enterprise: This domain considers where and how direct flight connectivity is adding value to current business and enterprise activities, through for example improved access to markets, products/ services and knowledge via the route. This covers short-term improvements to transactional processes (such as export activity, and/or levels of inward investment) and often longer-term changes in entrepreneurial culture (such as increasing collaboration/knowledge exchange, leading to new business models and ways of working).



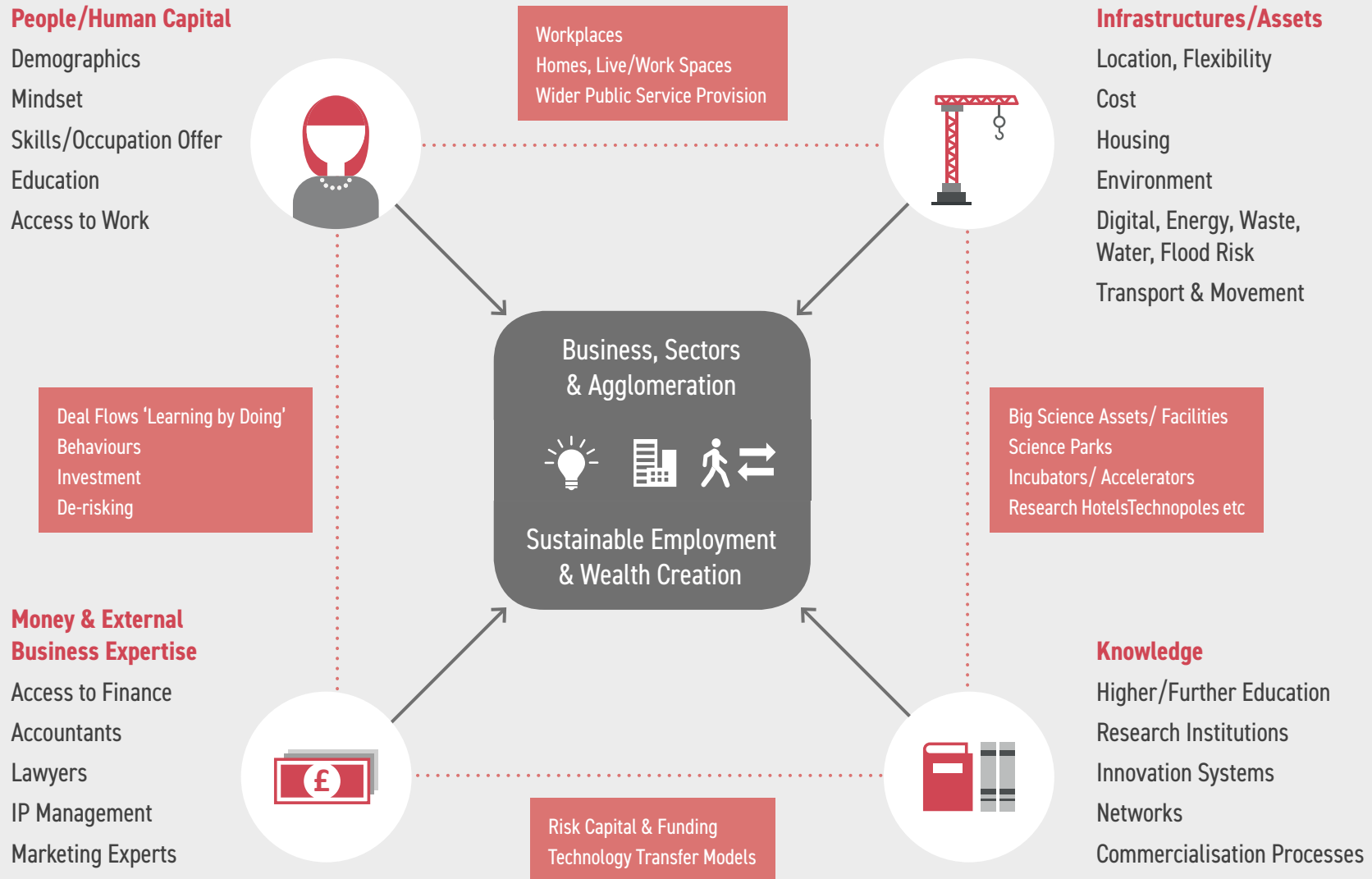
People Skills and Culture: Building on already strong cultural ties between the North of England and China, this domain considers how route further influences both the development of cultural and social capital (for example, through civic engagement and cultural exchanges) and more explicit value adding activities (such as tourism and employment) through people.



Knowledge and Innovation: Whilst knowledge is a key underpinning factor in all the above, this domain reflects a crucial impact of the direct flight connectivity as an enabler of enhanced knowledge (by facilitating collaboration and increased research and development) and therefore innovation across all domains.

The following diagram summarises this 'ecosystem' approach to the impact assessment. A more detailed framework aligned with this approach is provided at the end of this report in the Technical Annex. Each section of the report uses a clear delineation of Inputs, Activities, Outputs and Outcomes & Impacts to define impact channels.

It is important to recognise that the model is the starting point for measuring the benefits of direct connectivity over the long-term. As such, this is first output of an ongoing programme of evidence-gathering to demonstrate the value of direct flight connectivity with Beijing to Manchester's economy and the wider North.



Source: SDG-Economic Development

Some impacts have been felt already and can be observed in quantitative terms, such as increases in leisure and business tourism and student numbers. Others cannot be measured in full at this point, as they require more time to be established and become evident. For example, an increase in inward investment enquiries from China may be evident at this stage, but it may only be in subsequent years that this pipeline is converted and a full measurement of jobs created can be delivered.

One year in, it is also possible to qualitatively capture emerging observations, understand inaugural achievements, and anticipate how direct flight connectivity will continue to drive impact across the North of England and consequently the UK as a whole. As such, the report draws on combination of hard data and informed insight from key stakeholders. It is anticipated that the availability of quantitative evidence will be still stronger in future iterations of the report.

A major advantage of this ‘developmental’ approach to assessing the economic impact of direct flights is that it has the potential to create an evidence-base that can be used in future years to adjust the Input-Output multipliers used to calculate knock-on impacts to reflect local conditions more accurately. This will allow these multiplier coefficients for employment and Gross Value Added (GVA) to be increased as evidence on these tracked economic impacts

accumulates. From this perspective, the ‘Theory of Change’ articulated in this framework can be reflected in increased multiplier effects – as the Manchester economy improves its performance via learning how to better exploit the synergies between people, skills and culture, knowledge and innovation, business and enterprise and infrastructure and assets. This gives the Manchester China Forum a thought leadership role in a broader UK (and international) context.

The following chapters consider each domain within the ecosystem framework. Each chapter begins with a description of the why the domain in view matters, the type of data it has been possible to collect and the impacts it is anticipated will occur (over the short, medium, and long-terms), followed by an analysis of outcomes, one year in. Each chapter then concludes with consideration of what might be expected in the future within that domain.





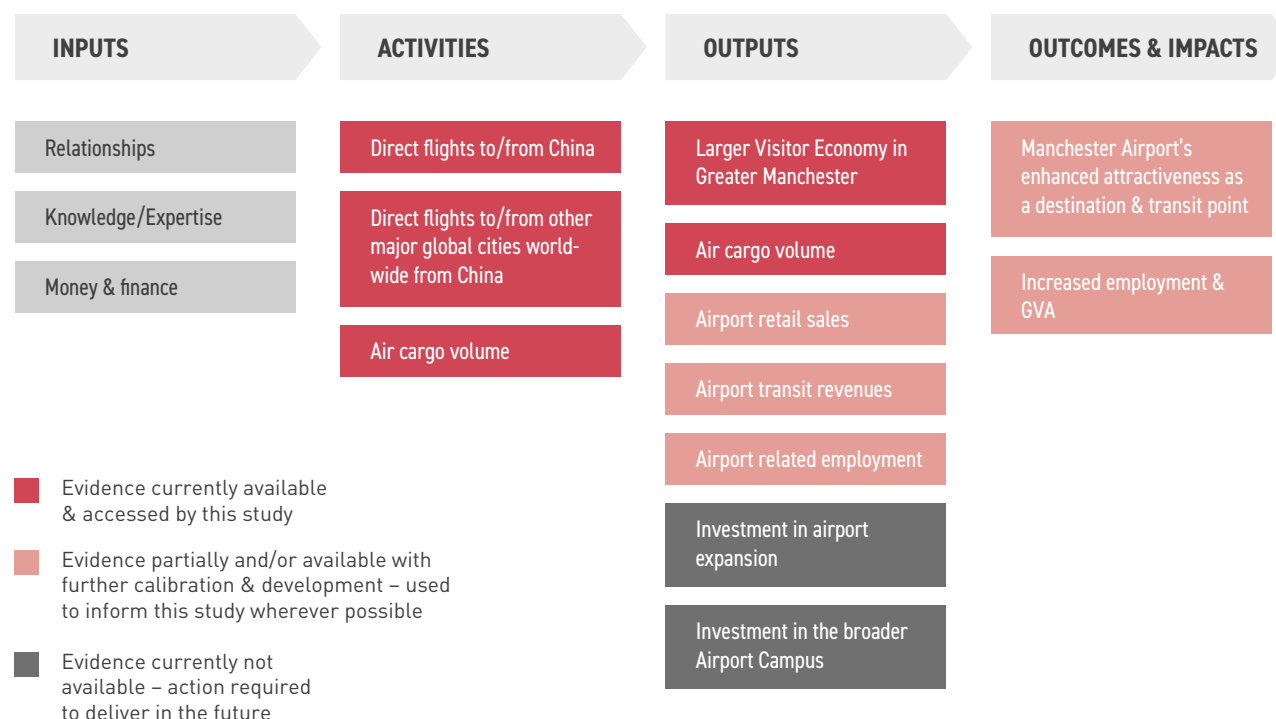
02

**DOMAIN 1:
THE AIRPORT CAMPUS**

The Airport Campus, alongside route operator Hainan Airlines, is the primary agent and enabler of change in delivering direct flight connectivity impacts. This new route is particularly significant because it was the first foray by Hainan Airlines into the UK market. This domain covers the strategic and operational impacts that direct connectivity is driving across the campus, for example through changes in passenger and cargo flows, and the growth in associated on-site services.

The theory of change for this domain is summarised in the figure below, tracing through the logic from the inputs that direct flight connectivity will encourage through to outcomes and impacts for the short, medium, and long terms.

The evidence set out below for this domain then draws on a range of detailed quantitative data regarding the operation of the service in its first year. In the future, additional data will be gathered to explore the finer details of impact across the campus.



WHY THIS DOMAIN MATTERS

Direct flight connectivity has established Manchester Airport as a new gateway to the North of England for Chinese visitors, and indeed the UK as a whole.

Immediate impacts will be evident in demand for the service, in terms of the number and profile of passengers using the route (which also provides an indication as to the potential success of direct services to other high growth locations) and increasing retail sales at the airport (food concessions, duty free goods, foreign exchange services, and other airport-based businesses). Direct flight connectivity also stimulates activity associated with the additional arrivals and departures (for example aircraft cleaning, cargo handling, flight kitchen provisioning etc.). These revenue uplifts have beneficial indirect impacts on the City Region's economy as income flows down through salaries and the locally-based parts of supply chains. Other short term economic contributions flow from increased car rentals, ground transport revenues, parking fees etc..

The direct employment and economic value generated on the Airport Campus also creates a 'ripple effect', with impacts reaching out into the wider economy and a supply chain that stretches beyond the site boundaries and into the regional and Northern economy.

Over the medium term, the uplift in a wide range of business supply inputs to the Airport Campus creates more favourable conditions for investments that further enhance its quality. This is reflected in modern and efficient airport services and a general sense of progress and optimism. When new routes are successfully launched and sustained, it gives confidence to other airlines that the Northern UK catchment area is an attractive commercial proposition. Added income and associated new investment across the Airport Campus will establish a 'virtuous circle' which builds further success; a modern, vibrant environment increases the likelihood of attracting more direct flights from China, and from elsewhere. A range of direct flights is a powerful engine for economic development in a global economy that is based increasingly on directly-connected major cities. Most world GDP is created in major cities, and the transport connections between them is a key driver of this network-based GDP growth.

In the long-term, Manchester's enhanced prominence as a global city, as a node in the network of directly connected urban economies driving global income generation, will make a significant contribution to the City Region, the North more widely and the UK in general. The Airport Campus will have played a key catalytic role in this important aspect of the city's future.



ONE YEAR IN

Over the course of the first year, the Manchester-Beijing route has proven to be highly successful, carrying 88,596 passengers⁶, 15% above forecasted levels. On average, 217 passengers have been carried per flight with the average load factor across the year reaching 75% (higher than the forecast 72%). During the year, 204 flights departed Manchester for Beijing and vice versa. The route has consistently exceeded targets for passenger throughput

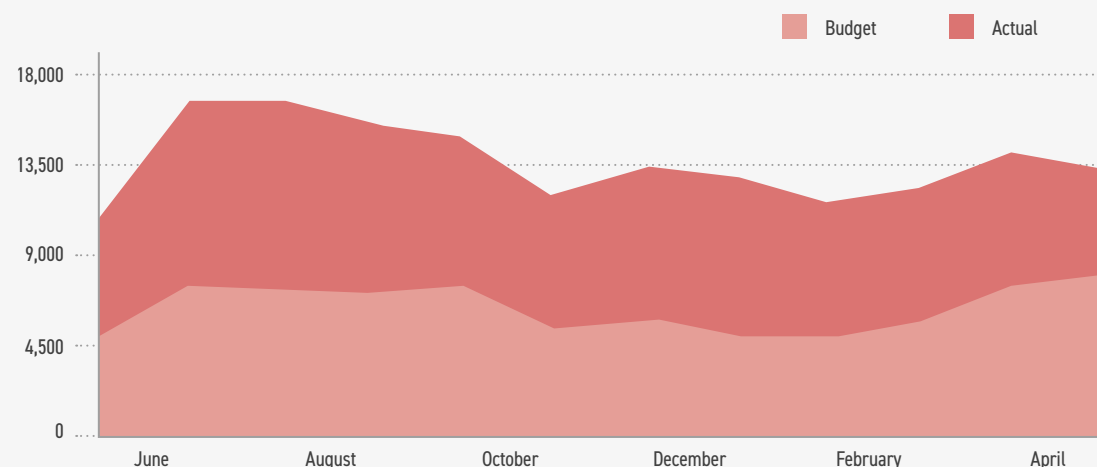
Since its launch in July 2016, the route has operated four return flights per week. However, reflecting strong demand for use of the route during the summer months, flights ran daily during the months of July-September 2017. During Summer 2016, the route proved highly popular, with an average load factor of 88% (compared with a budgeted load factor of 71%). Meanwhile, demand for use of the route spiked in January 2017, in the run-up to the Chinese New Year. Figures for inbound and outbound passengers suggest that most are making round-trips, reflective of business and leisure travel.

A total of 118,196 seats have been made available during the year (11% higher than budgeted), met by consistently elevated levels of passenger demand. As such, Hainan Airlines has experienced a 14% uplift in seats in its first year of operation at Manchester Airport.⁷ This is particularly strong compared with the first-year performance of other new routes, which either did not see any growth in seats between the first and second year of operation, or reduced them.

Of flights booked, 65% originated in China, compared to 24% from the UK and 11% from elsewhere⁸. This sits in stark contrast to much of the modelling work that had gone into projecting passenger demand for the Beijing route, which had anticipated stronger demand coming from the UK and a more balanced travel pattern between the two airports. This strong bias to China originating bookings reflects the rapidly rising importance of the Chinese air travel market at a global level. Inbound passengers are estimated to have a much higher spend profile, as such this means an estimated average annual spend of £81.5 million from inbound tourists (leisure and business), just under £30million above the forecasted figure of £51.8million.

The immediate impact of the change in passenger profile at the airport can also be observed through the processing of Value Added Tax (VAT) refunds, for which both the scale and process have changed significantly since the introduction of the route.

FIGURE 5: ACTUAL PASSENGER THROUGHPUT VERSUS FORECAST, MANCHESTER BEIJING ROUTE, 2016/17



Source: Manchester Airports Group passenger throughput (actual versus budgeted), 2016/17

⁶ Manchester Airports Group (Actuals vs Budget), June 2016-May 2017

⁷ IATA Airport IS

⁸ Manchester Airports Group statistics, IATA Airport IS



...We have recorded a fivefold increase in VAT form processing volume and revenue this year. Chinese tourists are widely aware of the financial benefits associated with VAT refunds and proactively seek out the service when traveling abroad. Our ability to offer the service is instrumental to the rise of inbound Chinese tourism in Manchester.

To optimise our operations and accommodate Hainan Airlines passengers we have hired Cantonese and Mandarin speaking queue hostesses who can assist travellers and distribute Travelex Step by Step VAT Refund Guide leaflets in simplified Chinese as well as English. For added convenience we offer refunds in a range of currencies including Pound Sterling, Chinese Yen, Hong Kong Dollar and USA Dollar.

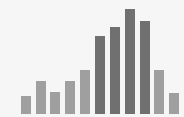
*Kat Kalinina, Global Head of PR,
Travelex Global Support Centre*

ACHIEVEMENTS

88,596 passengers
carried between
Manchester and Beijing, some **15%**
higher than budgeted



Peak passenger demand occurred during the Summer (Jul-Sep), when the average load factor reached **88%** and in the period leading up to the Chinese New Year.



The route has driven a **21%** uplift in total UK-China passenger air journeys compared to the previous year, total growth excluding the route would have equated to 5%.



Sustained levels of demand mean flights will depart daily between Manchester-Beijing during summer 2017.

The increased footfall of Chinese customers through the airport has led to other subtle changes in service delivery. For example, as explored in more detail in the People, Skills and Culture section, the Airport Academy now delivers a basic course in Mandarin and Chinese Culture for customer service operatives, demand for which is rapidly increasing.

Since the opening of the direct Manchester-Beijing route, the total number of passengers travelling indirectly between Manchester and Beijing has fallen by 16%, displaced by the new direct connection and strengthening direct links between Manchester and Beijing. The total number of passengers travelling from Manchester to Beijing (either directly or indirectly in both directions) has risen by 20,415 (+38% uplift) to 74,055 since the introduction of the route⁹. The opening of the direct route has thereby stimulated an estimated 28,839 net additional passengers travelling directly between Manchester from Beijing. As we will see in the following sections, this stimulus has already started to feed into other aspects of the ecosystem, such as the flow of cash, knowledge and cultural-exchanges, enhancing the wider economic benefits realised because of the route's operation.

Meanwhile, the growth of the route has not been at the expense of displacement of flights into

Heathrow (the only other direct route into the UK from Beijing) by other carriers. Both the Air China and British Airways routes travelling from Beijing to Heathrow also increased their passenger counts over the period. Data compiled by the Civil Aviation Authority (CAA) on the UK-China passenger market shows that, in the financial year 2016/17:

- » The Manchester-Beijing route accounted for 13% of the 568,659 total direct passengers travelling between the UK and China;
- » Total passenger numbers in the UK-China market grew by 21% from 2016 to 2017, driven by the opening of the Manchester-Beijing direct route, as Figure 22 highlights; and
- » The impact of the route is clear, given that year-on-year growth in passengers travelling between the UK and China excluding the Hainan Airlines route would have been more modest, at 5%¹⁰.

Analysis of the first nine months of operations show that the Manchester-Beijing route is not just providing an important direct link between the two cities, but is also having a wider impact on connectivity between the UK and the rest of China. Whilst 51% of passengers using the route originated at Manchester Airport and ended their journeys in Beijing, 49% started or ended their journey's elsewhere. For example, almost one in 10 of total passengers

started their journey at Manchester and ended it in Shanghai, connecting at Beijing (MAN-PEK-SHA)¹¹.

In its first year of operation, Hainan Airlines carried 3.6 million kilograms of cargo along the route. The route has been a net exporter of cargo (53% net exports), and at a rate above average compared to the top 15 airlines for belly-hold cargo at the Airport (46%). The route currently has a 3% share of total airport cargo belly hold, ranking ninth at Manchester Airport in terms of kilograms of cargo carried.

The Manchester China Forum estimates that the Visitor Economy contribution of the direct flight connection with Beijing is currently worth £138.68 million (twice the original anticipated annual value), yielding a five-year timeline Net Present Value of £626 million. This Manchester China Forum estimate is based on four flights per week over a 51-week operational timeline and 75% of seats filled. The estimated visit spend of the resulting 44,146 seats per year is £2,174. Once details of the non-EU & EU traveller split are factored in, this gives an estimated annual average Visitor Economy spend of £81.577 million to which a standard multiplier of 1.7 has been applied yielding an average annual value of £138.68 million which has been extrapolated over a five-year look-ahead timeframe using a 3.5% discount rate.

⁹ Up from 53,640 passengers travelling indirect from Manchester to Beijing in the year ending December 2015

¹⁰ CAA statistics, FY2016-17

¹¹ IATA Airport IS

LOOKING TO THE FUTURE

The combined objectives and ambitions of the Airport Campus and route operators such as Hainan Airlines and Cathay Pacific will be an important component of any further expansion. The strong market performance in the first year suggests significant scope for greater frequency of flights and potentially new routes. Demand has been high from both inbound and outbound passengers, providing access to Beijing (and beyond) for people and businesses across the Manchester Airport catchment area and establishing the North as a key entry point to the UK. In the context of constrained capacity at

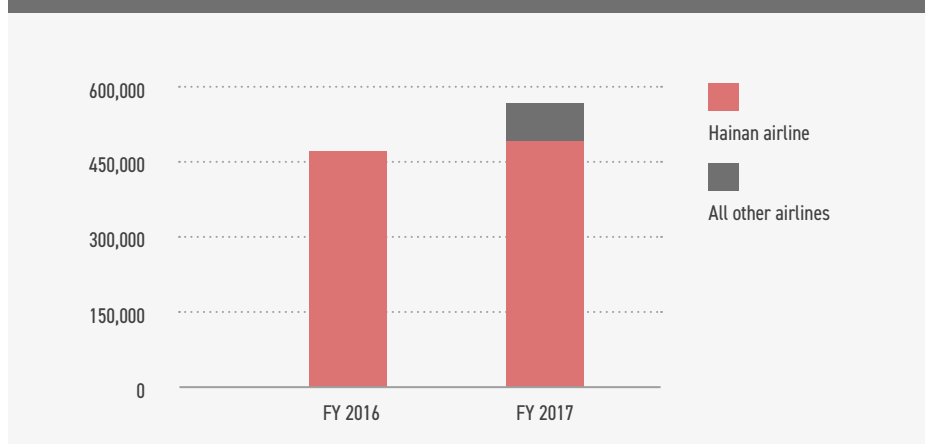
South East Airports¹², this highlights the potential for pursuing further routes from Manchester.

That the scale of demand from Chinese passengers for the route has outstripped expectations should play a key role in influencing future expansion decisions. Simple demographics coupled with a strong interest in international travel, education and investment present an appealing narrative around growth – something that merits further research and investigation to quantify and support ongoing work around future expansion strategy.

Looking to the future, growing long-haul direct flights into major global hubs can play an important role in further enhancing Manchester's recognition as a global city and supports the standing of the Northern Powerhouse as a whole. This additional direct connectivity will leverage current uninterrupted flights to/from Beijing by allowing travellers (especially those on business trips) to plan their complex itineraries more easily. This improved connectivity will amplify the economic and social benefits expected from the introduction of direct flights to China.

However, Manchester Airport's role as the Northern Powerhouse's international gateway does face a major challenge. Airlines consider the number of people within a two-hour travel radius of a long-haul hub when assessing new route feasibility. A threshold of 100,000 people within a two-hour travel radius is not uncommon. Whilst 22m people reside within Manchester Airport's two-hour travel time the population accessible via public transport is comparatively small. This public transport catchment area is currently 3.5m people for Manchester airport, compared to 12m for Heathrow and 13m at Gatwick. In comparison with European airport catchment areas such as Randstad (with Amsterdam Airport Schiphol as its international gateway) the Northern Powerhouse

FIGURE 6: YEAR-ON-YEAR GROWTH IN AIR PASSENGER NUMBERS IN UK-CHINA MARKET FOLLOWING INTRODUCTION OF MANCHESTER-BEIJING ROUTE

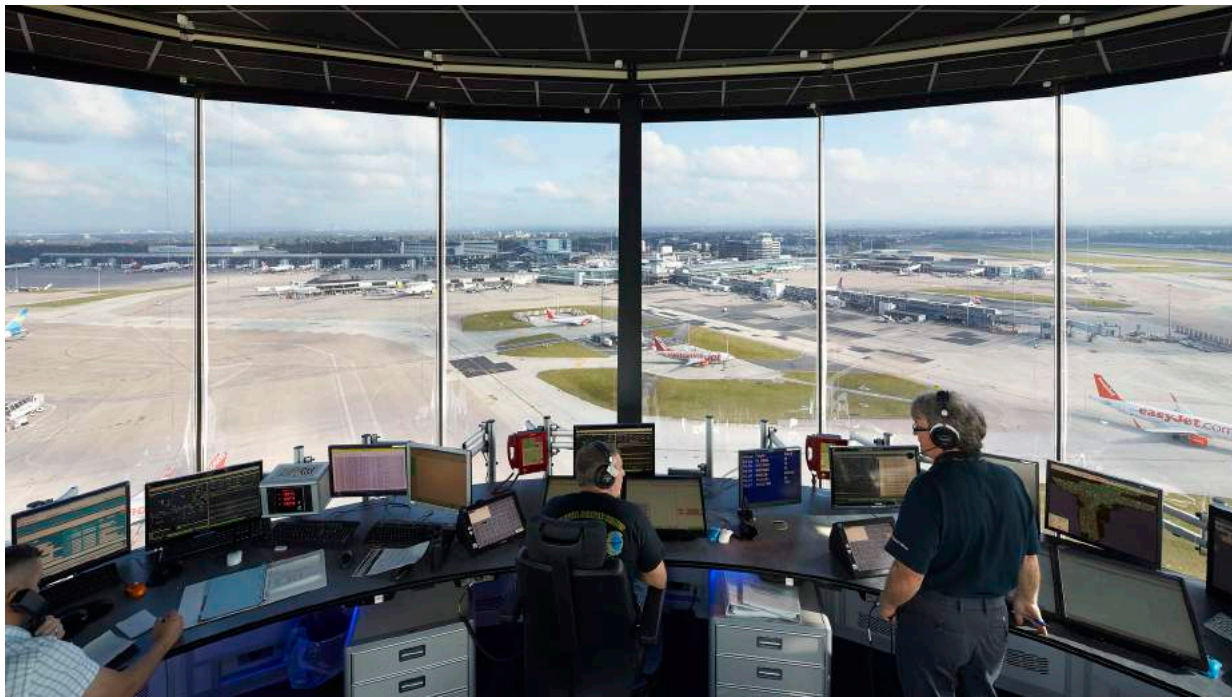


Source: Civil Aviation Authority, 2016-17, time series datasets

¹² The big picture: UK airport expansion in the South East (2016) <http://www.airport-technology.com/features/featurethe-big-picture-uk-airport-expansion-in-the-south-east-5032686/> Last accessed 19 September 2017

fares poorly. Rail transit times within the Randstad from Amsterdam Airport Schiphol are on average 30% faster than Manchester's rail connections to the likes of Liverpool, Leeds and Sheffield. This higher speed results in a far larger catchment area within a two-hour travel time threshold. The larger the population in this travel catchment area, the greater the potential to both attract additional direct flights and to extract pervasive regional economic benefits from these flights – setting up 'virtuous circles' of reinforcing advantages.

In the UK, this strategic approach to re-shaping regional economic geographies via fast transport is further constrained by the level of Air Passenger Duty (APD) levied – which is one of the highest rates in the world. The current levels act as an impediment to realising the benefits from investment in local and regional transport infrastructure as extended catchment areas are hard to translate into greater flight connectivity due to the APD cost imposed. This an issue returned to in the conclusions and recommendations.



INDICATORS TO WATCH . . .

- » The introduction of additional direct flights to other global cities – enhancing Manchester's prominence as a global city.
- » Uplifts in new investment in airport facilities enabled by the increased income flowing through the Airport.
- » Evolution of retail offer and other products and services relating to Chinese customers.
- » Uplifts in new investment in the Airport Campus, enabled by increased income flowing through the airport and increased profile to investors.
- » Employment at the airport specific to the flight (i.e. Hainan Airlines staff on-site)
- » Further enrichment of culture at the airport (e.g. uptake of entry-level courses via Airport Academy with Mandarin focus).



03

**DOMAIN 2:
INFRASTRUCTURE
AND ASSETS**

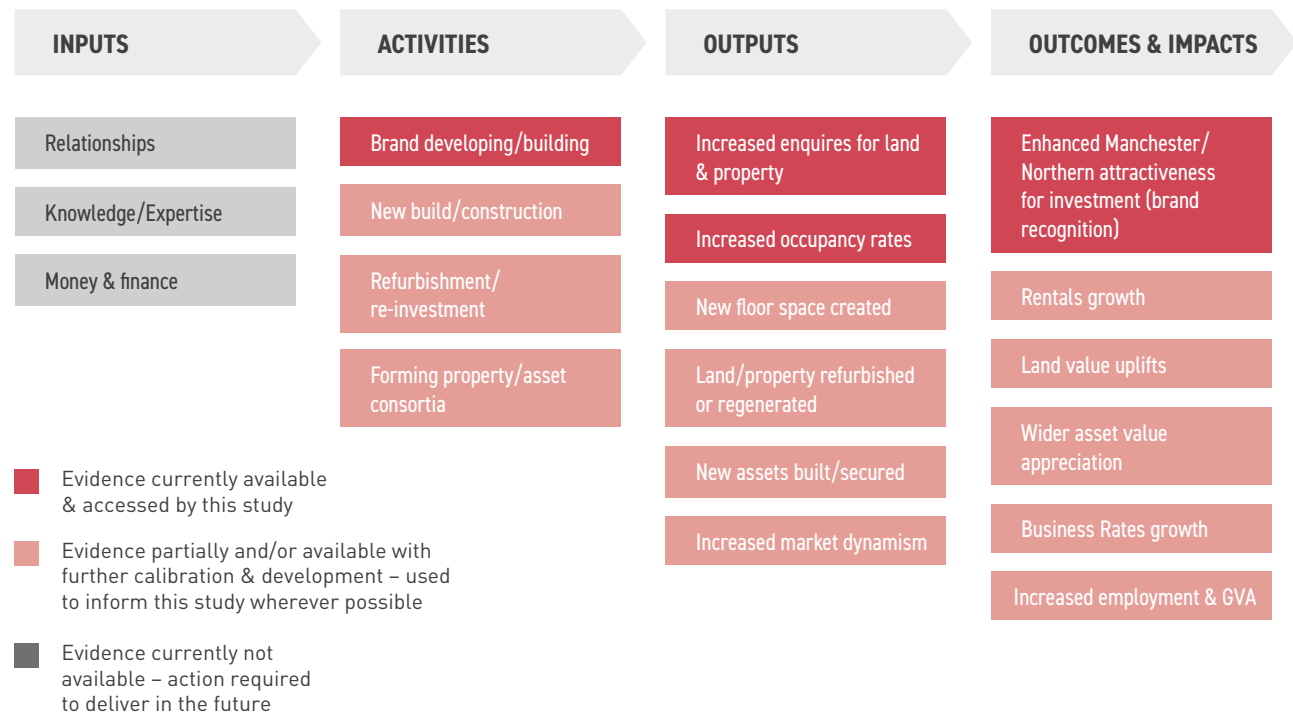
Covering both the tangible (such as land, buildings and equipment) and in-tangible (such as brand recognition and prominence), this domain considers how direct flight connectivity is driving changes in the availability, suitability, cost, and value of Manchester’s and the wider North’s infrastructure and asset bases.

The theory of change for this domain is summarised in the figure below, tracing through the logic from the inputs that direct flight connectivity will encourage through to outcomes and impacts for the short, medium, and long terms.

This section of the report draws on emerging details of investments, mainly in Greater Manchester but also in the wider North where information is available, and presents detailed information on the

successes to date of Manchester-brand marketing activities. This brand awareness dimension includes the psychological impact of placing Manchester and the North onto Chinese views of the world.

In the future, more detailed data will be gathered to describe infrastructural impacts such as raised levels of investment in land, property and buildings, increases in floor-space available, increased property and rental values, and the value and returns on business rates.



WHY THIS DOMAIN MATTERS

In the short term, direct flights between Manchester and Beijing should support the ongoing development of the North's infrastructure and asset base by opening-up new investment opportunities as visitors from China become more familiar with the Manchester brand and the wider Northern Powerhouse. The increased awareness of emerging investment opportunities aligned with the supply of investment capital is a potent combination for driving economic development. BCEGI, an Chinese property development and construction company, is a prime example of this. The company's relationship with Greater Manchester has flourished since its initial investment at Airport City in 2013. From this initial investment, BCEGI has carried out major follow-on investments in Manchester's residential and office market (through its investment at Middlewood Locks and St. Michaels in Manchester city centre). This demonstrates that once an investor appreciates the benefits to be realised and has bought into the civic and business life of a place, follow-on investment is much more likely.

Over the medium term, the resulting additional investments will further enhance what is already a highly dynamic built environment in the centre of Manchester. Foreign Direct Investment (FDI) from multiple source countries will improve resilience, with multiple funding streams offering greater stability

to economic development. The stock of modern and refurbished buildings that results from this, provides an asset-base for a wide range of increasingly knowledge-based firms, who compete on content rather than price. This investment stock will also encourage the re-location of offices to Manchester and other Northern cities by established corporations. There is precedent for this in the investment that has followed the launch of the direct Cathay Pacific service between Manchester and Hong Kong. For example, the far East Consortium, a property development and investment group, have invested heavily in Manchester over the last few years. Following an initial investment of £200m for the Angel Meadows development – they have successfully gone on to secure the £1bn Northern Gateway development, a 10,000 home redevelopment that will take place over the next 10 years. They are currently establishing an office in Manchester to support their ongoing and future developments.

The longer-term impact of these additional investments in Manchester's infrastructure and assets will reflect the increased dynamism of business, social and cultural activities that results from a modern, stylish and high-functioning built environment. This will help enable productivity and increase both employment levels and employment 'stickiness' in the City Region.

ONE YEAR IN

Whilst the tangible aspects of impact in this domain will become increasingly more evident in future years, evidence of the impact has already begun to become apparent. For example, Chinese property portal Juwai.com has already recorded a 53.8% rise in Chinese interest in property in Manchester in 2016 compared to the year before¹³.

In addition, over the past year, efforts have increased to encourage further Chinese investment in the Northern Powerhouse region. For example, in November 2016, the government presented a pitchbook of Northern Powerhouse projects worth £5bn (including MediaCityUK, Stockport Exchange, Pall Mall in Liverpool, Liverpool Waters and Carrington in Trafford) to Chinese and international investors at the UK-China Economic and Financial Dialogue. The linked investments to follow these developments will make a significant impact on the asset base in the city and wider region, as currently being seen with the Select Property Group investment in student accommodation in Manchester¹⁴.

Considering the more intangible assets, strategic partnerships between Manchester Airports Group, Hainan Airlines, Marketing Manchester and others have started to shape the brand and reputation of Manchester and the Northern Powerhouse region in the year since the route's launch.

¹³ Juwai.com, via Buy Association, January 2017

¹⁴ <https://www.placenorthwest.co.uk/news/bruntwood-aims-for-afflecks-of-oxford-road/> Last accessed 16 August 2017

The launch phase included an inaugural event attended by the Chinese President and nearly 200 attendees from various industry backgrounds.

Marketing Manchester's China media campaign around the Hainan Airline's route launch has been highly successful, gaining a total reach of 26.1 million globally between April 2016-March 2017¹⁵. The strategic campaign was particularly successful at capturing digital audiences (in terms of

audience reached), and China Aviation News audiences (in terms of audience reached per £ spent), as demonstrated below.

Brand prominence has been emphasised through a range of marketing activities, including visibility and audience engagement at student fresher's fairs, working in partnership with Universities and Colleges Admissions Service (UCAS) to engage with the student population and by

TABLE 1: MARKETING MANCHESTER 2016/17 CHINA CAMPAIGN - AUDIENCE REACH

Channel	Audience Reach	Media Spend	Audience reach per £ spent
Digital advertising:	15,188,136	£122,821	124
Outdoor advertising:	7,196,000	£86,178	84
Hainan channels:	2,579,800	£91,884	28
China Aviation news:	1,000,000	£5,595	179
TV & roadshows:	170,000	£131,340	1
All Channels	26,133,936	£450,000	58 (average)

Source: Marketing Manchester - The China Campaign (2016/17)

¹⁵ Marketing Manchester, China Campaign Evaluation, April 2016-March 2017

ACHIEVEMENTS

53.8% ↑

rise in Chinese interest in property in Manchester in 2016, worth £5bn in value



At the end of the first year a notable increase in brand recognition and the reputation of Manchester as a

key city partner to China, facilitated by the introduction of the route.



Manchester Airports Group named as

Outstanding Marketing Partner

for 2016 by Hainan Airlines



engaging with diverse audiences on social media platforms, including the highly popular Chinese social media site Weibo and Tencent's WeChat.

Testimony to the strength of partnership working post-inauguration is the announcement by Hainan Airlines that Manchester Airports Group has been named Outstanding Marketing Partner by the airline for 2016. Moving forward, Marketing Manchester will continue their strategic partnership with Hainan Airlines and VisitBritain in developing a comprehensive, integrated, multi-channel marketing campaign for 2017/18 that will build on the success of the first two years' activity in concurrence with Manchester Airports Group.

The Manchester China Forum, Marketing Manchester and Manchester Airport also share aspirations for Manchester to become the most 'China Friendly' city in Europe. Whilst this will continue to involve active marketing in key Chinese cities such as Beijing, Shanghai and Guangzhou (as well as expanding into other Tier II cities which have well-developed economies and travel trade infrastructure), it will also look at how the city enhances its offering in Manchester and the surrounding region. This will involve improving Chinese digital infrastructure to engage with visitors as well as ensuring that retailers, hoteliers etc. offer the best possible Chinese visitor experience.

LOOKING TO THE FUTURE

Manchester's aspiration to consolidate its position as a well-connected global city stands to benefit from the direct flights to China in several ways. These include further investment in and modernisation of the city's physical assets, but also (and importantly) a set of inter-connected intangible benefits associated with the Manchester brand as a globally significant city. This intangible asset is critically important because it acts as an investment and talent attractor and thereby increases the likelihood of further strengthening the city, and the wider North's, knowledge-based economy. The knowledge 'spill-overs' between firms, people and professional visitors generate collective benefits for all. These benefits are frequently expressed in an uplift in innovation activity, and especially new firm formation and better odds of success in these new business ventures (discussed in the following section). Indeed, the perception of superior odds of success in innovative new business ventures is itself an intangible asset for any city.



INDICATORS TO WATCH . . .

- » Rising inward Chinese investment in Manchester's infrastructure & assets and the Northern Powerhouse, following initial investment in St. Michaels (BCEGI in Manchester), Middlewood Locks (BCEGI in Salford) and in Sheffield City Centre (Sichuang Guodong).
- » Growth in business partnerships associated with development of Manchester's infrastructure & assets.
- » Relocation of established corporate offices from elsewhere to Manchester.
- » Increased floor space devoted to innovation-related activities (incubators etc.).

04

**DOMAIN 3: BUSINESS
AND ENTERPRISE**

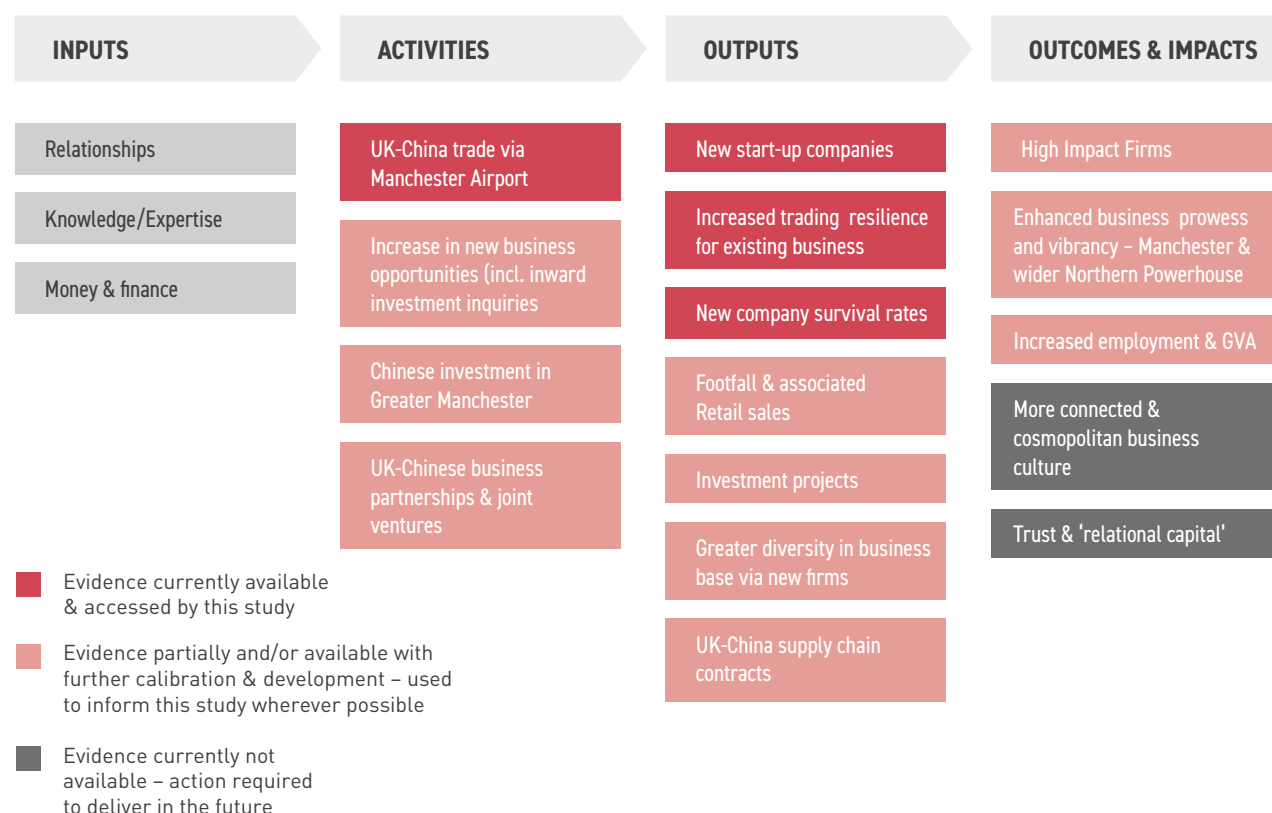


This domain considers where and how direct flight connectivity is adding value to current business and enterprise activities, for example through improved access to markets, products/services and knowledge via the route. This covers short-term improvements to transactional processes (such as export activity, and/or levels of inward investment) and often longer-term changes in entrepreneurial cultures (such as increasing collaboration & knowledge exchange, leading to new business models and ways of working).

The theory of change for this domain is summarised in the figure below, tracing through the logic from the inputs that direct flight connectivity will encourage through to outcomes and impacts for the short, medium, and long terms.

This section of the report draws on quantitative data to describe the impact of the new service on the business economy during its first year, particularly

the attraction of new FDI business projects and trade with China. In the future, additional data will be gathered to demonstrate the unfolding impact of increased business interaction and collaborations in quantitative terms (such as job creation, new firms, supply chain deals), but also the more nuanced, qualitative impacts on business cultures, behaviours, and knowledge sharing.



WHY THIS DOMAIN MATTERS

The immediate impact of the service on business transacted should be particularly evident in the export activity of local businesses, as opportunities to trade goods and services are opened and simplified. This can happen on a number of fronts, for example:

1. the activities of businesses who already export to a particular market can be made more efficient/cost effective.
2. barriers that may previously have been preventing businesses from selling their goods and services to a market may be removed/reduced.
3. awareness of a new trading location may be raised via the launch a new route.

This improved access to markets is a vital aspect of global cities' performance.

Also in the short-term, we might expect to see early signs of increased levels of interest in business investment reflected in Chinese inquiries to inward investment agencies. Going forward, this uplift in investment should take the form of a broadened range of business opportunities, combined with improved access to investment capital sourced from China.

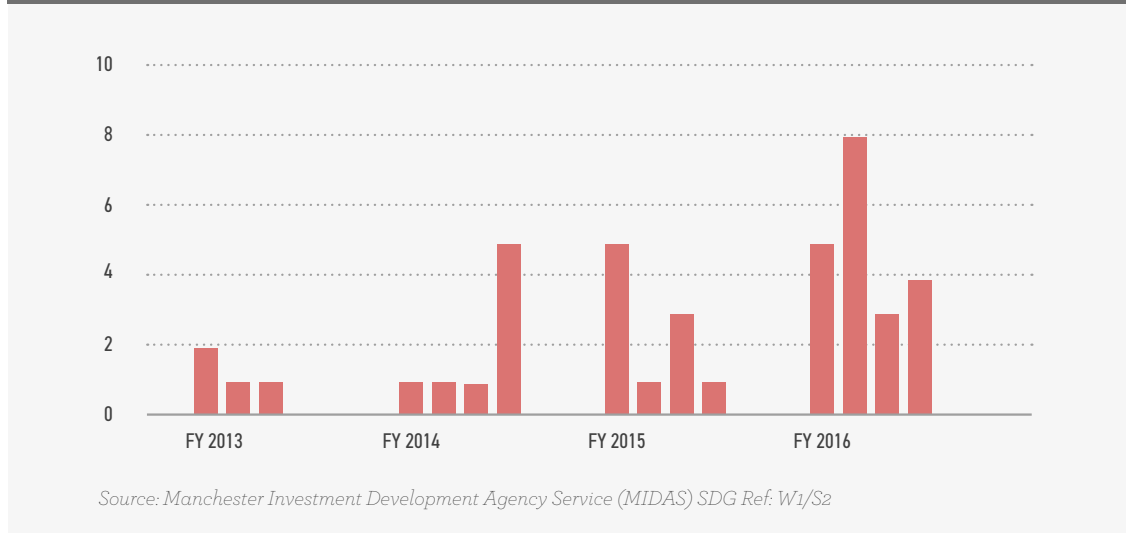
One year in, and given common lead-times, we would not yet expect to observe tangible outcomes from new inward investment projects from improved direct flight connectivity. However, it is reasonable to assume that the foundations for creating a stronger 'virtuous circle' linking trusted relationships and new investment will

be being laid down. Indeed, the introduction of direct flights is itself a clear indicator of the already vibrant business relationship between China and Manchester and the progress made since the inception of the Manchester China Forum in 2013. Consequently, the business impact of direct flights plays to an existing and demonstrated strength, a strength it will amplify over future years. The 'leading indicators' of this business investment uplift are new company formation involving Chinese business partners, job creation and increased footfall and retail sales.

ONE YEAR IN

It is evident that the Manchester-China connection is gaining traction in terms of inward investment interest and that this has increased since the route opened, as well as an increased value of exports from Manchester to China. Figure 9 shows inward investment inquiries from China to Manchester over the last four years, increasing from 10 in 2015/16 to 20 in 2016/17¹⁶, following the launch of the route. The 18 enquiries MIDAS has handled since the introduction of the route represent 43% of all Chinese FDI investment enquiries since 2013/14.

FIGURE 9: CHINESE FOREIGN DIRECT INVESTMENT ENQUIRIES HANDLED PER QUARTER BY MIDAS, 2013/14-2016/17

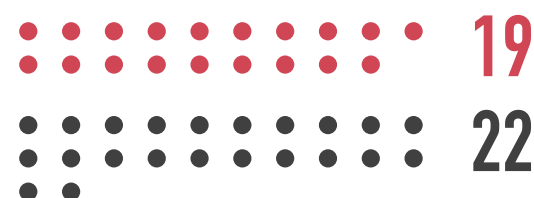


¹⁶ Two of which were lodged prior to the route opening.

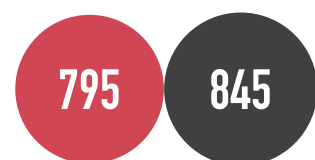
Over the long term, it should be possible to measure the impact of the route in terms of direct and in-direct influence on the creation of jobs, for example, from expansion at the Airport or as the result of new firm formation through the realisation of inward investment queries. Table 2 emphasises the potential impact of current inward investment projects, with those currently in pipeline potentially creating upward of 800 new jobs.

PIPELINE OF CHINA INWARD INVESTMENT PROJECTS AND OUTCOMES, 2016 AND 2017

Projects



Jobs Created



Jobs Safeguarded



● May 2016 ● April 2017

Source: Manchester Investment Development Agency Service (MIDAS)

The existing vibrant relationship between China and Manchester is exemplified by Manchester’s important exporting role to the China market. Currently, the UK predominantly exports goods to China by sea – 62% of all exports to China were made this way in 2016 compared to 34% by air and the remainder in

other forms¹⁷. However, Manchester Airport plays an important role in air exports to China and was the UK airport with the second highest value of exports to China in 2016 (after London Heathrow). In 2016, a total of £601m was exported to China (representing 13% of all UK airport exports to China), as Table 3 demonstrates:

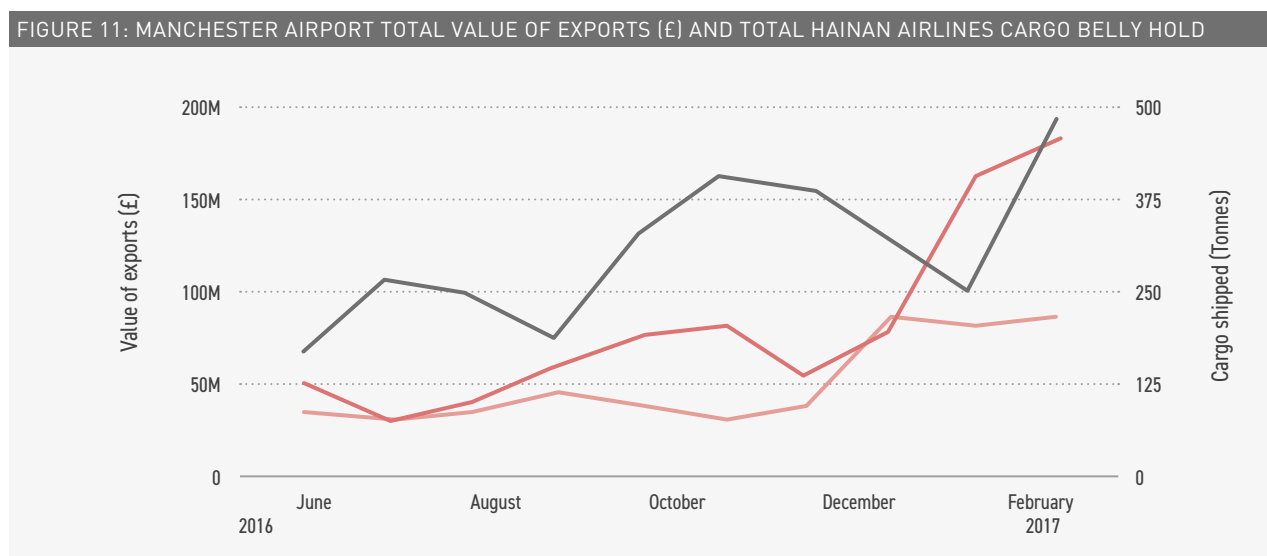
TABLE 3: HIGHEST VALUE OF EXPORTS (£) TO CHINA BY AIRPORT

Airport	2016		Q1 2017	
London Heathrow	£3.1bn	69%	£1.2bn	58%
Manchester Airport	£601.5m	13%	£418,158,700	21%
Newcastle Airport	£271.5m	6%	£149.9m	7%
East Midlands Airport	£195.4m	4%	£102.2m	5%
Glasgow Airport	£87.7m	2%	£58.9m	3%

Source: HMRC and Chamber of Commerce, Value (GBP) Exports to anywhere in China, June 2016-March 2017

¹⁷ HMRC Export Data from UK Ports, January 2009-March 2017, remaining export data includes free zones, inland clearance, low value trade, postal packages or unknown places of clearance under HRMC classification.

- » The total value of exports from Manchester Airport to China shows a series of peaks and troughs in exporting over the years. **However, since the introduction of the route, the value of exports rose significantly by 265%, as figure 10 demonstrates.**
- » Exports to China from Manchester Airport increased from £49.7m in June 2016 to £181.3m in March 2017, broadly in line with increased cargo shipped via Hainan Airlines.
- » Whilst data analysis in this iteration of the report has focussed on the impacts in Greater Manchester, it is important to recognise that the impacts for commerce reach across the North, bringing the approximately half a million businesses¹⁸ located in the North of England a direct link to one of the largest global markets.



¹⁸ Office for National Statistics (2016) UK Business Counts shows 552,660 enterprises located in North of England Local Enterprise Partnerships



Access to key global markets is critical to driving growth in the Sheffield City Region, both in terms of increasing exports and attracting inward investment. China is one of those markets and so having a direct flight service within easy reach has the potential to deliver significant economic benefits to the region. There are already strong links between Sheffield and China and this route will contribute to strengthening these connections, at the same time as stimulating fresh trade ties between the region and the Far East.

Dr David Smith, Interim Director of Sheffield City Region Local Enterprise Partnership

LOOKING TO THE FUTURE

At present, new business formation rates in both Greater Manchester as a whole and in the City itself are healthy¹⁹. One major challenge is, however, that these new businesses are not surviving at the rates found in other major cities. In general, businesses are more likely to survive in larger cities because the proximity of numerous start-ups creates advantages for all (network effects and knowledge spill-overs). Manchester is currently over-represented in its share of UK business deaths relative to its share of UK business births. This key ratio is 0.96 (share of UK births over share of deaths) compared to 1¹⁹ for the London region, and 1.26 in Inner London. As the business payoffs to closer flight connectivity with China start to appear, one would expect to find an increased likelihood of business longevity, as firms benefit from a greater propensity to export, engage creatively with Chinese counterparts, and start to understand more fully the benefits of participating in global value chains. This would be reflected in a convergence with London's better performance.

Knock-on impacts in employment and productivity will stem from improved survival (and business growth). Changes in business culture and know-how associated with greater familiarity with Chinese business acumen can make an important contribution to this uplift in business longevity. This would be an

¹⁹ Office for National Statistics (2015) *Business Demography* - 11,938 business births over the period 2010-14 in Greater Manchester, amounting to just over 4% of the UK total.

ACHIEVEMENTS

Interest in inward investment is increasing; there have been **five times** as many Chinese Foreign Direct Investment (FDI) investment enquiries through MIDAS in 2016/17 than in 2013/14.



Manchester Airport is second largest air route for export to China, accounting for **13%** of all air exports in 2016, a value of

£601 million



Since the introduction of the route, the monthly value of air exports to China from Manchester has risen by

265%



important contribution to the long-term performance of SMEs in Manchester. As awareness of the improved odds of new business success increases, this in turn attracts further interest in entrepreneurial activity, reinforcing the virtuous circle via which business success breeds even greater success. Once set in motion, this virtuous circle becomes self-sustaining and can operate effectively even if direct flights to China cease. It will help to increase exports, GVA and employment and generally add to the already vibrant business environment in Manchester.

More generally, the innovation performance of global cities is strongly dependent on 'high impact firms' - the subset of businesses that have a strong intention to grow, the capability to grow and the right leadership, market positioning and access to finance

to grow rapidly over a sustained timeline. Often, such firms are formed by people with established experience of business start-ups and research spin-outs and are characteristically therefore second or third generation entrepreneurial ventures. Closer business engagement with China can greatly enhance Manchester's capacity to foster high impact firms. China is especially well endowed with this type of business and experienced entrepreneurs. Consequently, direct flights have the potential to not only raise the prominence of these high impact firms in the city via Chinese entrepreneurial inputs but also encourage greater collaboration for local businesses able to take advantage of the relative strengths of partnering with Chinese businesses.



INDICATORS TO WATCH . . .

- » Increase in the number of business births relative to business deaths as evidence of a convergence to London's superior performance; increased investment and exports above established trends.
- » Jobs created through new firm formation and business expansion.
- » An increased proportion of high impact firms in Manchester's business mix.
- » An increase in start-ups and spin-outs formed by experienced and successful entrepreneurs relative to 'first timers.'
- » Sustained increases in inward investment inquiries.
- » Rate of conversion of inward investment opportunities into actual projects in the Northern Powerhouse.
- » Changes in business culture and 'new ways of doing things' driven by increased collaboration and exposure to alternative business practices.

05

**DOMAIN 4:
PEOPLE, SKILLS
AND CULTURE**

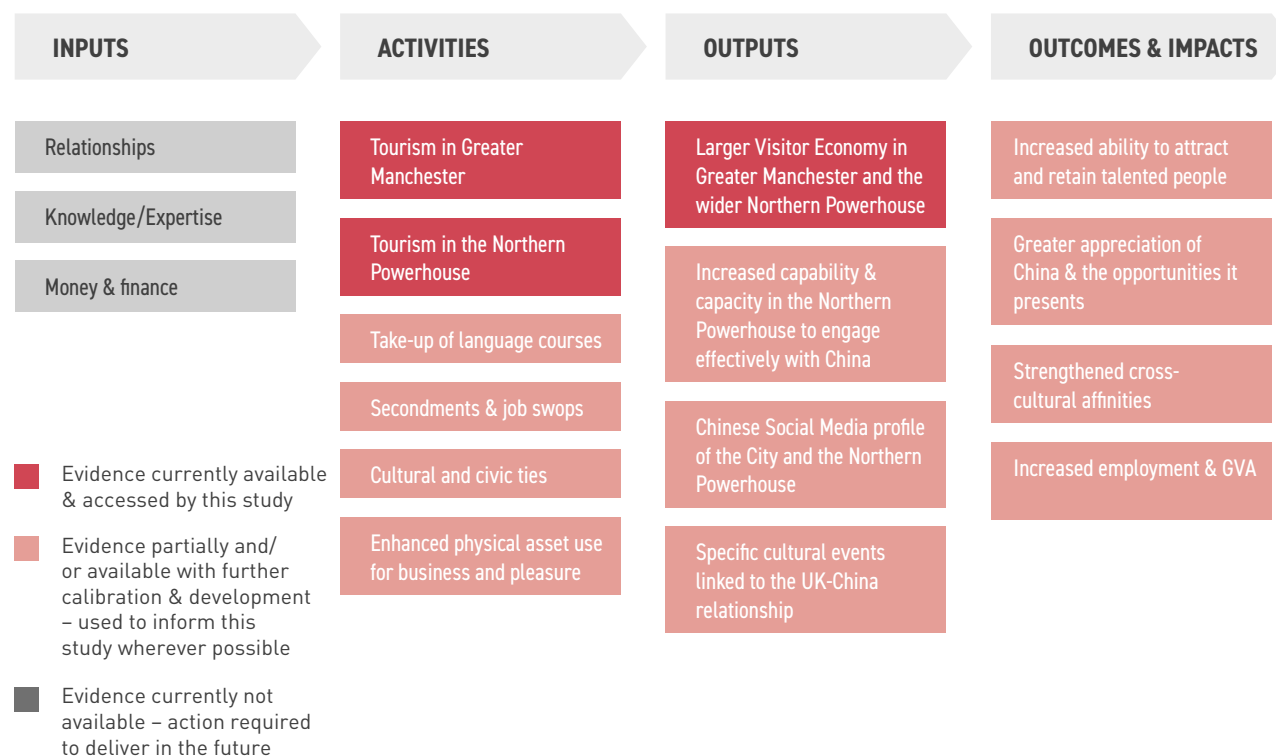


Building on already strong cultural ties between the North of England and China, this domain considers how the route further influences both the development of cultural and social capital (for example, through civic engagement and cultural exchanges) and more explicit value adding activities (such as tourism and employment) through people.

The theory of change for this domain is summarised in the figure below, tracing through the logic from the inputs that direct flight connectivity will encourage through to outcomes and impacts for the short, medium, and long terms.

This section of the report draws mainly on qualitative insights from key stakeholders describing how the

introduction of the new service has impacted on levels of tourism and engagement with China and Chinese culture across Greater Manchester and the North in its first year. In the future, once more time as elapsed to allow measurement, additional data will be gathered to explore these aspects quantitatively.



WHY THIS DOMAIN MATTERS

People, skills and culture are key to any successful economy. Where physical assets need improving, then it is the entrepreneurial spirit than makes these improvements happen. Where physical assets are strong then people, skills and culture extract greater value from them.

Manchester's infrastructure and asset base is already well-developed and attracting major Chinese investment. As such, in the short term, the impact of direct flights from/to China will be reflected in an enhanced use of these physical assets both for business and pleasure. In either context, these visitors are ambassadors for the region, communicating about their experiences and the North of England as a place to visit, via word of mouth and social media. In the medium to long-term, attributes of this transformational role of people, skills and culture will manifest in increased cultural and civic ties, stronger-cross cultural affinities, an increased ability to attract talent to Manchester from elsewhere and better retention of talented people in Manchester.

ONE YEAR IN

An early impact of the route in this domain is clear increasing interest in Manchester and the wider North as a destination for tourists. The data from airport show that most passengers are making short term round-trips, consistent with travel for business or leisure. Taken into account with data from Hainan showing that most passengers (85%) are Chinese, and the additional spending from inbound passengers highlights the significant inflow from new Chinese tourists. This is set to continue; through to December 2017, Nanhu International Travel is scheduled to bring 10,000 tourists into the UK, most of whom will travel through Manchester Airport.



Firstly, Hainan Airlines are one of our closest partners, and since their flights and offices are based in Manchester it makes it easier for us to communicate and work with them going forward in the UK. Secondly, Manchester is very well located with London and other major cities very easily accessible. Thirdly, Manchester's reputation within China has grown over the last few years, especially given Xi Jinping's visit in 2015

Nanhu International Travel

The advocacy value of positive experiences in Manchester and the wider North is a significant benefit; building a head of steam as more people visit and recommend the area to others, which feeds into the case for further flight services and potential demand for new routes.

Importantly, whereas Manchester historically served as an entry/exit point, it is now becoming a core component of the tour programme with visitors spending a minimum of 1-2 nights in the city. Indeed, this effect is being seen further afield than the city of Manchester. For example, increases have also been noted by partners in the Lake District, York and partners in locations such as North Wales anticipate a positive impact from the route. Windermere Lake Cruises reports an increase in Chinese Groups pre-booking by 40% between June 2016 and June 2017 compared to the same period in the previous year.



This first ever direct flight to and from Beijing marks a milestone for our relations with China. As a major international gateway into the North of England, a direct flight from Manchester opens up a world of new opportunities for York, Yorkshire and the North of England, both for tourism and for investment generally. China has moved rapidly from being York's 11th largest overseas tourism market to a fourth place ranking, behind the US, Germany and France.

Visit York





Manchester Airport is the international gateway for North Wales, which has so much to offer the Chinese visitor. Beautiful landscape, gardens, steeped in heritage and culture, with some of the leading adventure attractions in Europe. The new flight will make it much easier for inbound Chinese tourists to access our lovely part of Great Britain.

Jim Jones, Managing Director of North Wales Tourism

The spill-over from this into the wider retail economy has been recognised among key retail partners. For example, Selfridges, who sit on the board of the Heart of Manchester business improvement district (BID), has acknowledged significant uplifts in footfall and sales from the Chinese consumer market after the introduction of direct flights. Cheshire Oaks, the UK's largest outlet shopping destination, has reported an uplift of tax-free sales in the year since the launch of the direct route, for which Chinese visitors account for approximately half of all sales.



We were delighted to see the new direct route to Beijing from Manchester commence in June last year. Subsequently we have seen the impact of the Chinese consumer continuing to grow for us, with significant increases in both footfall and sales, not least because of the high number of tourists and international students now in the city. With the airport continuing to expand connectivity for the wider region, and Manchester city centre also supporting with major events such as Chinese New Year, this is great news for the economy across retail and wider afield

Selfridges



Chinese visitors account for around 50% of all tax-free sales and have an average transaction value of £210. For the past 12 rolling months, tax-free sales have increased by 35% and by 195% in the last four years. We have also welcomed three additional familiarization trips, facilitated by the direct flights

Cheshire Oaks

Though the creation of new jobs is anticipated to be a medium to long-term impact, the perception of opportunities for employment arising from the linkage with China is also emerging, reflected in an uplift in the number of people undertaking Chinese language courses in a professional context. The Confucius Institute²⁰, a partnership between the University of Manchester and Beijing Normal University, recorded **an increase of 51% in the number of students taking up evening language classes between June 2016 and May 2017**. Many students were professionals currently working in China-related jobs, or who are aspiring to work in a China-related career.



Direct flights from Manchester to Beijing enable more student and staff exchange between our two institutions. Over 100 UK students will be going to Beijing in the summer for short language courses and Manchester will welcome over 20 Beijing Normal University students for summer programmes here because of the partnership. The Confucius Institute has also helped to relocate a training programme for Chinese senior medical managers from Cambridge to Manchester and it is likely that the University of Manchester will become a key training centre for Chinese medical professionals in the future.

The Confucius Institute



New employment opportunities are also reflected in the development of Chinese language skills by staff at the Airport Campus, where demand for those in customer service roles to undertake training in Mandarin and Chinese culture is increasing.



We started Mandarin courses in 2015. It is a short addition to the customer service and employability course and offers some vocabulary and an insight to Chinese culture. This year we have run around six courses training approximately 40 people. Over three years we will deliver the course to 100 trainees. Employers on site are very keen to recruit those with the qualification, in particular in the retail sector where the skills learned are key for high end customers.

Gareth Burrow, Manchester Airport Academy

ACHIEVEMENTS

The visitor economy of Manchester and beyond continues to grow as a result of the introduction of the flight, with the retail sector reporting increases in



Chinese consumers

in the city and neighbouring counties.

Significant increased interest in

tourism,

both in Manchester and the wider region, with key tour operators in China adding



Manchester

as a core destination on their routes.

Interest in **Chinese language**

courses, particularly amongst professionals, is increasing.



A larger calendar of civic engagements, events and opportunities for

cultural



exchange

are more evident across the city.



Aside from the more tangible impacts related to tourism, jobs and skills, the linkage between the North of England and China increases opportunities to capitalise on the in-tangible benefits gained through wider civic engagement. Stakeholders across the city have already observed indirect benefits of the route. For example, for the Chinese New Year celebrations, the Confucius Institute was invited by Selfridges to provide Chinese calligraphy gifts for over 1,000 customers, a three-fold increase on previous years. In the year since the route opened there have been 36 Lord Mayors' engagements with China, 17 more than in the previous year. Manchester City Council also reports an average of two or three senior delegations visiting the city per week, with an increase in the number of visits from China since the State Visit from President Xi Jinping in October 2015.

LOOKING TO THE FUTURE

The overall economic and social impact will be a more cosmopolitan and vibrant city and region with both a more dynamic business sector (leading to new and more secure jobs and higher GVA per head) and a higher quality of life. The future evolution of Manchester's people, skills and culture will be usefully shaped by increased opportunities to access risk-capital (from China) able to fund entrepreneurial activities, in turn empowering people to attempt to achieve new ambitions with the benefit from cross-cultural networking and learning. Global, well-connected, cities all benefit from the flows of ideas and transfers of skills that take place between these cities. The following section considers the knowledge and innovation dimension to people, skills and culture in greater detail.



INDICATORS TO WATCH . . .

- » The size of the Visitor Economy
- » Increase in GVA per head (or competitiveness) above the established overall trend in Manchester to date
- » Increased talent attraction and improved talent retention
- » Chinese language capabilities in the City Region economy



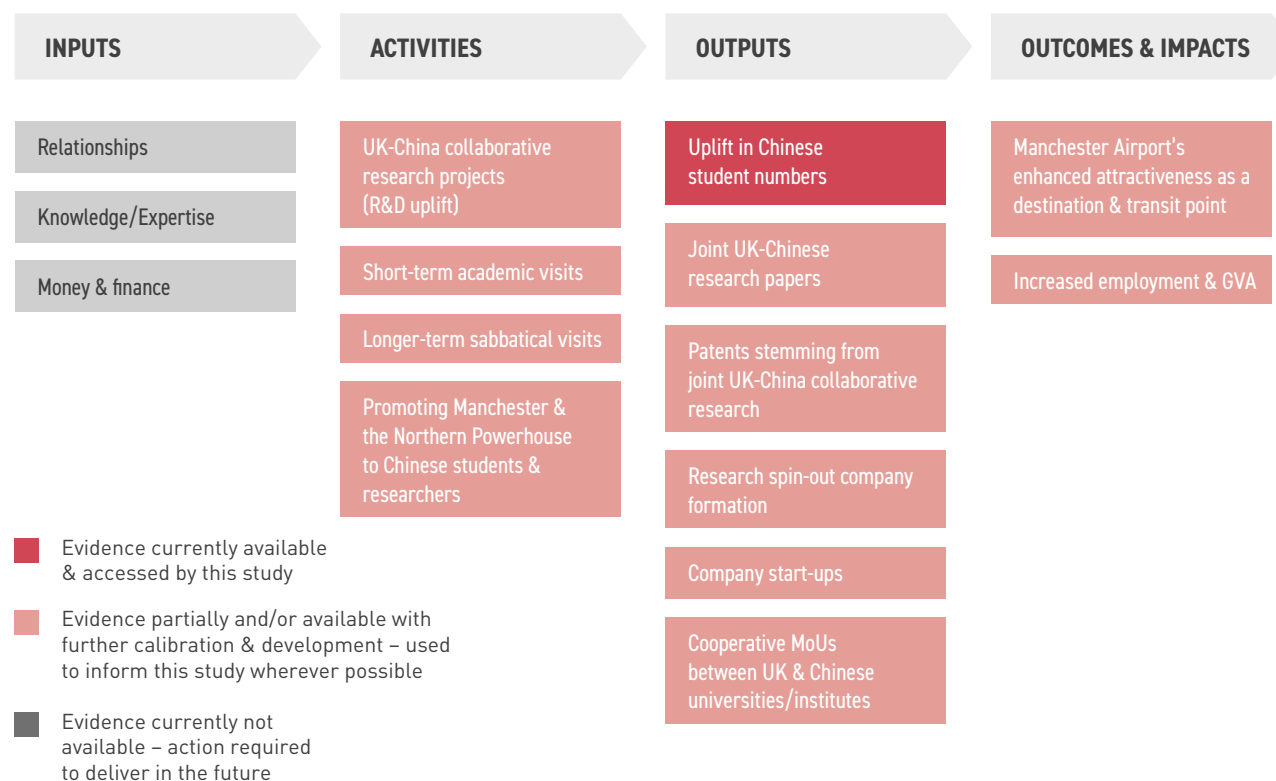
06

**DOMAIN 5:
KNOWLEDGE AND
INNOVATION**

This domain reflects a crucial impact of the route as an enabler of enhanced knowledge, facilitating collaboration and increased research and development, and therefore innovation across all domains.

The theory of change for this domain is summarised in the figure below, tracing through the logic from the inputs that direct flight connectivity will encourage through to outcomes and impacts for the short, medium, and long terms.

This section of the report draws mainly on qualitative insights from key stakeholders describing early impacts of the new service for the student population and collaborative activities and partnerships with Chinese institutions and businesses. In the future, once more time has elapsed to allow measurement, additional data will be gathered to explore these aspects quantitatively.



WHY THIS DOMAIN MATTERS

In the short term, direct flights will further enhance the already strong contribution of Chinese students to the Northern economy. Higher Education is a key export and an important source of income for potential use in funding cutting-edge R&D. Better direct flight connectivity is also helping to strengthen collaborative research between the North's universities and Chinese universities & research institutes (collaboration that often also involves universities and institutes in other countries as well). There are clear signs of institution-wide interest in our universities by China partners, exemplified not least by the partnership between the National Graphene Institute at the University of Manchester and the Beijing Institute of Aeronautical Materials, as well as a number of other leading Chinese firms including Huawei, into researching the commercial capabilities of graphene.

Over the medium term, this uplift in R&D, with the potential for increased Chinese funding for research, will have the dual advantages of further enhancing the academic prominence of Manchester and the North, and increasing the breadth and depth of Manchester and the North's IP assets - key to translation and commercialisation potential. Another medium-term gain will stem from an enhanced alumni base. Developed appropriately,

this alumni network can be translated into a long-term intangible asset for Manchester and the wider north, building the trust and reciprocity so essential for success in international business ventures.

Over the longer term, the resulting uplift in student income, R&D and resulting IP assets will contribute to job creation, GVA and start-up and spin-out activity in Manchester. and the Northern Powerhouse as a whole.



China is a major market for us, both in terms of the students who come to study and learn in Manchester, and from the perspective of our international research and development programmes, for example around graphene and life sciences. In terms of students, networks, knowledge transfer, and formal research collaborations, the Manchester-Beijing flight is a major asset for us and the wider knowledge base of the North of England. We are delighted to be benefiting from it.

Professor Dame Nancy Rothwell, President and Vice-Chancellor, University of Manchester

ONE YEAR IN

STUDENTS IN HIGHER EDUCATION

Chinese students are playing increasingly an important role in Greater Manchester's student population across its higher education institutions. The introduction of the direct route has served only to strengthen the already well-established links between Chinese and Northern educational and research assets, as well as the student populations of both.



The experience of the University of Manchester (UoM), with its already strong links with institutions in China, serves to highlight the steady foundations upon which the Manchester-Beijing opportunity is building and can continue to develop in future years. In 2016/17, 4,755 Chinese students enrolled on courses at the University of Manchester in 2016/17, up 12% on 2015/16 levels and outperforming the UK average.²¹ Currently, 62% of UoM's Chinese students are postgraduate students, but the student body is increasing at both levels and more rapidly at undergraduate level. The University saw a 15% increase in undergraduate students from 2015/16, and an 11% increase at post-graduate level. The most popular courses among the Chinese student population (at undergraduate and post-graduate level) include Engineering and Business (to which 40% of students enrol), the School of Materials and the School of Environment, Education and Development. Mathematics and social sciences are also popular destinations for undergraduates.

One of the very significant softer impacts of the direct route is the positive psychological impact it has for first time student visitors, as well as parents who may be visiting their children in the North of England, who are unable to speak English or other foreign languages. The ability now to be able to

²¹ Data from the Higher Education Statistics Agency (HESA) shows a 6% average increase in enrolments from Chinese students at UK institutions between 2014/15 and 2015/16. Data for 2016/17 was not available at the time of writing.

travel directly to Manchester from the Mainland, without having to navigate a foreign airport (where they are unable to converse in the local language) is a benefit that should not be underestimated.

The direct route has also been cited by the University of Bolton as helping to increase business engagement with China, through several business delegation visits from various cities including Beijing, Shanghai and Wuhan. Anecdotal feedback highlights a rise in students coming to the sub-region to study, including to the University of Bolton, for flexible pre-sessional English-language programmes, from which 60%+ arrived at Manchester Airport via the direct Manchester-Beijing route. Key stakeholders in the region highlight the value that the direct route will continue to have in making the North West region's universities more attractive to Chinese universities looking to collaborate more closely. For example, the University of Chester reported to have increased its student exchange programme to China in 2016/17 compared to the previous year and planned to continue this expansion as the importance of China grows, Alliance Manchester Business School (AMBS) indicated that this year has been a 'record year' for their China programmes and the University of Leeds noted the value of the route in supporting its Chinese student community and widening access and opportunity for both UK and Chinese students.

ACHIEVEMENTS

Key partnerships

formed between regional and Chinese institutions.



Manchester and the wider sub-region continue to see positive levels of

student enrolments in its higher education institutions, with the new route acting as an enabler to an already **vibrant** Manchester-China relationship.



Anecdotal feedback in Year One among partners at the Universities of Manchester and Bolton are highly positive, with the route securing major buy-in from key stakeholders who describe the direct route as a



'major asset' which has helped to increase business engagement with China.



Alliance Manchester Business School recognises the importance of the Chinese market and see it as a fantastic opportunity for growth, especially with our campuses in Shanghai and Hong Kong. The last 12 months has been a record year for AMBS in terms of its engagement with China and, in particular, in the development and expansion of our executive training offering for Chinese clients. We also recognise that the new route, along with future connectivity to China, will be crucial in driving and maintaining success in the China market.

*Alan Wu, Director, China Programmes,
Executive Education, Alliance MBS*



Direct routes like this benefit universities like Leeds, sending a strong message to students from all over the globe - they are joining a vibrant, international university that is innovative and well connected to the rest of the world. Here at Leeds, we have a strong community of Chinese students, both in the UK and at our new joint-school based in Chengdu, and with this new direct route to Beijing, students now have even better access to the very best of Chinese and British higher education.

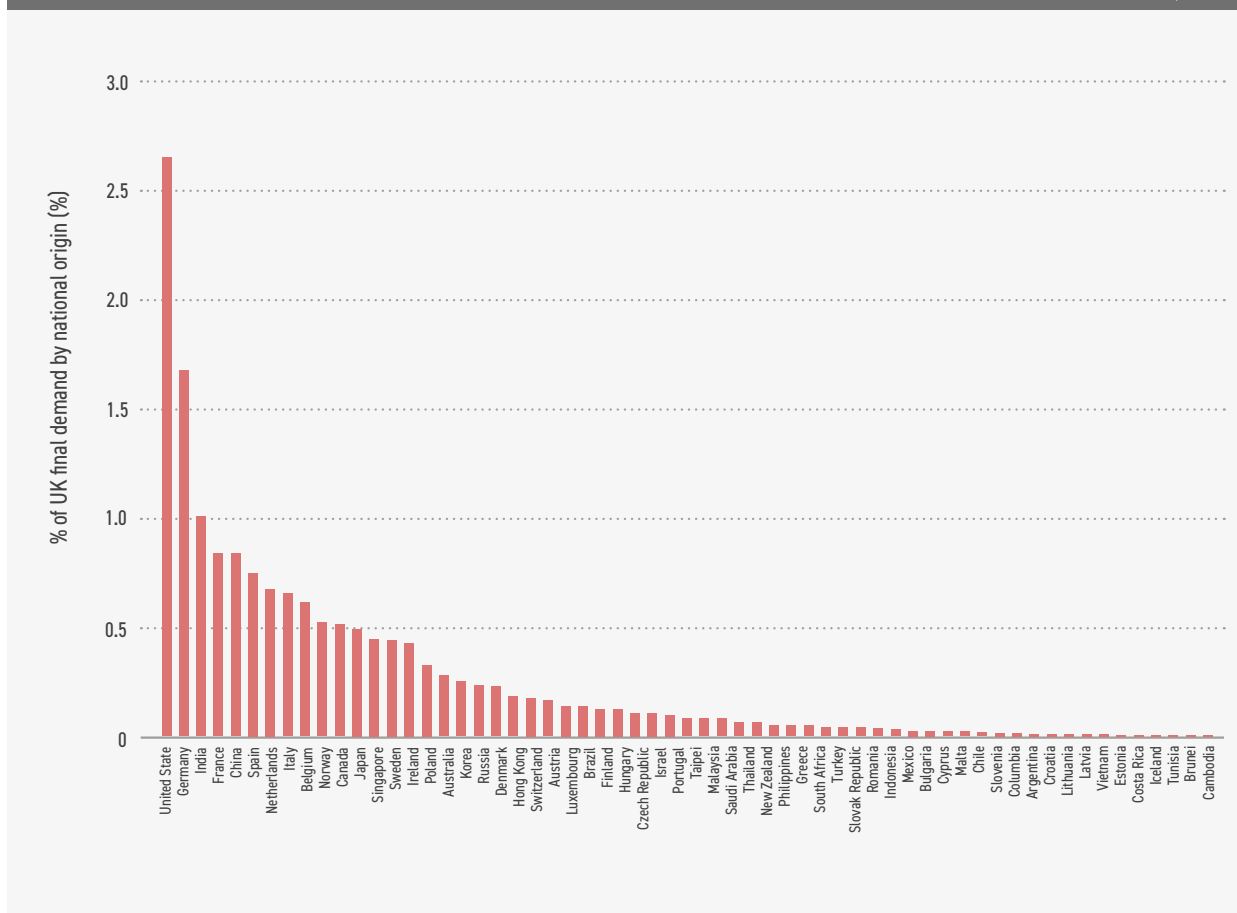
*Doug Pearce, Head of International
Student Recruitment at the University
of Leeds Research and Innovation*

Currently the lower longevity of new companies in Manchester compared to London noted in Section 5 is associated with a reduced take-up of R&D Tax Credits (an incentive to invest in R&D) by SMEs. For instance, the average value claimed in Manchester (£40,214) is around half of that claimed in London (£80,114).²² Although this is not a direct causal relationship, it is indicative of a different mix of SMEs and a more R&D focused SME base in London.

China is of growing prominence as a source of inward funding for UK R&D as a whole. As Figure 12 highlights below, highlights, in 2011 China was the fifth largest contributor to UK final demand for R&D and other business activities when all direct and indirect international flows are estimated.

There is already strong engagement with Chinese institutions and it is expected that the route will enable greater research collaboration, and thereby increased research funding, between the North's universities and Chinese counterparts in the years to come. These could include, for example, outputs and outcomes in the form of exploitable Intellectual Property (IP), new company spin-outs from research projects, and other new company start-ups.

FIGURE 12: GLOBAL VALUE ADDED CONTRIBUTIONS TO UK FINAL DEMAND FOR R&D AND OTHER BUSINESS ACTIVITIES, 2011



Source: SDG-Economic Development analysis of OECD-WTO TiVA data

²² ONS data on R&D Tax Credits.



The university pays great importance to the Chinese market and it is of strategic importance to the University. The University has several excellent links with Chinese universities and is constantly looking for new opportunities for partnership arrangements. The addition of direct flights between Manchester and Beijing will make the North West region's universities including Chester, more attractive to Chinese universities looking to work together

The University of Chester

LOOKING TO THE FUTURE

Given the importance of knowledge and innovation in the global economy, and the increasing concentration of global GDP generation in major (inter-connected) cities, the long-term impacts of direct flight connectivity will be reflected in a more prominent role for Northern institutions in the global knowledge economy.

The introduction of direct flights also creates an opportunity to re-think Manchester's approach to university alumni. Rather than treat students principally as a flow 'through' Manchester's universities, a new approach could be based on building a new more strategic approach designed to encourage a long-term and sustained engagement with Manchester following the student experience - this opportunity is picked up in our Conclusions and Recommendations.



INDICATORS TO WATCH . . .

- » Increases in the number of collaborative research projects involving Manchester and Beijing-based researchers (both bilateral and multilateral).
- » Increases in the number of short-term academic visits and more extended sabbatical visits both from Beijing to Manchester and vice-versa.
- » An uplift in the number of collaborative academic research papers involving Manchester and Beijing-based researchers.
- » Increase in innovation-led investment in key Northern Academic institutions from the Mainland.
- » Patent applications associated with collaborative research by Manchester and Beijing-based researchers.



07

**AND, SO,
WHERE TO NEXT?**

This is the first in what is intended to be a regular cycle of reports on the economic and social impacts of direct flight connectivity between Manchester and Beijing. In preparing this report, we have demonstrated the early effects of the new service and started to explore how direct connectivity with China is beginning to permeate, in more sophisticated ways, the wider aspects of the economic ecosystem in the City Region and the wider North. Box 2 (on the opposite page) demonstrates how this example of direct connectivity is already delivering to the broader strategic economic objectives for North, articulated in the Northern Powerhouse Independent Economic Review.

Many of these impacts are likely to be complex and long-term in their presentation. For example, the ways in which easier access to Beijing and its business and labour markets feed back on business behaviours and cultures in this city region will only become clear substantively after some years. But, other effects are already becoming apparent quickly, with the key ones as follows:

- » The route has carried nearly 90,000 passengers between Manchester and Beijing in its first year, some 15% higher than budgeted. This has driven a 21% uplift in total UK-China passenger air journeys compared to the previous year, bringing an

estimated 20,415 net additional direct passengers to the North of England. These are primarily Chinese passengers making round-trips and the impact of their associated spend in the region is already demonstrably evident in boosted retail and tourism indicators, not least of which is the estimated £138.68 million average annual spend of tourists from China;

- » Manchester is now the second largest UK air route for export to China, accounting for 13% of all air exports in 2016, a value of £601 million. Monthly exports from Manchester Airport are showing a significant increase, from £49.7 million in June 2016 to £181.3m in March 2017 a rise of 265% in the value of exports since the route began;
- » Inward investment interest in Manchester from China has been notably higher in the months following the launch of the route, both in terms of queries to the Inward Investment Agency and recorded Chinese interest property in local property. This aligned with the increase in exports post launch highlights the rising interest in Manchester as a place to do business;
- » The Chinese student population at the University of Manchester alone is increasing at twice the rate of Chinese students in the UK as a whole and the City Region is increasingly becoming a place to study at both undergraduate and post-graduate

level. The route is already proving a major asset in enabling the informal networks created through international study, alongside the increasing number of formal research collaborations, business engagement and knowledge transfer programmes (other universities report a similar trend);

- » Decisions from Chinese operators such as Nanhu to incorporate Manchester as a core component of their UK programmes indicates the positive direct economic impact the route not only has across the North but also in the immediate Manchester vicinity;
- » There has been a 54% increase in Chinese interests in property in Manchester in 2016, compared to 2015. The investments in the City Region that followed the launch of the Cathay Pacific direct service to Hong Kong in 2014, and have continued since the launch of the Hainan route, are anticipated to continue as Manchester's prominence as a desirable investment location with direct connectivity into the Mainland grows;
- » Finally, Department for International Trade data demonstrate that the Northern Powerhouse is experiencing a marked uplift in inward investment projects (a 24% increase in 2015/16 over the previous year), and in 2016 accounted for 25% of total UK exports to China (£12.7 billion for the UK as a whole, £3.1 billion for the Northern Powerhouse).

THE MANCHESTER-BEIJING DIRECT ROUTE & ITS CONTRIBUTION TO THE NORTHERN POWERHOUSE AGENDA

The opening of the direct route between Manchester-Beijing is well aligned with the findings of the Northern Powerhouse Independent Economic Review, which reported in June 2016. Alongside innovation, skills and enterprise, transport & connectivity were identified as key enablers in realising the Northern Powerhouse 'prize' – the creation by 2050 of an additional £87 billion of GVA and 850,000 new jobs in the North if it can achieve its economic potential.

It focussed on the prime capabilities of the North (advanced manufacturing, digital, energy, health innovation) which have the potential to be internationally significant. As the IER reported:



Better transport connectivity within and between cities matters for the North's growth prospects for a number of reasons: investment in skills is more likely where there is access to well-paid jobs; foreign investors are more likely to be attracted to locations that are well connected to global markets, with access to a well-qualified workforce; and firms are more likely to specialise and innovate in areas with deep and extensive labour markets.

Northern Powerhouse Independent Economic Review

Unequivocally the introduction and continuation of direct flights between Manchester and Beijing has already started to positively impact on China-UK connectivity. However, the direct route has started to contribute to positively impact on the wider economic 'ecosystem' in the North, and will continue to do so in the coming months and years. Signs of this are already evident in:

- » How the route is improving graduate attraction and retention – with the route already acting as an enabler to increasing the number of students coming to study at the North's universities from China. Positive anecdotal feedback from HEIs in Greater Manchester and Cheshire shows university-level buy-in and a community appreciation for the benefits that can be unlocked thanks to the route;
- » How the route is improving education outcomes and work-based and vocational training – for example, the increase in the number of people studying Mandarin (such as the Mandarin courses run by Manchester Airports Group for staff alongside other employability courses) which has been already been attributed anecdotally to increasing staff employability at the Airport campus;
- » How the route is increasing university research commercialisation to benefit the North's business base – increased China-UK collaboration in R&D is

already becoming evident in Greater Manchester, for example that between the National Graphene Institute at the University of Manchester, the Beijing Institute of Aeronautical Materials, and Chinese electronics company Huawei;

- » How the route is helping to facilitate inward investment and foreign direct investment bringing transformed business practices and access to leading technologies – for example, the notable spike in inward investment enquiries with MIDAS since the launch of the flight, and continued Chinese investment ramping up in the Northern Powerhouse (e.g. BCEGI at Airport City, BCEGI and Xinjiang Hauling at Middlewood Locks (Salford) and Sichuan Guodong Construction Group's long-term investment in Sheffield city centre);
- » How the direct route is helping to contribute to better management skills and the uptake of innovation, with a longer-term view, the flight facilitates new routes to increased collaboration between the UK and China initially through people transfer (short-term academic visits, sabbatical visits) through to knowledge transfer (i.e. collaborative research projects, academic papers and patent applications). The effects of this are ones to watch in the years following the introduction of the flight.

CONCLUSIONS AND RECOMMENDATIONS

As Lord O'Neill noted in the foreword,



The very notion of policy helping to build a different pattern of geographic economic growth by undertaking ambitious projects to both strengthen and link up urban areas is at the heart of China's astonishing success of the past 30 years and more.

China's rise is a clear demonstration of how direct place-based strategic investments, in combination with efficient markets, can re-shape economic geographies. Each can deliver change on its own but in combination the impacts can be greatly amplified.

The re-shaping of the geographical dimensions of economic growth has been reflected in this report. It demonstrates the catalytic role of the Manchester Airport campus as the primary international air gateway for the Northern Powerhouse. It also highlights the broader significance of the Northern Powerhouse as part of a global network of major cities that, collectively, drive global economic growth.

These geographical dimensions are therefore both localised and global in their nature. It is essential that strategic public investments, and other aspects of government policy in the UK, recognise the importance of this mix of local and global connectivity. Narrowly framed minds-sets, policy, and fiscal objectives, can mean that the opportunities to exploit the full economic potential of direct flights between major global cities such as Manchester are missed.

This economic potential is also culturally-enabled: without the trust, mutual understanding and reciprocity essential to success in business and as places, the long-term economic benefits may be unsustainable and/or prone to significant volatility. In other words, whilst direct flight connectivity has the potential not only to lift short as well as long-term economic growth; this needs to be backed with long-term commitment to strengthening relationships and trust between the UK and China that will convert these increased inputs into the outputs that constitute economic growth.

The stronger the 'social capital' built by business and cultural ties, the stronger the conversion of increased flight inputs into economic growth. We not only want visitors to contributing to the Visitor Economy, but also to initiate business deals that result eventually in additional production and exports, investment in infrastructure and assets, knowledge and innovation, an uplift in skills or a decision to study in a Northern

university. Over the long-term, this strengthened mutual understanding, cultural familiarity and trusted relationships will give the next generation of our people in the Northern Powerhouse a head-start in constructive engagement with China.

Consequently, Lord O'Neill's emphasis on the importance of approaching the role of direct flight connectivity from an appropriate 'big picture' angle, which reflects the socio-cultural side of the UK-China relationship, gets to the heart of the challenge.

The recommendations that follow reflect this emphasis on combining strengthened direct flight connectivity with further efforts to convert this connectivity into sustained and resilient economic growth.



STRENGTHENING DIRECT FLIGHT CONNECTIVITY

Over the long term, what matters most to the future prosperity of major cities, and their hinterlands, is connectivity with other major cities world-wide – and especially the 600 cities that are responsible for generating 60% of global GDP.

In the global knowledge-based economy, face-to-face contact, relationships and trust are all key success factors. Greater connectivity allows business to flourish and knowledge to advance in ways that other virtual means cannot yet match. The co-evolution of the global digital economy and air transport, with each reinforcing the other, is a long-standing and widely recognised feature of the global economy. Digital connectivity opens pervasive opportunities for new business, but it is face-to-face relationships that make much of this business happen – especially if it involves addressing risks of various types. In particular, business innovation ‘cultures’ are critical to competitiveness and evolve via personal relationships and shared experiences in solving problems. Consequently, direct flights are a key component of this connectivity and the associated advances in how we innovate and co-create. Cities with good transport connections can leverage more effectively the success of the cities they are linked to. They form a global network of reinforcing business relationships – creating a ‘positive sum’ game from which all participants benefit.

These benefits are also reflected in the academic performance of universities. Recently published research reinforces one of the messages in this report by stressing that universities that are well connected to global transportation hubs tended to rise up rankings faster than those of similar rank, but in less well-connected areas. As the Times Higher Education report stressed: “The main factor contributing to the rise in the rankings was proximity to airports that have more direct flights to other global hubs, rather than the number of flights or the number of connections alone”.²³

From this strategic business perspective, direct flights to and from China are a tangible expression of Manchester’s growing global prominence – a prominence that will yield long-term economic and social returns for the Northern Powerhouse as a whole. Understanding the role of additional direct flights to other Chinese and global cities (and working practically to secure these) will further strengthen this global connectivity and profile. The ability of executives to fly directly into the North via Manchester airport from other major global cities, conduct business in the city, and then fly directly to China is a major advantage. The greater the number of direct flight connections to other global cities the stronger the case for being classed as a global city – and the international brand prominence and credibility that this brings.

The enhanced connectivity created by direct flights is especially useful when it results in a reduction from three to two flight segments in a given journey, especially in a geographically large country like China. The new direct Manchester-Beijing route means that someone travelling to, or from, a regional Chinese city need only catch a flight to Beijing and then straight on to Manchester (and vice-versa).

There are currently 130 within-China onward destinations accessible via Beijing, i.e. tremendous two-flight connectivity for Manchester. This reduces transit times, delay risks and therefore makes it far easier to travel between the north of England and the whole of China. These streamlined travel times are especially important for business people, and therefore assist with uplifts in trade and investment – to mutual advantage.

From this angle, the direct flights between Manchester and China have extended the Northern Powerhouse’s ‘two flights’ hinterland in China. Future routes could, usefully, be prioritized by maximising this extended hinterland formed by this ‘onward connectivity’. Many cities within this extended hinterland are displaying rapid growth rates, with their airports increasing in physical size and passenger numbers at the same time. Indeed, recent IATA projections estimate that by 2022 the Chinese air passenger market will be on the cusp of becoming the largest in the world. As this report highlights, the advantages

²³ THES 18 October 2017. Original article: Weisi Guo, Marco Del Vecchio, Ganna Pogrebna (2017) Global network centrality of university rankings. Royal Society Open Science. 4 October. DOI: 10.1098/rsos.171172.

of being directly linked in to this emerging preeminent air passenger market are profound.

Air Passenger Duty (APD) is an important factor in flight profitability and, as a result, the willingness of airlines to launch new services on price sensitive routes. The UK currently has one of the highest levels of APD in the world. In extremis, APD can act as an impediment to re-balancing the UK economy by limited the scope for driving economic growth outside of London and the South East.

As the comprehensive perspective laid out in this report highlights, extensive long-term economic benefits (which include inward investment attraction and enhanced innovation performance) have the potential in the long run to outweigh the short-run loss of APD tax income to government. The greater the appetite in Whitehall for considering the 'broad spectrum' and long-term benefits of APD reductions, the more powerful the case for strategic reductions in APD to support sub-national economic development.

For instance, temporary 'regional route launch' APD relief on new services could facilitate the transformative economic benefits delivered by this air connectivity without losing out on tax revenues over the longer-run. As we leave the European Union we have an opportunity to think about these challenges in new and innovative ways.

Finally, there is the challenge of airport catchment areas. Airlines consider the number of people within a two-hour travel radius of a long-haul hub to be a key decision factor. The greater this number of people, the more attractive the route as a business proposition. As the report notes, a threshold of 100,000 people within a two-hour travel radius is not uncommon.

Whilst 22m people reside within Manchester Airport's two-hour drive time the population accessible via public transport is comparatively small. This public transport catchment area is currently 3.5m people for Manchester airport, compared to 12m for Heathrow and 13m at Gatwick. Better ground transport connectivity could lift this catchment area to 10m within 90 minutes travel time – which Civil Aviation Authority data suggests could, potentially, open up at least 20 new long-haul routes. This enhanced connectivity would further reinforce the regional economic growth impacts through the different economic domains described in this report.

The more that government can do to stimulate greater direct flight connectivity outside London by, for example, reductions in APD and airport catchment area transport infrastructure investments, the greater the potential to re-balance the economy. As this report argues, we risk overlooking this potential if we restrict our impact analyses to what can easily be measured

over short-term timeframes. The more willing we are to consider factors that are hard to measure, and may only eventuate over the long-term, the greater the likelihood of stimulating strong and resilient economic growth – a classic public policy conundrum.



Reflect the contribution of Manchester Airport's direct flight connectivity in the Northern Powerhouse strategic agenda.

The Northern Powerhouse strategic agenda, and broader strategies aimed at rebalancing the UK economy, should place a strong emphasis on the contribution of Manchester Airport as the main long-haul direct flight gateway for the Powerhouse. The Northern Powerhouse agenda needs to place a strong emphasis on international connectivity and, as a result, the contribution of Manchester Airport. The evidence and insights contained in this report can be used to understand this contribution. This perspective will help policy-makers make informed decisions about the interventions needed to maximise the value derived from enhanced international connectivity and, in particular, the specific contribution made by Manchester Airport. As additional direct flights to other major cities world-wide are added, then the benefits generated can be captured by using the comprehensive approach piloted here.



Improving long-haul connectivity to the North, by overcoming barriers to the attraction and retention of new services, should be prioritised in the Government's new Aviation Strategy.

The new Aviation Strategy being developed as the UK leaves the European Union provides an opportunity to re-consider the benefit-cost relationships associated with innovative reforms to Air Passenger Duty (APD). The broad nature, and long-term extent, of the economic benefits generated by direct flight connectivity suggests that innovative temporary reductions in the level of APD for new routes have the potential to stimulate disproportionately larger economic growth contributions – including innovation performance. More progressive APD arrangements aimed at stimulating regional economic growth via temporary reductions may be attractive in this context, and as such should be considered by the Aviation Strategy.

Similarly regional airports need to be a priority when decisions are being made around improved transport infrastructure. Whilst APD regulation adjustments can attract new services into the UK, improved transport links in the North could expand the economic benefit of these routes to other connected regions. The framework laid out in this report can serve as one input to this analysis by emphasising the importance of strong flight connectivity to strategic investments in re-shaping

regional economic geographies. The combination of international flight and local ground transport connectivity reduces overall journey times and extends the functional geographies that drive economic growth.

CONVERTING DIRECT FLIGHT CONNECTIVITY INTO ECONOMIC GROWTH

Awareness of the beneficial economic inter-connects between air, rail and road transport modes is well-established. This report has extended this inter-connect to cover inward investment, innovation and other considerations. It is therefore important that Government policy-making is 'joined-up' in ways that align with this understanding.

Industrial Strategy provides a timely opportunity to focus on these beneficial inter-connects. The 'developmental' methodology used in this study to understand the scope and scale of the benefits that direct flight connectivity generates is, therefore, useful in present policy thinking. As we transition into the post-Brexit era, it is particularly important to promote understanding of how creativity and innovation, factors so central to knowledge-based economies, can be enhanced by flight connectivity with a dynamic economy like China. The Visitor Economy generates important short-term gains and these longer-term transformational factors then amplify and consolidate these gains in ways that can have profound implications for regional prosperity and social welfare.

Consequently, we recommend that the progress made towards articulating this sort of comprehensive developmental approach to anticipating and tracking the conversion of direct flight connectivity into economic growth be consolidated and built-upon in the future.

One way of building this momentum would be via a joint UK-China initiative to articulate the mutual benefits that stem from better connectivity – as reflected in the key dimensions of the One Belt One Road initiative, i.e. investment, trade and innovation.

The Manchester China Forum is well-placed to organise this bilateral collaboration via a Joint Working Group. Such a joint Working Group would be able to combine a 'joined-up' approach to how we approach the economic benefits from direct flights within the UK with a bilateral conversation over how to maximise the mutual benefits of this direct flight connectivity. It would also draw upon the progress and broader economic benefits of China's own investment into surface access links in and around key airport hubs, opportunities for best practice sharing as well as identifying opportunities for future collaboration. Such a mechanism would be especially useful in drawing on Chinese expertise on investing in (to use Lord O'Neill's phrase) 'creating different patterns of geographic economic growth' via strategic investments. This report has

touched upon just a few of the exciting opportunities presented by improved connectivity between the North of the UK and the world's key growth market.

Opportunities to grow air connectivity alone are tremendous; however, given the platform created since President Xi's historic visit, these ambitions should not be one-dimensional. Indeed, at the heart of China's Belt and Road Initiative lies improvements to both sea and land connectivity, all of which can play an important role in progressing the region's ability to engage effectively with China.



The scale and breadth of ambition of the Belt and Road Initiative provides a suitable framework for building mutual understanding of the multiple benefits generated by improved connectivity - and for identifying constraints and possible solutions to any constraints that may require joint solutions. Beyond the immediate opportunities in growing air connectivity and building on existing success around the collaboration of major infrastructure initiatives, such a Working Group could also consider approaches that support social and cultural engagement.

For example, capitalising on the shared innovation capabilities of both China and the North could be achieved by collaborative research and research training linking both business and educational institutions. Similarly, the Chinese student body is a significant asset to Manchester, maintaining alumni relationships and connections post-graduation is important and the city should strive to maintain these connections as a way of encouraging additional intellectual investment. Talent should continue to be encouraged to move into the Northern Powerhouse through research and innovation scholarships for exceptional Chinese students, with the option to open up opportunities in both Manchester and China via a web portal which highlights research and innovation links between the two countries, made possible by the provision of direct flights.



Explore joint UK-China initiatives to identify and progress collaboration and confidence-building opportunities between the Northern Powerhouse and Belt and Road Initiative.

Given the clear synergies between these two Government backed strategic initiatives, a more formal framework for supporting joint collaboration in this space should be explored. The Manchester China Forum should therefore explore interest in both the UK and China in forming a joint working group to explore collaboration between these two Initiatives. Looking at developmental approaches to improve multi-modal transportation links as well as broader collaboration opportunities around infrastructure, innovation and education.

The attractiveness and the feasibility of launching post-graduate scholarships for gifted Chinese to study at Manchester's universities should be explored as part of this initiative. Scholarships of this type have an important significance in China because they are a clear demonstration of Manchester's long-term commitment to the reciprocal relationship with China. These scholarships would be a particularly effective way of spending some of the additional income from the visitor economy created by the direct flights, with a disproportionately high return on the investment in terms of profile, mind-sets, credibility and reputation in China.



Develop an improved understanding of the China outbound market growth potential to Pro-actively raise ambitions around the North's connectivity with China.

The stimulation of direct connectivity between key markets, such as Manchester-China, should be key features of the UK Government's diplomatic and economic discussions with China. Chinese airlines will fly 140 times more passengers in 2017 than they did 35 years ago (IATA)²⁴. Less than 10% of the Chinese population currently own passports. As passport coverage increases, and the growth of second tier cities and investment into airports improves, the China tourism and trade market is expected to become the largest in the world.

Recognising that this report has focused on the UK side, a better understanding of this demand-side within China now needs to be developed in order to better anticipate, and facilitate, the benefits of this growth potential for the Northern Powerhouse.

BUILDING ON THE EXPERIENCE OF THIS STUDY.

In the post-Brexit era, the developmental approach adopted by this study to understanding the effects of direct flight connectivity on local economic growth by linking understanding of local conditions and global trade, investment and tourism opportunities is highly relevant. Indeed, the model adapted warrants consideration nationally by other major

UK cities, as they seek to better understand how flight connectivity enables their place and business competitiveness. It is particularly important to promote understanding of how creativity and innovation, factors so central to knowledge-based economies, can be enhanced by flight connectivity with dynamic economies like China. The Visitor Economy generates important short-term gains from flight connectivity, but it is these longer-term transformational factors that can start fundamentally to reshape and rebalance the prosperity and social welfare of place.



Disseminate and promote this developmental assessment approach elsewhere in the UK.

It would be useful from, a national perspective, to raise awareness of the advantages of adopting this 'developmental' approach to assessing the economic impacts of flight connectivity. This 'rounded' assessment, with a clearly articulated 'theory of change' based on synergies between people, skills and culture, knowledge and innovation, business and enterprise and infrastructure and assets, aims actively to increase the economic multipliers that apply at a local level – not just assume these factors as 'a given.'



²⁴ *What has driven the outperformance of Chinese Aviation? IATA Economics, October 2017.*

ACKNOWLEDGEMENTS

Organisation	Contact	Role
Alliance Manchester Business School	Alan Wu	Director, China Programmes, Executive Education
BCEGI	Yu Dongwen/Peter Chi	Managing Director/Finance Director
Cheshire Oaks	Jennifer Wilson	Senior Marketing Manager
Chester University	Andrew Lyon	Head of Department- Marketing, Tourism, and Events Management
Confucius Institute	Karen Wang	Deputy Director
Consulate to the People's Republic of China in Manchester	Sun Dali	Consul General of the People's Republic of China to Manchester
GM Chamber of Commerce	Christian Spence	Head of Research and Policy
Hainan Airlines	Ryan Zhang	UK General Manager
Harvey Nichols	Ian Mackenzie	General manager, Harvey Nichols, Manchester

Organisation	Contact	Role
House of Fraser	Anne Latham	Store Manager, House of Fraser, Manchester
Lake District China Forum	Jennifer Cormack	LDCF Chair
Lord Jim O'Neill of Gatley		
Make it York	Kate McMullen	Head of Tourism
Manchester Airport	Adam Jupp	Head of External Affairs
	Conan Busby	Head of Cargo and Business Aviation
	Sam Marsland	Manchester Airport Strategy Team
	Tim Hawkins	Corporate Affairs Director
	Stephen Turner	Commercial Director
Manchester China Forum	Samantha Atherton	Public Affairs Manager
	Rhys Whalley	Executive Director
	Charlie Dowdle	Project Manager
	Rebecca Drakeford	Project Manager
	Tover Yu	Route Development Representative

Organisation	Contact	Role
Manchester City Council	Richard Elliott	Head of Policy Partnerships and Research
	David Houlston	Manchester City Council Policy Team
Manchester City Football Club	Tom Glick	Chief Commercial Officer of City Football Group & Managing Director of City Football Marketing
Marketing Manchester	Sheona Southern	Managing Director
	Tim Manley	Marketing Manager - China
MIDAS	Tim Newns	Chief Executive
	Dan Baxter	Business Intelligence Analyst
Nanhu Travel	Nora	Service Agents
	Jackie	
North Wales Tourism	Jim Jones	Managing Director
SDG Economic Development	Simon Pringle	Director
	Mark Matthews	Associate
	Fiona Tuck	Associate
	Daniel Burke	Assistant Consultant

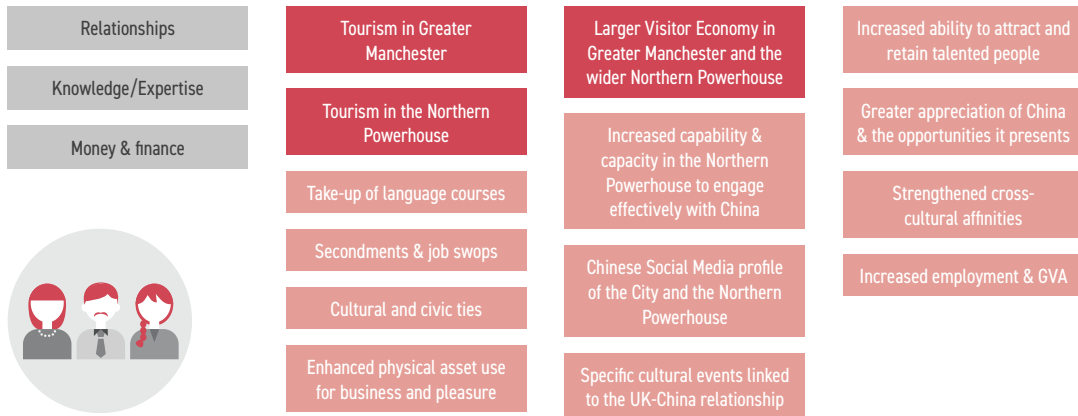
Organisation	Contact	Role
Selfridges	Jane Sharrocks	General Manager, Selfridges Exchange Square
University of Bolton	Ben Chen	International Team Leader
University of Manchester	Nancy Rothwell	President and Vice-Chancellor
	Richard Cotton	Director of Student Recruitment and Outreach
	Tanya Luff	Head of International Relations

TECHNICAL ANNEX

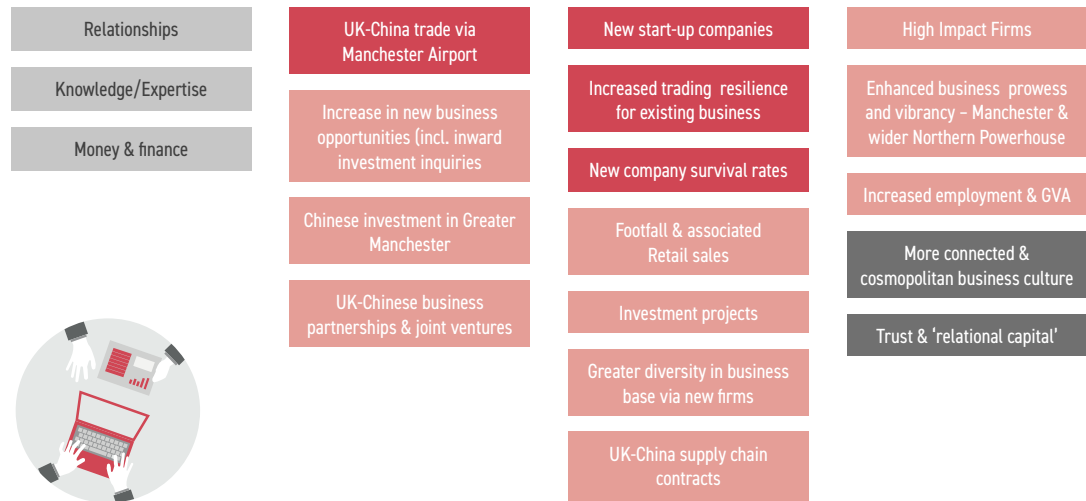
The specific logic model used in this report is laid out below. It details the Inputs, Activities, Outputs, and Outcomes & Impacts for each of the five domains considered in the report



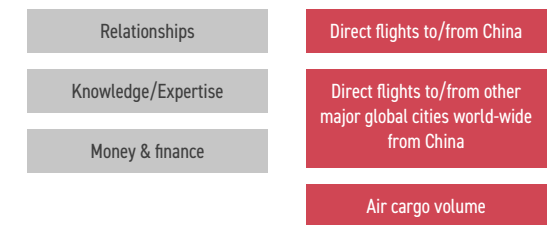
PEOPLE, SKILLS AND CULTURE



BUSINESS AND ENTERPRISE



THE AIRPORT CAMPUS



- Evidence currently available & accessed by this study
- Evidence partially and/or available with further calibration & development – used to inform this study wherever possible
- Evidence currently not available – action required to deliver in the future

INPUTS

ACTIVITIES

OUTPUTS

OUTCOMES & IMPACTS

INFRASTRUCTURE AND ASSET BASES

- Relationships
- Knowledge/Expertise
- Money & finance

- Brand developing/building
- New build/construction
- Refurbishment/re-investment
- Forming property/asset consortia

- Increased enquires for land & property
- Increased occupancy rates
- New floor space created
- Land/property refurbished or regenerated
- New assets built/secured
- Increased market dynamism

- Enhanced Manchester/Northern attractiveness for investment (brand recognition)
- Rentals growth
- Land value uplifts
- Wider asset value appreciation
- Business Rates growth
- Increased employment & GVA



OUTPUTS

OUTCOMES & IMPACTS

Larger Visitor Economy in Greater Manchester

Air cargo volume

Airport retail sales

Airport transit revenues

Airport related employment

Investment in airport expansion

Investment in the broader Airport Campus

Manchester Airport's enhanced attractiveness as a destination & transit point

Increased employment & GVA

KNOWLEDGE AND INNOVATION

- Relationships
- Knowledge/Expertise
- Money & finance

- UK-China collaborative research projects (R&D uplift)
- Short-term academic visits
- Longer-term sabbatical visits
- Promoting Manchester & the Northern Powerhouse to Chinese students & researchers

- Uplift in Chinese student numbers
- Joint UK-Chinese research papers
- Patents stemming from joint UK-China collaborative research
- Research spin-out company formation
- Company start-ups
- Cooperative MoUs between UK & Chinese universities/institutes

- Manchester Airport's enhanced attractiveness as a destination & transit point
- Increased employment & GVA





If you would like more information on the analytical methods used, or the findings of, this report then please don't hesitate to contact Simon Pringle Director, SDG Economic Development by email at Simon.Pringle@sdgworld.net or by phone on +44 161 261 9141.