



## A Second Runway for Gatwick Appendix

# A2

How Technology will drive  
Transformation of the Aviation  
Industry



How Technology will drive Transformation of the Aviation Industry

## **Updated Scheme Design**

# A2

**How Technology will drive Transformation of the  
Aviation Industry**

### Foreword by Nawal Taneja

New technologies are driving exponential change for producers in the air travel value chain and for customers across all stages of travel, from search and booking through to all stages of the actual journey. New technology aircraft - such as the Boeing 787 and the Airbus 350 - will enable global markets to be more directly and more affordably connected, and consumer-orientated technologies driven by the internet, social channels and booking technologies will also help re-define the options available for customers to book different and more affordable connections. The online consumer experience will be dominated by technological change, powerful consumer brands and marketplaces, and the physical travel journey will be similarly transformed. Technologies will drive consumers to search for, and collaborate on the best travel experiences, and open technologies will lower barriers to accessing these experiences. Technology will also empower travel-related sellers to understand customers' behavior and expectations and will enable different members in the travel value chain to collaborate to provide much more personalized services.

Clearly, airlines and airports need to reinvent the experiences they offer to maintain their relevance to consumers in a technologically-driven age. London Gatwick Airport is clearly headed in this direction due to the initiative to facilitate connecting traffic, called GatwickConnect, the diversity of business models that currently operate at the airport (which are also the ones driving industry transformation), and the scale of its ambition to develop a second runway. If its capacity were to increase, it could become an airport of choice not only for origin-destination traffic, but also for connecting traffic, given its location and the scale and sustainability of the network that it already has, and would increasingly have with additional capacity. In the case of Gatwick, it is perfectly feasible to envision new long haul LCCs adding service to take advantage of London's position as a global world city for local demand, but also to capture feed from this huge network - Air Asia X, Cebu Pacific, Singapore Airlines' Scoot, Qantas' Jetstar, and Flynas from Saudi Arabia are examples, as well as the possible emergence of transatlantic LCCs led by Norwegian, but potentially followed by WestJet and other powerful players.

As a whole, and over a long period of time, airlines have rarely made money. While airlines worldwide have managed to reduce their unit costs, they also reduced their unit fares in parallel to the reduction in costs to keep up with competitive pressures. Thus, while consumers benefited, airlines have always struggled to make sufficient returns to cover their average weighted cost of capital. In recent years, continuing increases in capacity and the unyielding focus on price on many routes has led to profitless growth or, at best, razor-thin margins. The argument I make is that airlines should now focus more on the revenue side of the equation than the cost side because most of the larger savings in costs, under management control, have already been achieved. The path to this is through the deployment of technology, and collaborations with other members in the travel chain.

Most airlines have already started on the path of revenue growth through the unbundling of the airline product to increase ancillary revenues given that fares in many markets are either declining or stagnating, at best. The challenge, however, is for airlines to examine consumer perceptions of value and service -perceptions that are changing rapidly and dramatically due to innovations from the technology sector. These perceptions of value and service encompass all business sectors, challenging airlines, as well as other value chain members (such as airports) to measure up to best in breed business practices.

Airlines and airports will inevitably need to collaborate in the use of data and enabling technologies to deliver improved opportunities and experiences to customers, such as booking connections between non-interlined carriers within seconds in a single transaction, together with a transit product at the

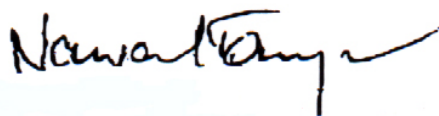
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airport that facilitates the transfer of baggage from any airline to any other airline. An onward train journey and hotel reservation will also be part of the single end to end booking if the consumer wishes it. Such value-adding services would also provide revenue-related opportunities for airlines and airports stemming from the use of information from the connected consumers to make relevant and more affordable offers to the right customers at the right times. It would also transform the connecting potential at an airport to exploit network opportunities, driven mainly by LCCs, to the maximum.

A few airlines and airports, such as the management team at Gatwick, are stepping up to the challenge of data-driven marketing, and applying technology solutions which are actually available now. Airlines and airports that are not laser focused on mining insights from all these sources are missing a real opportunity to engage with customers and provide personalized services (data-driven mass customization) as consumers value having control over the services they buy. Airlines and airports that are prepared to focus on understanding the rapidly changing perceptions of value of their customers will not find that service is irrelevant and little else matters but cost. On the contrary, there are huge untapped opportunities for value creation for which Internet-powered customers are willing to pay.

The bottom line is that tomorrow's travelers will want high degrees of personalized services—services that they can control, and they want all possible relevant and affordable journey options to be presented to them quickly, and to be easily bookable. Airlines and airports need to use emerging technology (the Internet, mobile devices, and emerging bag tag technology, for example) to engage with constantly-connected customers to enable them to meet their individual needs and improve their experience. Emerging consumers want convenience, control and choice in making their purchasing decisions, and they want assurance of a hassle free experience at the airport. Airlines and airports are held to account in meeting this customer promise by experience-sharing via social channels.

London Gatwick's vision for this future is becoming reality even now, and in my opinion will become the new industry norm.



Nawal K. Taneja  
Airline Business Strategist and Author  
Aviation Professor Emeritus

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### Technology will continue to disrupt the aviation status quo

Without doubt the aviation industry will be transformed over the next 10 years by technology.

Technology will enable airlines to drive greater efficiencies into their operational and customer service models through new generation aircraft and airport process technologies, but equally as fundamental will be the adaptation of business models to the huge changes that will take place in the consumer sphere, where booking technologies, the internet, data-led customer relationship management, and the power of non-aviation players in the online consumer world, will be hugely disruptive to legacy models.

According to Nawal Taneja, the former Associate Professor at MIT, former Professor and Chair of the Departments of Aviation and Aerospace Engineering at Ohio State University, and now consultant and author, in his book *The Passenger has gone Digital and Mobile* (2011), the convergence of airline business models and the ability of different models to develop connecting traffic is already taking place, facilitated by technology:

“..new generation information and technologies are now becoming available for low cost airlines to interline with conventional full service network carriers without adding higher cost complexity...While it is not possible to totally eliminate complexity, it is possible to manage complexity to enable the two sectors of airlines to work together to the benefit of both. Early signs are already appearing showing the feasibility of such a game-changing scenario facilitated by enabling technology.”

### Gatwick's has a major role to play in industry transformation

Gatwick has an almost unique position in the aviation industry, as it serves all types of airline business models – regional, charter, LCC and full service carriers, both short and long haul. Indeed Gatwick has one of the largest LCC networks of any airport in the world, and is the largest base of one of the world's most successful and innovative short haul airlines, easyJet. It is also one of the designated bases of one of the world's most ambitious new-generational global carriers, Norwegian, and offers premium services to globally successful airlines such as Emirates who operate triple daily from Gatwick, including A380 services.

Not only is Gatwick at the centre of changes and adaptations to airline business models, observing the increasing service-led initiatives of major LCCs in the areas of allocated seating, flexi fares, LCC through-baggage ticketing, and long haul low cost (both Norwegian), but is designing airport infrastructure that will support new generation processes, and can accommodate increasing systems integration between search and booking platforms and airport check-in environments.

Gatwick therefore is at the very centre of the emergence of new thinking among some of the world's highest growth airlines, and has a crucial role to play in supporting the inevitable convergence of these business models as technologies become more open and the delivery systems less fragmented.

### Gatwick is driving industry change for connecting passengers

Gatwick has already performed significant research and analysis of its existing passengers that shows that the most enterprising and educated of our passengers have already used the internet to perform the research, and find fares, that enable self-service transfer at fares cheaper than the



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alliances or traditional airline models can offer. This has uncovered approximately 960k passengers self-transferring every year through Gatwick.

Along with that research, Gatwick also performed “big data” analysis with Skyscanner and Deloitte on 1bn searches for flights in the month of December 2012. When this data was compared with our known self-connecting traffic there was a surprising result. The top ten searched routes (the ones the consumer is looking for and available via Gatwick but without interline protection) were different to the top ten booked and flown routes. This suggests that there is an unfulfilled market for self-connecting traffic that could be served by Gatwick if the fares can be surfaced on the aggregator websites and the transfers protected as they would be for a fully interlined ticket.

Gatwick has taken up this challenge by developing GatwickConnect, a service that assists in the transfer process for customers that have booked 2 separate tickets. This service has a precedent: Milan airport, smaller in size to Gatwick but with a similar mix of traffic types, developed viaMilano (<http://www.flyviamilano.eu/en>) to assist with the transfer of passengers from none interline partners with incentives such as shopping vouchers and free WiFi to encourage take up.

By the end of 2014 Gatwick expects over 90% of its passenger base capable of being served via Gatwick connect with over 12 airlines participating. The next step is significantly bolder and will establish a completely new concept in connecting travel across Europe and the world.

### Before 2025 the consumer will expect the following experience

Mr Jones, 30, his wife and 2 children, 10 and 8, decide to go on a trip from their home in Edinburgh to Istanbul. Mr Jones had his first smartphone and tablet by age 15 and so his natural behaviour is to search for the journey by asking his Google Glass device how to get there. At the same time his children pick up their old tablets, the ones Dad used as a teenager, and start their search on Skyscanner. Within seconds Dad and the children have found end to end journeys from their home to Istanbul.

Dad's Google glass has suggested a route via tram and train from Edinburgh to Kings Cross, walk to St Pancras and a short trip on the brand new Thameslink trains to Gatwick, where GatwickRailConnect will support the onward connection to a flight on Turkish to Istanbul. Once in Istanbul it has recommended a hotel and planned a taxi for them.

The children's Skyscanner search has found journey that is a tram to Edinburgh airport, easyJet flight to Gatwick, a GatwickConnect assisted transfer onto Turkish Airlines, followed by a taxi to the same hotel. This trip is 3 hours shorter, £50 per person cheaper than the train route and £100 per person cheaper than going with competing services via Heathrow.

With one click to pay, the whole journey and experience is booked and all the barcodes are downloaded to their smart watches ready for travel.

On the day of travel they have 2 suitcases and 3 hand luggage bags. The 2 suitcases have permanent bag tags. The GatwickConnect app has issued a bag tag token for 2 of the passengers. With a swift flick of the wrist the smart watch sends the data to the permanent bag tag and they are ready to travel.

From dropping the bag at Edinburgh to arriving in Istanbul they won't see their bag again. GatwickConnect will take care of everything including the bag transfer. There is no extra hassle for

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them and the 2 airlines involved don't have any interline agreement or impose any booking restrictions.

### Consumer behaviour trends that will accelerate the change

Consumer behaviour of 2014 is very different from that of 2000 and by 2025 will be significantly different again. These changes are driven by changes in technology that cannot be controlled by the aviation industry, so the industry must adapt to them.

In 2000 the internet had grown and was becoming part of everyday life. However it required a dedicated desktop PC to access it, access was still limited by the speed of the connection and the "internet café" was still heavily used. Looking for a flight online was a rare activity.

By 2004 home broadband was becoming more common and social networks like Facebook were starting up. This was to start a drive towards everyday use of the internet for social interaction in a way that nobody had previously considered. The impact of this social interaction has had profound effects on everything from government stability to how we find lost cats and dogs.

In 2007 Apple launched the iPhone and in 2010 the iPad. These devices along with cheaper alternatives from other manufacturers transformed the internet and the services available on it from the office and home to completely mobile and ubiquitous, also enabled by WiFi, 3G and 4G services rolling out across every geography on the planet. This change is the most dramatic in terms of consumer behaviour as phones and tablets now outnumber humans on the planet and are being produced at a rate of approximately 2bn per annum.

In 2014 consumers are realising their power, as they use loosely organised networks such as facebook, twitter, amazon and google to drive feedback and performance of their service providers. Examples of this include a British Airways customer complaining via twitter about his baggage delivery experience <http://www.bbc.co.uk/news/technology-23943480>. Consumers have also become far more empowered and educated about the value of the products they buy and the options they have when buying services.

Consumers have become smart using social networks and the internet to understand markets in much more detail. An example from the rail industry is <http://www.splitmyfare.co.uk/>, a site that will save you money by buying 2 tickets instead of one for the same journey.

### How consumer power could drive an even more radical outcome

In the society of 2025 where everyone has had a smartphone and tablet from birth, the understanding of how markets work and how we interact with brands changes completely.

Collaborative consumption, also known as crowd sourcing, could drive the aviation industry into a new reality of many flights being point to point charter service. On the surface this seems like unbelievable statement based on what we know today, but the consumer behaviour described above has the potential to change that dramatically.

Consider a Facebook or Amazon page that allows you to register your interest to fly to a certain destination on a certain date. Once enough people have registered the consumers, Facebook or Amazon will perform an e-auction to all the airlines interested in their business to operate the flight for them. This is exactly the premise of [www.gojumpon.com](http://www.gojumpon.com), and could be viable for some charter and LCCs operating out of season today, and would grow over time. However the model really takes off



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when it is fully integrated into a Social Network ensuring that multiple billions of users have the chance to register for journeys and experiences that could be serviced by Gatwick and its array of airlines and business models.

This is challenging traditional markets in everything from parking to storage, plant hire to hostelry. A few examples are:

- <http://www.collaborativeconsumption.com/directory/> - A directory of possible services
- <https://www.airbnb.co.uk/> - Using spare rooms as temporary accommodation
- <http://www.parkonmydrive.com/> - Using empty driveways as parking
- <http://www.girlmeetsdress.com/> - Temporary use of clothing and accessories

All of this change in consumer behaviour has happened in 10 years. The consumer of 2014 is very different to the consumer of 2000. The consumer of 2020 will have been brought up and educated in a world dominated by the internet, collaborative consumption, social media with a higher understanding of markets and their value propositions.

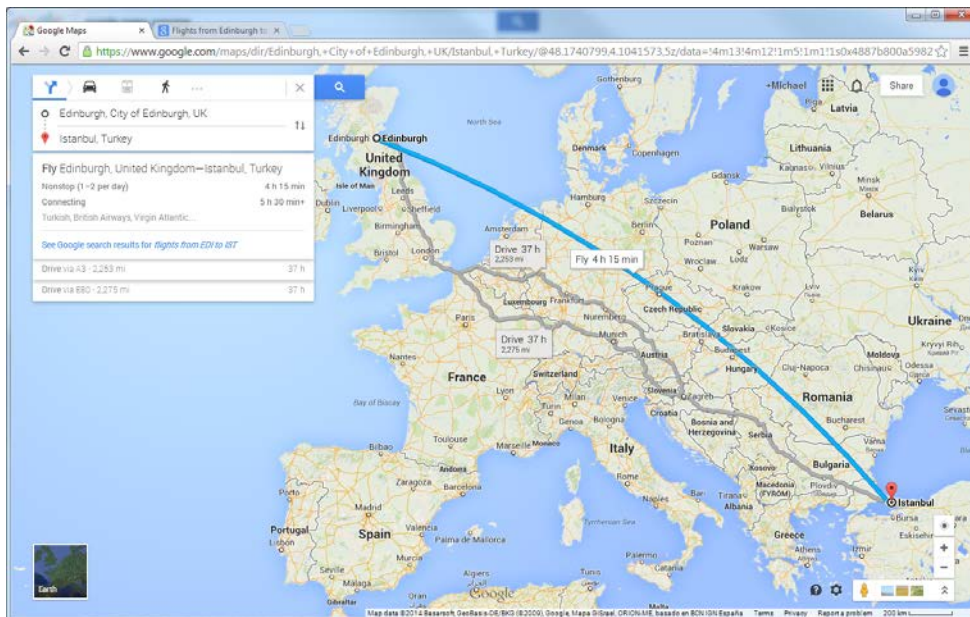
In its Retail 2022 study, the Economist Intelligence Unit also highlighted some of the profound changes which will take place in the consumer space (see Appendix 2)

“By 2022 these bargain-driven technologies will have merged and expanded in scope so that sophisticated sites are able to tailor the best voucher or Groupon-type offers in to much more personalised and bespoke retail services. Comparator sites will be able to split online baskets automatically between different retailers to ensure a ‘best price’ for each item. ‘Marketplacing’, where different retailers compete under one ‘virtual’ roof, will offer maximum choice to consumers, eBay and Amazon already cater to the marketplace concept. In the UK Tesco has announced plans to do the same, and it seems likely that other global players will follow suit. This means that 2022 will see retailers competing head to head with one another and with producers further up the supply chain through consolidated platforms”

The consumer of the mid 2020s, driven by the vast array of options, collaborative consumption and social media networks, will migrate away from searching for travel options on the websites of large airline brands and will move towards demand aggregators and meta-search businesses, journey planners and experience hunting.

In the near term the Google will release their new version of Google Maps with integrated multimodal travel options. This allows consumers to search journeys rather than flights. In reality this means entering your starting postcode then your destination hotel, postcode or Airbnb apartment and Google will give you all the travel options to get you from one to the other. The below image is from this service, with a trip from Edinburgh to Istanbul.

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Integrated with Google's own flight search capability ([www.google.co.uk/flights](http://www.google.co.uk/flights)) and their online travel agency this allows them to price up the journey and offer it for sale. It is only a matter of time before they can offer integration with rail tickets, taxi booking or bus timetables to enable you to book once and travel the entire end to end journey.

Skyscanner is also continuing to grow globally. They have expanded across the globe, with office in Europe, Asia and the Americas and last year purchased a specialist hotel search company.

<http://www.skyscanner.net/blogs/skyscanner-acquires-fogg-hotels-and-opens-barcelona-office>

Skyscanner's competitive advantage over Google will come from their ability to surface fares from multiple sources leading to a completely unbiased view of the travel options available to the consumer. Skyscanner has even developed a research study to unveil how they see technology transforming the research and booking experience over the next decade

<http://www.skyscanner2024.com/>

This is an extract from this site:

Our research and expert interviews suggest that in 10 years' time the era of time-consuming online travel discovery, research and booking across multiple platforms and devices will be long gone.

As Skyscanner's Head of B2B Filip Flipov says:

"In the near future there is going to be a mass-market conversion to semantic, location-aware and Big Data [data sets that are beyond our reasonable ability to manage or comprehend so that more imaginative methods and ways to visualise them are required] applications, which will be transformative to travellers, and we'll see a step change in how to use foreign languages, or choose what restaurant to eat at, based on the wisdom of crowds that we can easily access".

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It's legitimate to raise a sceptical eyebrow at forecasts about the impact of new and emerging technology on the travel industry of the 2020s. Predicting which interfaces and devices will succeed – and which will disappear without trace – is tricky.

“Ten years ago, who would have predicted that it would be the norm today to communicate directly with all friends on holiday by Skype or mobile phone rather than sending a postcard, or make travel choices from a website on a computer screen rather than from a travel agent's brochure?” asks Filipov.

Nevertheless, Filipov believes this technological revolution is in its infancy. “We are at the start of a journey that will see personalisation of content and advances in areas such as Artificial Intelligence that will totally change one again the way we book and take our holidays” he says.

“Travel services such as Skyscanner will be able to deploy online semantic and intuitive tools that will know your preferences: that you are a regular business traveller, that you only ever take hand luggage, that you always fly premium, and like to stay in a four star hotel no more than a mile from your meeting.

“Summer holiday bookings will be similarly seamless, knowing that you prefer sunny destinations within seven hours; flight time, that you take at least two suitcases, and like a hotel with a gym, close to a beach. By the middle of next decade travel websites will be able to deliver personalised inspiration to the digital technology in your home without being asked.

Essentially, think of a world of travel where the traveller comes first – and the technology comes together to make that experience intuitive, rich and inspirational.

Both Skyscanner and Google represent a much more likely view of how a consumer will search for travel information and fares in the future as it simplifies the process for the consumer surfaces all the options and aligns much closer to the consumer of 2020 and beyond as they become social and better informed of the market value.

All this seems farfetched, but 15 years ago HMV believed music would always be sold through outlets selling physical media, then came iTunes and HMV no longer exists. Blockbuster thought the same about films and then came Netflix and Blockbuster no longer exists. It's not unreasonable to think that similar disruption will be encountered by the airline industry as well.

This view is endorsed by Nawal Taneja in his new book *Designing Future-Oriented Airline Business Models* (Sept 2014). In a summary of the contents of the book, Taneja explains the key drivers and the inevitability of this change:

“The marketplace for the airline business is changing rapidly and dramatically with respect to:

- consumer behavior and expectations—consumers are continually connected and gathering information from a myriad of sources
- competition—not only among traditional airlines, but also from new generation airlines, some that are well funded and facilitated by their governments,
- disruptive technology—incredibly sophisticated search engines and the proliferation of smart mobile devices, empowering customers everywhere and in real time,

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- new intermediaries—armed with the power of big data and analytics.”

He then goes on to say

“...if airlines do not improve significantly the area of search, the use of big data and analytics will lead some innovative technology companies, such as Google and Apple, to grow within their travel verticals to implement new business initiatives that manage the passenger travel experience. First, they could offer truly comprehensive content, not just the offers from an airline, or a hotel, or a car rental company, but all of them, simultaneously. Second, they can integrate information from different travel-related businesses (airlines, hotels, and car rental companies) for particular individuals for particular itineraries. Third, data can be gathered on the real time location of an individual to provide real time and context-sensitive concierge service based on local conditions and services such as traffic jams, on-the-spot promotions being offered by local vendors (stores and restaurants), and expected weather conditions (based on information gathered from local meteorological services). Fourth, they can add a new dimension to their value that airlines cannot provide. For example, these technology-savvy companies could offer even more sophisticated advice using their own algorithms or those provided by third parties (such as Kayak and Momondo) on when a customer should purchase the ticket based on the “buy now” or “wait” recommendations to take advantage of fare changes. This dimension can be applied not just to airline fares, but also to the price of hotel rooms and car rentals, and, in turn, provide enormous value to travelers with some flexibility”.

*Nawal Taneja from Ch7, Designing Future-Oriented Airline Businesses Sept 2014*

## Gatwick is already making the future a reality

Gatwick researched the top 600 city pairs, ranked by distance travelled in order to eliminate fares such as from Orlando to Las Vegas via Gatwick to present a case to work with an online travel agency and meta search technology partner to create a single booking but with three distinct parts:

1. Travel to Gatwick from point of origin
2. GatwickConnect Service to facilitate the connection at the airport
3. Return travel from Gatwick to destination

This would be visible as a single bookable journey competing with other fully interlined options.

The research already performed suggests that the price difference for the journeys will vary from a few £s cheaper to multiple £100s on some routes. For a family of 4 travelling from Edinburgh to New York £75 per person will make a significant difference when deciding to travel via Gatwick or a traditional high cost airport without such competing route offerings.

The booking will be a single booking but with 2 issued tickets and a GatwickConnect confirmation. Gatwick will be informed of the booking and be available to assist with the onward connection baggage processing and other value added services. The GatwickConnect confirmation will come with an onward flight promise to ensure your end to end journey is protected from delays and missed flights.

This overcomes many hurdles for the consumer and simplifies the search and comparison process, empowering the consumer to make informed choices about the real options they have, including charter, low cost and full service carriers, in connecting point from A to C via B. This will eliminate the

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long held view that airlines can control connections and pricing via interline agreements and GDS rules.

The baggage service currently replicates the US model, where an international traveller has to enter the baggage hall, claim their luggage, clear customs (if necessary) and then re-check it onto the domestic airline or partner.

Gatwick is developing a strategy to replicate the automated baggage transfer process performed by alliance partners and interline partners seen across Europe, Asia and the Middle East for GatwickConnect customers, and will therefore work regardless of alliance membership and interline agreements. The technologies required for implementing such a service already exist and Gatwick is working on bringing them into the GatwickConnect service proposition by 2018.

The technologies required are already in test with British Airways and will be in full production for KLM AirFrance by December 2014.

<http://www.telegraph.co.uk/travel/travelvideo/10372773/The-smartphone-bag-tag-that-will-revolutionise-air-travel.html>

<http://www.futuretravelexperience.com/2014/03/air-france-klm-new-permanent-bag-tag-and-tracking-device-can-benefit-the-entire-industry>

The permanent reprogrammable bag tag and RFID tracking device (as show below) will become a feature of travel in the near future. GatwickConnect customers that would prefer a seamless bag transfer will be able to request it at the time of booking, provide us with details of their existing device or re-programme the existing one via their smartphone as shown in the video available on the link above. The GatwickConnect service will either send a branded permanent tag to the consumer or register their existing device on our systems to ensure the bag is found and transferred to the correct aircraft.



Gatwick would implement inbound baggage sortation, initially through a hand held scanner that would be carried by Ground staff in the baggage hall. The ground agent would be alerted by the RFID tag entering the baggage hall and would then use the proximity capability of the device to locate the bag and ensure it makes the onward flight. As volumes increase, Gatwick would invest in full automation of baggage sortation on inbound baggage systems for qualifying self-connecting customers.

In an environment where companies like Skyscanner and Google are able to provide end to end journey information and ticket booking capability, multi-modal connectivity (beyond airline to airline) becomes even more important. This is another key strength for Gatwick: with 129 directly connected rail stations and 700 one change away, Gatwick is in an excellent position to serve this market today. By 2020 Gatwick will have 179 directly connect stations and over 800 one change away. The next natural step to enable seamless journeys is to ensure that GatwickRailConnect is also available to railway passengers transferring from plane to train or plane to train. Allowing the consumer to choose



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not only the quality or support of the transfer service between aircraft but also add assistance and assurance to the intermodal journeys as well.

### What is in it for the airlines?

LCCs have chosen to adopt simple point to point models to avoid the cost and complexity of transfer traffic. A service such as GatwickConnect allows the consumer to choose to use the LCC network, and select the components of the connecting service they wish to pay for, without putting the cost and the burden on the airline.

It also allows airlines to continue to price every sector as a profitable route, rather than running loss leading short haul routes to funnel traffic on to long haul sectors. Short haul LCC routes such as Edinburgh to Gatwick would be able to feed long haul routes on premium carriers such as Emirates and vice versa, allowing far greater consumer choice and driving down price. This unlocks the full power of a huge, sustainably profitable short haul network with the global reach of long haul carriers.

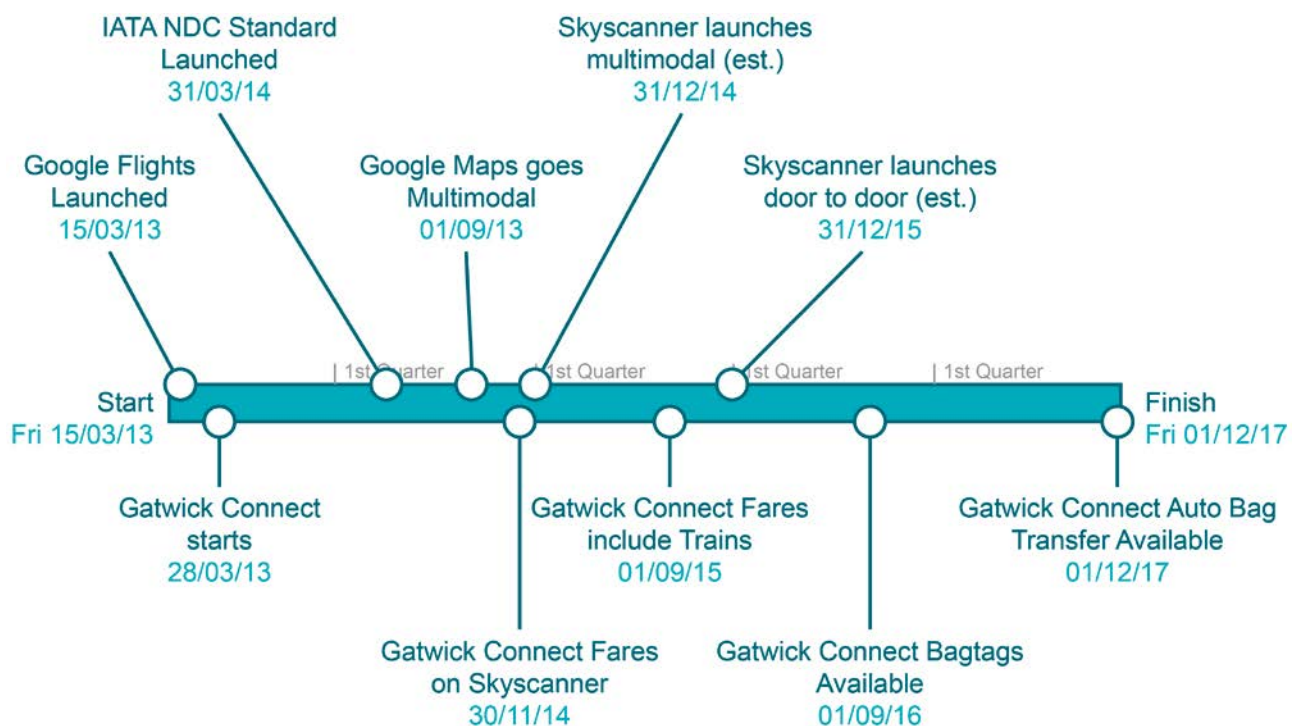
The alliance model has not worked for many short haul carriers due to the IATA pro-rate system, which divides revenue based on distance flown rather than cost of operation. The larger more powerful airlines in the alliances have tended to use the alliance system to filter more traffic to their hubs, taking the profits on the long haul routes and ultimately putting the smaller alliance partners at a disadvantage through pro-rate price and inventory availability, thereby reducing choice and competition, resulting in increased prices for the consumers. Examples of this include BMI whose long haul routes were reduced after joining Star Alliance and Malev who were unable to operate on the reduced revenue of the prorated system. In a transfer model where consumers choose to connect and manage the risk based on a more open system, the airlines involved would price the individual sectors to ensure profitability.



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### Integration and timelines

Gatwick is in a unique position, due to its diverse carrier base and their varied business models, to take advantage of the changes that technology is bringing to the aviation industry. The technological change required to serve the consumer of the future is very different to what we have encountered to date. Gatwick's plan in this regard is already well established and follows the timeline below



The potential of journeys that are fully digitally integrated, searchable on comparison websites and cheaper than existing alternatives will provide significant growth in the next couple of decades. Unlike Heathrow, Gatwick has the diversity of business models to support the growth that this change in consumer behaviour will require, but it will only be possible with a second runway.

The longer term prospect of consumer power through social networks and crowdsourcing driving passengers away from traditional hub models, based on networks of convenience for the supplier, and moving them to ad-hoc operations based on the needs of the consumer are quite a stark contrast to how the market operates today. However we need to plan for this eventuality when considering the impact of educated, digitally savvy, highly organised and capable consumers.

### Appendix 1

#### A brief history on the Global Distribution System and the distribution of fares on the internet.

Traditionally the industry has relied on a very tightly controlled and managed system for fare distribution and sales known as the Global Distribution System (GDS). It allowed travel agents to sell fares from multiple airlines from any location in the world.

The GDS had significant benefits for airlines as it ensured a cost effective route to market for airlines in all locations regardless of size and reach. The GDS also allowed airlines to tightly control what fares were available in which geographies and also to determine which connections and fares were allowed to be booked.

The GDS was bad for the consumer as the airlines could artificially reduce choice and competition based on rules they could implement into the system. The GDS has been one of the foundations of the “alliance” (Skyteam, Oneworld, Star Alliance) partners that sprung up in the last 15 years. By being part of an alliance smaller airlines were allowed to create more routes and connections in the GDS, in theory giving them greater access to larger markets and routes despite limited capacity of each individual airline. In reality the alliance system has only benefited the largest and most powerful airlines.

The GDS was a revolution, as it was a global network that allowed multiple organisations to share data across vast geographies; however it was private and controlled by its community. In 1992 the internet became a public service, this resource allowed multiple organisations to share data across vast geographies and with the general public. This should have ushered in a revolution in aviation ticket sales as the GDS and the traditional travel agency market could now be bypassed and each supplier from any geography could resell in any market, boosting competition.

This didn't happen, as the major carriers avoided the necessary technical transformation and stuck closely together with their travel agency partners to maintain higher fares and limited distribution of fares on the GDS.

In 1995 easyJet was founded, with the underlying principle that fares would only be sold on the internet, bypassing the “middleman” in this case the GDS and the travel agent. This was a major disruption to the airline business model that many older carriers are still coming to terms with. Where easyJet and other low cost airlines lead, all others have eventually followed, and now fares are available on the internet from any airline, however mostly they are booked through an airline specific website or an online travel agent such as Expedia. The online travel agents still use the underlying GDS systems to search fares and they are surfaced through webpages with transactions performed online via credit card instead of in a store.

In 1997 through to 2000, the major airlines setup the 3 alliances. The idea was to create greater connectivity and routes across larger geographies by connecting more airlines, ultimately this was done via rules in the GDS. The result was more control of a few powerful airlines, less competition and consolidation of the traditional airlines into larger airports.

The new generation of airlines such as Southwest, Ryanair and easyJet had significant cut through in supporting smaller airports vacated by the alliances, serving lower fares by keeping operating costs low and selling fares direct to consumers and only supporting point to point travel. The result was rapid growth of the low cost airlines creating vast networks that whilst currently unconnected, have huge potential.

### Appendix2

#### Extract from

Retail 2022, How the Economist Intelligence Unit sees the retail landscape changing over the next 10 years © *The Economist Intelligence Unit* 2012

### A virtual marketplace

In 2002 Amazon reported revenue of US\$3.93bn, an impressive figure in itself but a drop in the ocean in the US\$2.3trn US market; this year Amazon's revenue should pass the US\$50bn mark. Total online retail accounts for around 10% of the US market. The UK has the highest proportion of online spending in the world, with web purchases accounting for an estimated 13.2% of all retail sales in 2012 (according to the Centre for Retail Research). Although emerging markets have further to go, the rate of growth is even more rapid. Last year China reported that online business-to-consumer transactions increased by 53.7% to reach US\$123.2bn.

#### Sales (US\$ bn)

	2002	2011
US total retail sales	2,314.05	3,260.07
Amazon turnover	3.93	48.08

Sources Economist Intelligence Unit, Investopedia.

Much of this growth has been built on the convenience of desktop or laptop purchases from fixed points in the home and office, adding only a single additional dimension for consumers. More recently, the emergence of smartphones and the explosive growth of shopping applications have revolutionised point-of-sale decisions. Forrester, a US-based market research company, is anticipating that between 2011 and 2017 the value of mobile retail transactions will rise elevenfold across Europe. Given the continuing emergence of app-based shopping, this estimate looks conservative and 2022 will see mobile commerce as very much a mainstream means of shopping. Consumers are increasingly able to make impulse buys on the

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move in a variety of ways. Applications can allow people to search for items by quick response (QR) codes or photographs they take, or even to make real-time purchases of products they see in their favourite television programmes. “Showrooming” has emerged as a trend where customers visit stores to find items they like, but then compare the price of that item and make the relevant purchase on their phones.

Point-of-sale purchase decisions are not just evolving in the physical world but on the web as well. Social networks have provided a new springboard for brand interaction, viral marketing and social storefronts to provide an alternative channel for retailers to sell through. Although this channel has been limited in scope, with some storefronts closing after disappointing sales, the emergence of an online pinboard community, Pinterest, has accelerated retail opportunities significantly by driving traffic for pinned items and products. This has not been lost on an e-commerce giant, Rakuten, which has invested heavily in Pinterest with a view to using the network as a storefront for popular items.

Technology will play a key part in developing these trends, and 2022 will see a market where online purchases account for a far greater proportion of overall retail sales than currently. Leading online markets such as the UK should see e-commerce account for one-third or more of overall sales. Online shopping has traditionally been limited to products like books, downloads and consumer electronics. However, views that “try before you buy” categories such as clothing or groceries would not catch on are being proven wrong with the success of firms like ASOS and the increasing focus on online sales for mainstream grocery retailers.

While technology, especially the increased connectivity and choice supplied by smartphone and tablet applications, will be the key driver of this trend, the recent economic downturn has acted as a catalyst to increasingly sophisticated consumer behaviour. The emergence of price comparison sites for retail is not new, but austerity has supplied a strong incentive for consumers to move online. Where price comparison sites have been limited to checking single items, newer online ventures such as mySupermarket in the UK allow consumers to compare the price of aggregated baskets from key retailers and choose which offers the best value. The US Groupon network has also emerged as a means of crowdsourcing discounts or special offers for bargain seekers. This concept has caught on globally, especially in China (despite Groupon’s poor performance there), where coupon and discount sites were already well established.

By 2022 these bargain-driven technologies will have merged and expanded in scope so that sophisticated sites are able to tailor the best voucher or Groupon-type offers into much more personalised and bespoke retail services. Comparator sites will be able to split online baskets automatically between different retailers to ensure a “best price” for each item. “Marketplacing”, where different retailers compete under one “virtual” roof, will offer maximum choice to consumers. eBay and Amazon already cater to the marketplace concept. In the UK Tesco has announced plans to do the same, and it seems likely that other global players will follow suit. This means that 2022 will see retailers competing head to head with one another and with producers further up the supply chain through consolidated platforms.

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