Q6 | Strategic Capital Business plan

July 2014

Heathrow
Making every journey better

Prepared by Seema Salan, Heathrow

Table of Contents

Foreword

Heathrow's first priority is to deliver everything we do safely and securely. Our second has been to make every passenger's journey better through our Strategic Programmes, working with our stakeholders.

Heathrow's safety performance on its construction sites exceeded its target, completing over six months and almost eight million man hours without a reportable incident - an excellent safety record with which to end Q5.

We started Q5 with the opening of Terminal 5 and in Q6 we have already seen the opening of Terminal 2; two major world class developments delivered just over six years apart.

We have transformed our airport through our Strategic Programmes, which has had an enormous impact on our passenger satisfaction scores. In Q1 2014, 80% of our passengers rated Heathrow as either excellent or very good, a transformational improvement during Q5.

Since our last publication we have hit many milestones which include completing the construction of Terminal 2: The Queen's Terminal, which was officially opened by Her Majesty the Queen on 23rd June, following extensive trials with people from the local community getting involved with our colleagues, their friends and families.

Heathrow has invested in the latest technology to allow Passenger Automation to enhance our passenger's journey from check in to boarding. The Southern Runway was resurfaced ahead of schedule, with no disruption to Heathrow's Operations, which was a great achievement involving a lot of night work. Our investments have enabled the A380 to operate out of Heathrow, another remarkable achievement, which we will build on in Q6. We are as ambitious in Q6 with a plan to improve and deliver efficiently.

I look forward to building upon our successes to ensure continued safe and efficient delivery of our commitments to our passengers, stakeholders and shareholders.

John Holland-Kaye

CEO
Heathrow

1. Introduction and Context

1.1 Purpose

Heathrow Airport's Strategic Capital Business Plan (SCBP) is delivered annually in accordance with regulatory requirements.

Following the final Quinquennium 6 (hereafter known as Q6) Settlement announced by the CAA, the SCBP 2014 will look at the Q6 Regulatory period, April 2014 to December 2018, to inform the Airport Community of Heathrow's Capital Investment Plan and to facilitate consultation.

Where airlines require further information to understand proposed investments, Heathrow will respond to these requests.

The SCBP 2014 is a document for consultation; therefore Heathrow encourages the Airline Community and its stakeholders to submit their views on the SCBP by 01st September 2014 to Richard_Randolph@Heathrow.com.

Heathrow would like to thank the Airline Community for their response to the SCBP 2013, which we have taken on board in developing this document.

2. Strategy and Vision

2.1 Heathrow's Vision, Priorities and Service Propositions

Heathrow's vision defines where we are going and what we stand for. Our vision is:

'The UK's direct connection to the world and Europe's Hub of choice by making every journey better'.

Our vision takes passenger interests as its primary objective. This objective is enshrined in the regulatory regime and is also consistent with Heathrow's management philosophy, commercial interests and business landscape. It reflects the fact that Heathrow must remain competitive in terms of service offering and price in order to maintain a competitive advantage.
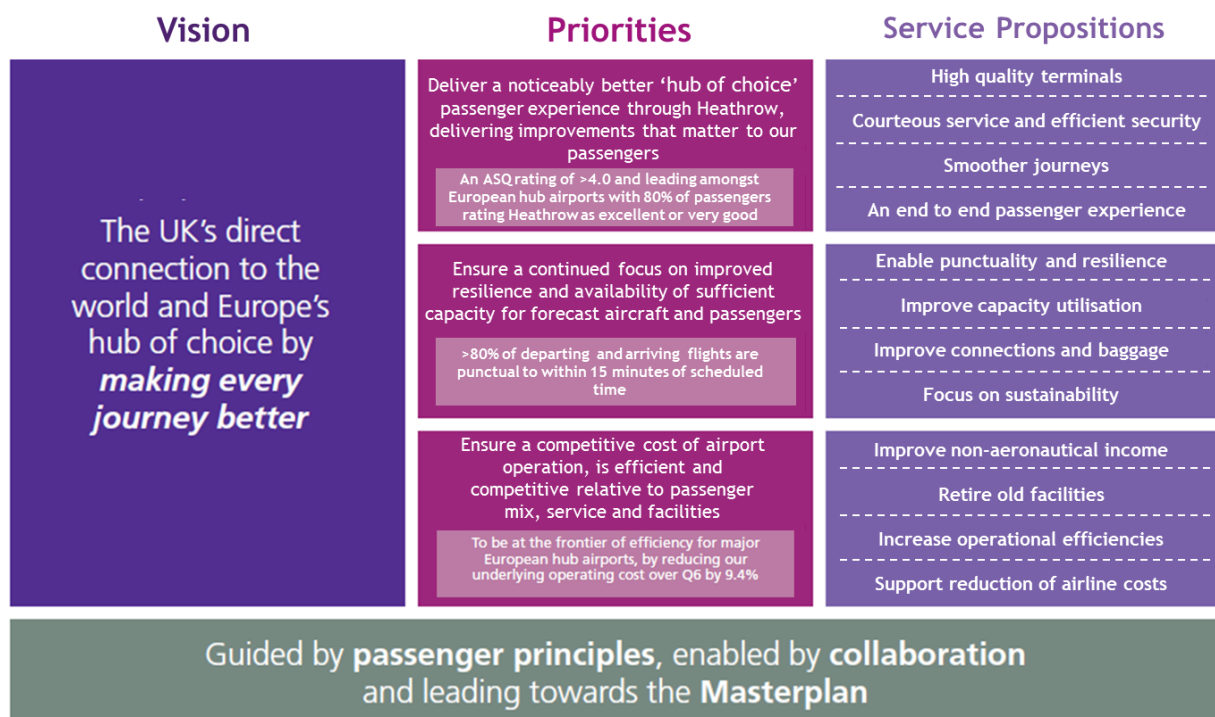
Figure 2.1: Heathrow's Vision, Priorities and Service Propositions

As illustrated in the diagram above, Heathrow and the Airline Community developed three specific priorities for Q6, Passenger Experience, Hub Capacity and Resilience, and a competitive cost of operation, through Constructive Engagement. These continue to shape and guide our thinking. A target has also been defined for each priority setting our aspiration for Q6, with a capital investment of around £3bn.

3. Masterplan and Land use Plan

3.1 Heathrow Airport Development – 2 Runways

The Heathrow Masterplan is a long-term vision illustrating the development of Heathrow over a period of time. It provides the basis for the long term vision of transforming the airport layout to improve passenger experience, drive out operational inefficiencies, and enable growth in aircraft size.

In May 2013 Heathrow updated the 2 Runway Masterplan Vision, following consultation with the Airline Community to reflect the impact of IAG acquiring bmi. The Masterplan now rationalises passenger processing capacity into two buildings between the runways. It also removes current cul-de-sacs to provide a flow-through taxiway system, more stand frontage and a greater number of stands suitable for accommodating Code F aircraft. This approach brings the following benefits:

- Improved passenger experience, fuel costs and CO_2 emissions by reducing taxi time;
- Improved passenger experience by removing time-expired passenger processing facilities and replacing them with newer, efficient and attractive buildings;
- Increased revenues by increasing passenger throughput as a result of enabling larger aircraft to be used at Heathrow; and,
- Improved ability to compete as an international Hub airport by reducing transfer times as a result of consolidating alliance partners.

Our long term plans now reflect this revised Masterplan phasing approach. During Q6 we will:

- Deliver a full closure of T1 as demand is moved to other facilities, enabling a partial demolition of some parts of the terminal infrastructure and a partial reconfiguration of airside apron areas to support T2's operation; and,
- Reconfigure the northern section of the Alpha and Bravo taxiways to accept code F aircraft and improve taxiing patterns for these aircraft types;

Our view is that the next major step towards delivering the Masterplan should be the second phase of the T2 development, as this provides the:

- Potential to close T3 and process more passengers through newer terminals;
- Replacement of T1/T2 baggage system;
- Reduction in airline operating costs earlier by balancing out demand across the aprons; and,
- Minimal amount of operational disruption compared to other options.

Figure 3.1: Heathrow in 2013

Figure 3.2: May 2013 Master plan: Heathrow in 2012+ approximately 20 years

3.1.1 Cargo

Heathrow's role in the Cargo operation is to provide infrastructure that enables airlines and cargo handling companies to operate efficiently and competitively. Transit sheds and other cargo warehouses are not owned by Heathrow. We recognise the growth in off Airport Cargo facilities, and therefore our focus is to ensure that different zones are managed securely, and both the control posts and road system are fit for purpose and support the required levels of service. Business Case 062, which sits in the Airfield Resilience Programme, remains an opportunity to bring the Other Airside Area (OAA) into the Critical Part Security Restricted Area (CPSRA).

Heathrow is considering the options for the Cargo strategy and have engaged with the Airport Community on their requirements. Last year we advised that a Cargo strategy was being developed and we continue to engage with cargo operators and the Airline Community in its development.

3.1.2 Planning Policy

At the regional level for Heathrow, the London Plan provides the relevant planning policy framework for London and must be in general conformity with national policy. At the local level, planning policies for the Heathrow area are contained within the London Borough of Hillingdon Local Plan Part 1 and the Hillingdon Unitary Development Plan, which must also conform to the higher tier regional and national policies.

Local and regional planning policy specific to Heathrow is generally supportive of development which is contained within the limits of growth set down by Government in its decision to permit Terminal 5, and within the defined airport boundary.

The Hillingdon Local Plan Part 1 is supportive of the sustainable operation of the airport within its existing boundaries and the renewal of facilities to improve passenger experience. In March 2013 Hillingdon Council embarked on the process to produce Part 2 of the Hillingdon Local Plan which will replace the Unitary Development Plan and provide new detailed policies for guiding development proposals, together with a site allocations and proposals plan. Further consultation on these policies will take place during 2014.

The 2008 Planning Act introduced the Community Infrastructure Levy (CIL). This is a new charge which local authorities and the Mayor of London are empowered to collect on most forms of development. Currently the Mayor's CIL charge for projects at Heathrow is £35 per metre square and in 2015, Hillingdon is likely to introduce a similar charge.

3.1.3 Airspace

The success of Heathrow's operation depends on the airport's resilience and capacity. This applies across all parts of the passenger journey, from the terminals, over the airfield, and into the airspace. To this end the airport is working with its industry partners (NATS, the Airline Community, CAA, and European partners) to create an 'Airspace Masterplan'. This will ensure the airport has sufficient airside capacity to enable the airport to cope better with crisis events (such as heavy snowfall) while also improving the punctuality of our arriving and departing flights. In Q6, our Airspace

Masterplan will draw on synergies with the UK CAA's Future Airspace Strategy (FAS) and the Single European Sky ATM Research programme (SESAR) to:

- Increase airspace safety;
- Improve capacity and resilience (by increasing operational 'headroom');
- Reduce environmental impact; and,
- Improve performance (throughout Q6 we will work to improve punctuality, with 80% of flights arriving or departing within 15 minutes of their scheduled time).

These key performance areas support Heathrow's role as the UK's Hub and its function as a critical lynchpin of the entire Air Traffic Management (ATM) network. Heathrow's performance has a material and significant impact on network performance, for example, implementing A-CDM is widely recognised as fundamental to the ATM performance at a pan-European level.

Progress in these areas will be accomplished in collaboration with NATS, the CAA, and the Airline Community through advances in both policy and technology to ensure better tactical decisions are made and resources are used more efficiently. This includes:

- The real-time measurement and collaborative management of performance;
- Addressing the lack of flexibility in the runway and taxiway infrastructure; and,
- Improving out-dated arrival and departure procedures through airspace change processes and new technology (e.g. time base separation and independent parallel approaches).

Through such measures we aim to reduce the level of Air Traffic Flow Management (ATFM) delay at Heathrow by half – usually attributable to weather disruption such as strong winds or low visibility.

This work is vital to support the airport's vision to be 'a resilient airport with the capability to meet demand and recover quickly' while maintaining Heathrow's high levels of operational intensity and decreasing susceptibility to mass disruption or 'red days'. In particular the work will ensure that the increase in wide-bodied aircraft, expected at Heathrow during Q6, can be accommodated at the airport and that the short-medium term recommendations of the Airport's Commission on Airport Capacity are implemented (such as permitting alternation on Easterly approaches). You can see the list of Business Cases supporting this vision in the Airport Resilience Programme, in Section 4.

These improvements will make Heathrow comparable to competitor Hubs such as Amsterdam Schiphol, improving the passenger experience by reducing delays (incurred either at origination airports or in the stack) and by reducing the 'buffers' airlines place in the schedules to compensate for anticipated delays. This directly impacts fuel burn, CO_2, aircraft usage and resource planning.

3.2 Heathrow Airport Development – 3 Runways

Heathrow is full, its runways are running at 99% capacity, whilst other European Hub airports, with which Heathrow competes, have spare capacity and are adding new flights to growth markets such as China. In future, the role of major Hub airports is expected to become even more important than they are today. Providing additional Hub capacity will provide new and affordable connections for the UK, driving in excess of £100 billion worth of benefits.

We believe that a third runway will provide sufficient capacity until at least 2040. The 740,000 flights that a three runway Heathrow could deliver would allow the airport to compete effectively with other European Hubs. The advantage of this option includes the flexibility (additional capacity could be added gradually as demand requires and financing allows), sustainability and sensitivity to the local environment (preserving heritage sites and lowering the overall number of people exposed to aircraft noise).
A third runway will also reduce delays and disruption, and improve the airport's ability to respond to adverse weather or unforeseen events, by introducing the extra runway and terminal capacity into the system.

A more operationally efficient airport would reduce disruption, ensure consistency, reduce travel times and deliver an overall better passenger experience. In addition passengers travelling to a three runway Heathrow will have a wide choice of transport options available such as Heathrow Express, Crossrail, London Underground, mainline rail, HS2, Western rail, Southern rail, and road transport, to access the airport with a range of fares and service levels available.

Heathrow would build upon the experience gained from delivering two world class terminals in the design and construction of the new runway and its terminal infrastructure. These terminals would all have the latest offerings in terms of way-finding, environmental friendliness, ambience, retail and passenger facilities.

Figure 3.3: Our vision for an expanded Heathrow

3.3 Asset Disposal

An area Heathrow is focussing on is the provision of hotel rooms with direct access to terminals, and consequently Heathrow has developed a proposal for a new hotel in close proximity to Terminal 4. A site adjacent to the terminal has been identified and planning permission for development has been secured. The site will require some relocation of staff car parking. Heathrow is not proposing to spend its own capital on the project, but is proposing to grant a long ground lease of up to 150 years to a third party developer or operator, who would fund and operate the hotel.

We are currently at tender stage and plan to have a developer and operator contracted by the end of 2014, with the hotel opening in 2016 / 2017. The proposed ground lease would be structured to provide for annual ground rent payments to Heathrow, channelled through the Single Till. These payments will be partly linked to hotel performance.

As this project would represent a part disposal from the Regulated Asset Base (RAB), consultation with the Airline Community is required under Annex G. This is being undertaken, although we will need to confirm the precise terms once detailed contract terms are known.

Figure 3.4: computer generated image of the proposed Terminal 4 hotel

3.4 A Responsible Heathrow

Achieving Heathrow's vision to be 'Europe's Hub of Choice' relies on managing the airport responsibly. This is why we are working hard to maximise the economic benefits that Heathrow brings, whilst carefully managing our environmental responsibilities and being a good neighbour to our local communities. As part of our overall business strategy, we have established Responsible Heathrow 2020, which brings together our top ten goals for the sustainability issues that are most important for Heathrow and our stakeholders, see Figure 3.5.

Figure 3.5: Responsible Heathrow – our 2020 targets

These goals are supported by detailed strategies and action plans to achieve them, such as the Heathrow Noise Action Plan, Air Quality Strategy, and Sustainable Transport Plan[1].

Our plans for Q6 to support the delivery of Responsible Heathrow include:
- Plans and initiatives to eliminate workplace illnesses, injuries, and business losses.
- An energy efficiency Programme to significantly reduce Heathrow's energy consumption.
- Creation of a low carbon, energy and cost efficient heat network that links T2, T3 and T5 with the airport's energy centers, including the new biomass boiler completed in 2014.
- A noise Programme that complies with Heathrow's noise abatement procedures and planning conditions, which aims to demonstrate that we are doing all that is reasonably practicable to manage aircraft noise impacts.
- Investment in waste management infrastructure that will limit waste, and increase recycling, whilst cutting costs.

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[1] All available at www.heathrow.com/sustainability

- Improvements to the surface water pollution control system across the airport to cope with current and future demand, and meet regulatory requirements.
- Improved aircraft ground movement efficiencies, leading to reduced delays and congestion that cut fuel, costs and reduce emissions.
- Reduce air quality emissions in line with our objective to play our part in meeting local EU air quality regulations, including considering further investment in infrastructure, such as pre-conditioned air.
- Contributing to Crossrail to facilitate sustainable passenger and staff travel.
- An economic and community Programme that includes our support of the Heathrow Academy to support local people into work, the Heathrow Business summit to help local businesses engage with Heathrow's supply chain, and the Heathrow jobs and careers fair.

So that there is a reduction in aircraft noise for the local community and pollution, we have restructured our airport charges, implementing a 'fly quiet' scheme (designed to encourage quieter operation of airline fleet at Heathrow) and set out our plan for a 'Quieter Heathrow'[2].

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[2] A Quieter Heathrow, Heathrow Airport, www.heathrow.com/noise

4. Heathrow's Traffic Forecast

Ensuring an accurate forecast is hugely important and benefits the whole Heathrow community, enabling businesses to plan their activities and tailor their resources in accordance with the expected demand.

4.1 Settlement Traffic Forecast

The table below shows the CAA's Q6 forecast of 347.7 million passengers, using the econometric model.

Reg. Year	Total (Millions)	Short Haul (Millions)	Long Haul (Millions)	Q6 Total (Millions)
2014 (Apr - Dec)	55.4	27.0	28.4	
2015	72.0	34.9	37.1	
2016	72.7	34.9	37.8	347.7
2017	73.4	35.0	38.4	
2018	74.2	35.1	39.1	

Figure 4.1: Passenger forecast (millions) based on CAA's Q6 Settlement

4.2 Heathrow's Current Traffic Forecast

For the Regulatory year 1st April 2014 - 31st December 2014, the passenger traffic forecast is at approximately 56.8 million passengers. With an encouraging start to the year, recent traffic trends suggest that the forecast could be exceeded by up to 1%.

The forecast does not include any allowance for potential disruptions or shocks. This is consistent with Heathrow's approach to traffic forecasting, where a forecast that does not reflect shocks, is required for short-term planning. Medium or long-term forecasts make an allowance for potential shocks given that historically they have impacted Heathrow's traffic by an average of close to 1.4%.

4.4 Risks and Assumptions

4.4.1 Risks

Our forecast values come with some risks; aviation is a cyclical industry, exposed to both the overall business cycle and aviation-specific events. The key assets, namely aircraft, are mobile and deployed in a global context for Heathrow's airlines.

We have reflected this uncertainty in the numbers discussed above. However, this does not account for dramatic changes to core assumptions. These might include:

- Economic crises – our forecasts are occurring at a time of great uncertainty in the world and UK economies. Growth assumptions and the stability of growth cannot be assumed, with impacts on demand and airline investment decisions;
- Fares - oil price and carbon impacts on fares have the potential to diverge dramatically from what currently appears to be a reasonable range. This can be seen in historical upward volatility in the oil price; and,
- Security - forecasts are at risk from major changes in the overall level of security in global aviation and security screening rules.

4.4.2 Assumptions

Airport capacity constraints

This plan assumes that the annual cap of 480,000 ATMs at Heathrow will continue throughout Q6 and that any use of tactical measures will not lead to an increase in capacity, but rather improves resilience of the airport.

This plan is based on a two runway airport. Any decision to increase runway capacity at Heathrow is assumed to result in a revision to the Regulatory Settlement and thus has not been included within this plan.

Terminal occupancy assumptions

In 2012, Heathrow Airport undertook a review of terminal occupancy across the entire campus, in consultation with the airline community, to determine airline occupancy of each terminal once the new T2 opens in 2014. The occupancy review followed the sale of bmi to IAG, the owner of British Airways. The new T2 will be home to all 23 STAR Alliance airlines operating at Heathrow together with germanwings, Aer Lingus, and Virgin Atlantic's domestic services.

In addition a number of other occupancy decisions have been made including decisions on terminal occupancy instigated due to airline requests from Virgin, Delta and US Airways. This leads to a series of airline moves, described further in figure 4.4 below.
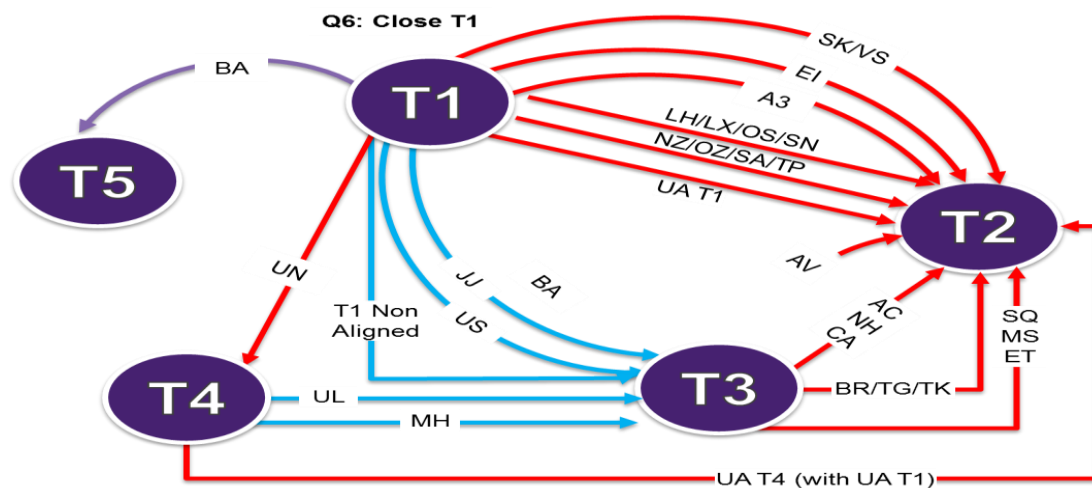
Date	Airline Name	IATA Code
4th June 2014	United Airlines	UA (T1&T4)
18th June 2014	Air Canada/ All Nippon Airways/ Air China	AC/NH/CA
24th June 2014	US Airways	US
2nd July 2014	Thai Airways/ Turkish Airlines/ EVA Airways/ Avianca	BR/TG/TK/AV
9th July 2014	Aer Lingus	EI
16th July 2014	SriLankan Airlines	UL
23rd July 2014	Aegean Airlines	A3
10th Sep 2014	Scandinavian Airlines System/ Virgin Atlantic Airways	SK/VS
17th Sep 2014	Singapore Airlines/ Ethiopian Airlines/ Egyptair	SQ/MS/ET
1st Oct 2014	Lufthansa/ Austrian Airlines	LH/OS
8th Oct 2014	Germanwings	4U
15th Oct 2014	Swiss International Air Lines/ Brussels Airlines/ Croatia Airlines/ LOT – Polish Airlines	LX/SN/OU/LO
22nd Oct 2014	Air New Zealand/ Asiana Airlines/ South African Airways/ TAP Portugal	NZ/OZ/SA/TP
Oct 2014	Transaero Airlines/ British Airways	UN/BA
Nov 2014	El Al Israel Airlines	LY
Jun 2015	British Airways T1 – T3	BA (T1 – T3)
Oct 2015	British Airways T1 – T5	BA (T1 – T5)
TBA	TAM Linhas Aereas/ Malaysia Airline/ Icelandair/ Cyprus Airways	JJ/MH/FI/CY

Figure 4.2: Diagram showing Heathrow's Airline Moves

5. From Q5 to Q6

Heathrow invested a total of £5.9 billion in Q5 to improve passenger experience, enhance resilience, provide additional capacity, and to improve airport efficiencies. This investment has comprised a number of significant infrastructure projects, and has contributed to increasing our passenger satisfaction scores.

We move from Q5 and into Q6 with a transformed passenger satisfaction rating at Heathrow, to the highest ever rating of 4.06 in Q1 2014[3], which has narrowed the satisfaction gap to the top quartile of European airports to only 0.01 points.

In the year to Q1 2014, 80% of passengers rated Heathrow as either excellent or very good compared to only 54% at the start of Q5. Equally in the year to Q1 2014, only 4% rated Heathrow as poor or very poor compared to 11% at the start of Q5.

The overall ASQ satisfaction rate has improved 0.59 points (equivalent to a 20% increase) since the start of Q5.

With the opening of Terminal 2: The Queen's Terminal in June 2014, we anticipate that passenger satisfaction at Heathrow will increase again, with ratings comparable to the leading European Hub airport, and within the top quartile of our European comparator group.
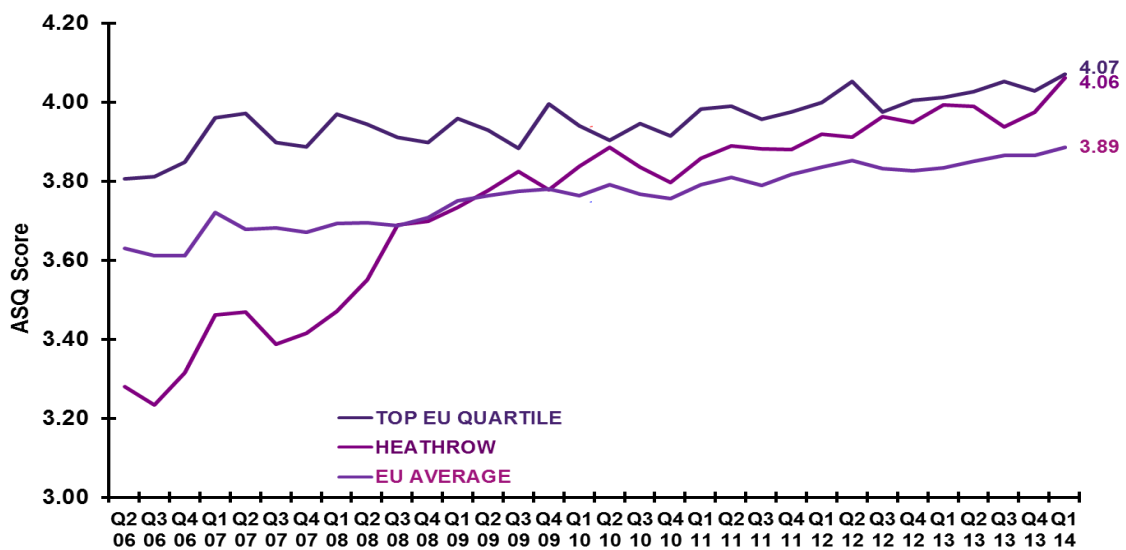
Source: Heathrow Commercial Passenger Services / ASQ Q1 2014 Update

Figure 5.1: Overall satisfaction with Heathrow – ASQ trend Q2 2006 - Q1 2014

In June 2013, Heathrow jointly won the ACI Europe Best Airport Award, for airports with over 25 million passengers, jointly with Schiphol Airport in Amsterdam. A common theme highlighted by all judges was that both airports delivered excellent services and facilities.

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[3] Airport Service Quality (ASQ) survey for Q1 2014 – directed by Airport Council International, the most comprehensive measure to compare Heathrow's performance. European average and European top quartile relate to Heathrow's European comparator and competitor group of airports.

In 2014 Heathrow won 'Best Airport for Shopping' while Terminal 5 (T5) won 'Best Airport Terminal' at the Skytrax World Airport Awards.

We have achieved this overall performance by focusing on areas that passengers tell us are the most important to them. For example, we have improved:

- Cleanliness ratings at the airport.
- Wayfinding ratings at Terminal 3 (T3) following investment in the departure lounge, and improvements to security.
- At Terminal 4 (T4), investments in Q5 have led to sustained improved passenger ratings, whilst passenger satisfaction at T5 is consistently high.

For our Airlines in Q5, we continued to support the Hub and strengthen our resilience through improvements by delivering the following:

- **Airfield infrastructure:** Delivered new stands for T3, T4, T5, and the new T2, making it easier to accommodate the ever evolving aircraft fleet.

- **Airfield management:** Improved departure punctuality and reliability, by implementing airport collaborative decision making (A-CDM), and focused on resilience (such as strengthening our planning and response to the impact of adverse weather at the airport).

- **Transfers:** Reduction of the baggage transfer time between T5 and T3 with new baggage systems, helping to improve overall baggage misconnects performance by 62%.

5.1 Transformation in Q5

Heathrow has transformed its infrastructure and this transformation has partly been enabled by enlarging and refreshing the infrastructure, particularly over the last two quinquennia with the construction of T5 in Q4, and the construction of T2 in Q5.

T3 has benefited from a refurbishment of the check-in area; the immigration hall, passenger security, the retail areas and the baggage reclaim areas.

T4 has also been completely transformed. We have extended the check-in area to create a more welcoming environment for departing passengers, and we are also refurbishing the departure lounge and the arrivals concourse. This investment has resulted in the T4 Quality of Service Monitor (QSM) scores moving towards those of T5.

Since T5 opened, 43 airlines have moved terminals to align alliances to specific terminals – radically improving the experience of transferring passengers. Today 61% of these passengers complete their journey within one terminal, compared to only 30% before T5 opened.

The largest single investments in Q5 – T2 and T3IB – will start to deliver benefits during Q6.

The Q6 Plan has been developed with the Airline Community, working collaboratively through Constructive Engagement which started in 2011. Heathrow has continued to develop constructive and productive relationships with the Airline Community covering operational and strategic issues. We will continue to focus on our Airline customers to

ensure that we maintain positive working relationships that will help deliver operational improvement at Heathrow.

5.2 Introducing Q6 and the Q6 Licence

Q6 is the new regulatory period, which commenced on 1st April 2014 and will see Heathrow's Business Plan starting with a clear vision, focusing on continuous improvement of our passenger experience, resilience and efficiency.

Planned Capital Investment for the Q6 Regulatory period is currently forecast to be £2.3 billion (outturn). The Q6 Capital Investment Plan is materially lower than in the last two Regulatory periods, and is primarily focused on maintenance and compliance related projects, together with sustaining and improving the Passenger Experience.

The Plan includes a £1 billion Programme of Asset Replacement projects and a £350 million project to implement latest generation hold baggage screening equipment.

In line with the Regulatory Settlement, the Capital Investment Plan may increase to up to £3.3 billion, but this is subject to further scoping of the remaining individual projects and corresponding approval of the Business Cases.

It will be apparent from this document that Heathrow has enhanced its approach in delivering the Capital Investment Plan, by applying a Portfolio Approach. This approach will have us at Heathrow collaborating and engaging effectively with our stakeholders, to get closer to the vision of making Heathrow 'the UK's direct connection to the world and Europe's Hub of choice, by making every journey better'. More information on the Portfolio Approach is detailed later in this section.

In December 2012, the Civil Aviation Act 2012 (the Act) came into force and repealed the Airports Act 1986. Part 1 of the Act sets out the laws associated with the economic regulation of airports in the United Kingdom. The Act designates the Civil Aviation Authority as the regulator and then sets out the duties and functions that the CAA must deliver.

The Q6 Licence is a new legal mechanism introduced by the Act and is effective for Heathrow as of 1st April, 2014 (Q6). So that Heathrow can operate, it requires a Licence and must comply with the series of obligations within it, which are legally binding.

To comply with Condition F of the Licence, Heathrow has an obligation to consult on enhancing Consultation in Q6 with the Airline Community. An output of this will be the Consultation Protocol, which will replace the Q5 Information and Consultation Protocol (Annex G), as of 1st October 2014. Further detail on this is in the 'Consultation on Strategic Programmes' section.

Until 1st October 2014, Heathrow will continue to work with the Airline Community following the requirements set out in Annex G, whilst Heathrow and the Airline Community work on the Consultation Protocol.

5.2.1 Strategic Portfolio Approach in Q6

Heathrow's environment is complex and one of the main challenges we face, and overcome well, is maintaining an operational airport whilst improving our infrastructure. In Q6, we will face this same challenge; however Heathrow has evolved, and is working hard to ensure that projects continue to be delivered safely and efficiently (whilst following industry best practice standards).

In developing the approach to Q6, Heathrow and the Airline Community collaborated to achieve this through Constructive Engagement. An output of Constructive Engagement is the flexible approach of the Portfolio, recognising the dynamic environment of the Airport, to develop the Capital Investment Plan.

This methodology recognises that the Portfolio is a balance between strategic benefits, the resources invested, and the business risks. The objectives of the Portfolio are fully aligned to the three priorities for Q6 – passenger experience; Hub capacity and resilience; and a competitive cost of operation.
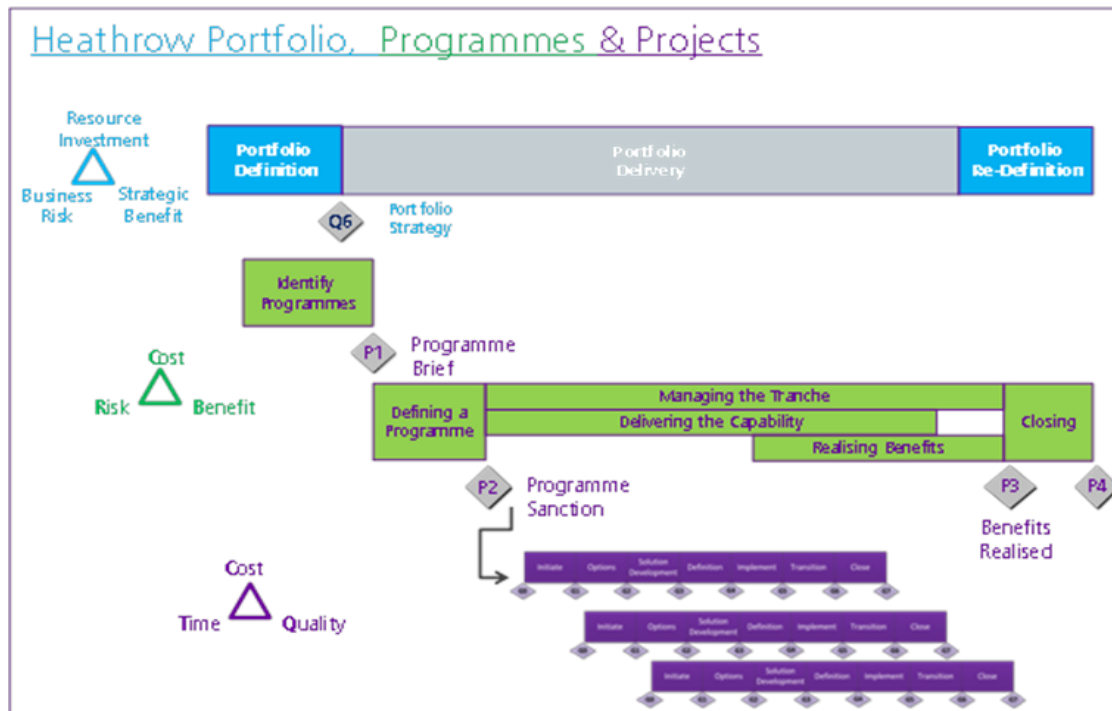
Figure 5.2: Portfolio, Programme, and Projects framework

The Portfolio Methodology is based on the Office of Government Commerce 'Management of Portfolios' guidance. The Portfolio lifecycle consists of two key processes – Portfolio Definition and Portfolio Delivery.

Where the emphasis in Q6 will switch from Definition to Delivery, the Portfolio Definition approach will still be undertaken on a regular basis to ensure the Portfolio is optimised. New ideas and concepts can be introduced in this manner.
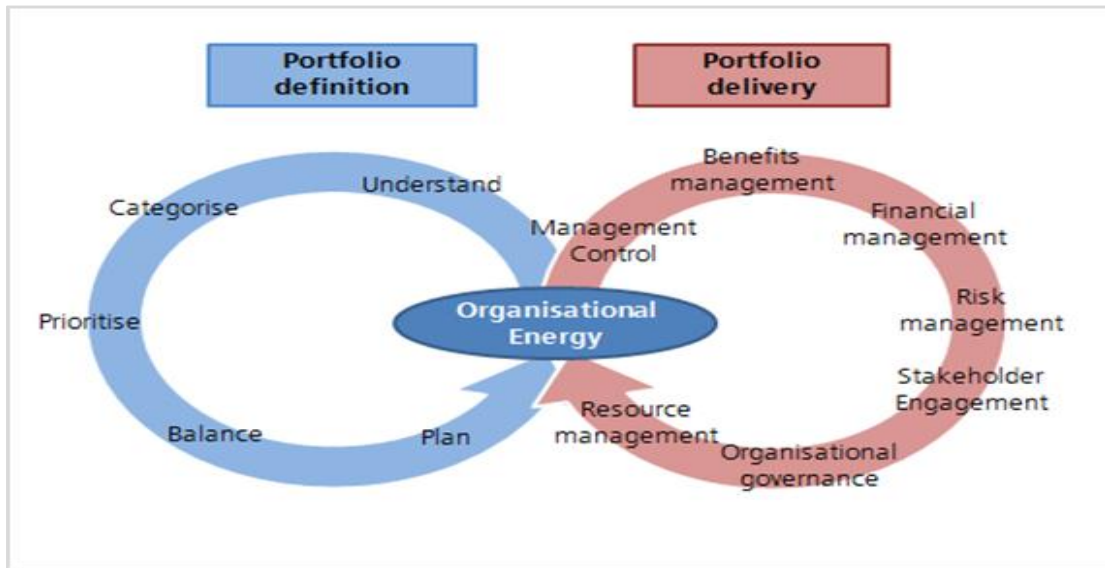
Figure 5.3: Portfolio Lifecycle (From Management of Portfolios, OGC)

5.2.2 Gateway Lifecycle

The Q6 portfolio comprises of business cases aligned to the strategic objectives of improving passenger experience, hub capacity & resilience, and cost of operating. These have been allocated to Heathrow's Strategic Programmes. Programmes provide the structural framework to ensure that the business cases are delivered within defined time, cost and quality parameters. Also they should deliver the outputs required to enable the programme to deliver its agreed outcome and benefits for passengers and airlines. Section 6 provides further detail of Heathrow's Strategic Programmes.
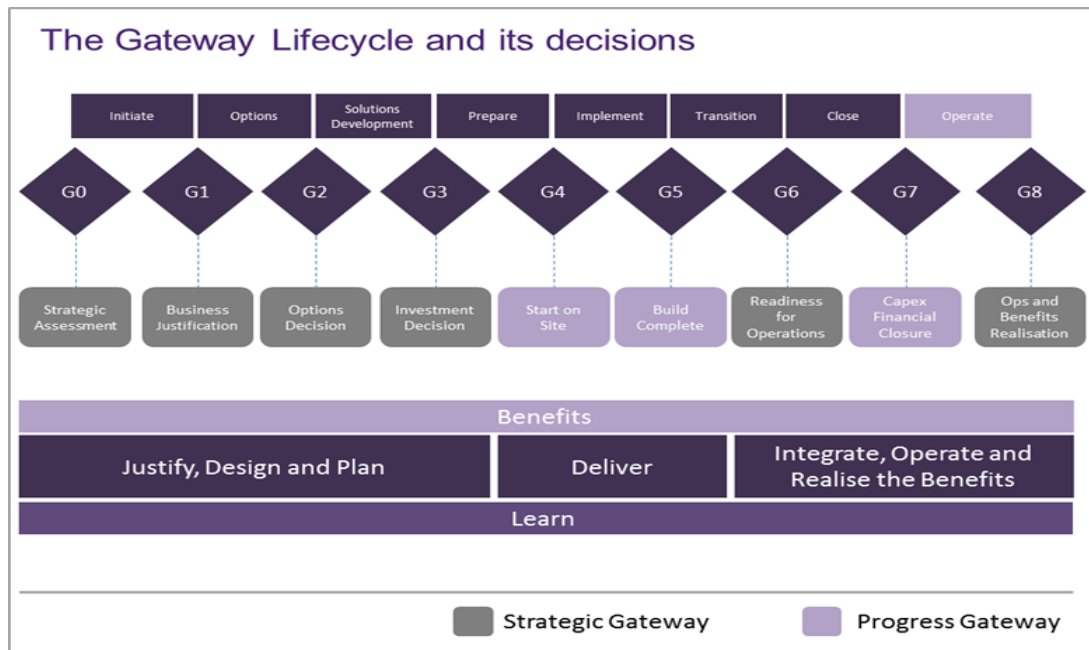
Figure5.4: Gateway Process

All business cases should progress at the appropriate pace through the Gateway Lifecycle process following the Development to Core concept at Gateway 3. This process allows for extensive engagement with the airline community. .

Gateway 0 to Gateway 3 is known as the Development stage. Development Capital Expenditure (Capex) projects will have a lower definition of scope, schedule, risk and

cost than Core Capex projects (post Gateway 3), and may not necessarily have a clearly understood method of delivery.

Gateway 3 is the critical investment decision point, as:

1. It is the transition point at which Capex passes from Development to Core.
2. It is the point of transition where the Business Case goes from the Programme, into Delivery. For this to take place there should be confidence in the schedule, cost and risks prior to awarding a contract to the Delivery Integrator.
3. It is the point at which Regulatory Triggers are set (if required).

At this point in the lifecycle, it may be jointly agreed between Heathrow and the Airline Community for the Business Case not to go ahead, as there might not be a requirement for the investment any more. In this scenario, any investment money not spent may either be given back to the Airline Community via a rebate, or, the money may be spent on a new Business Case.

As discussed in section 5.2 above, it is important to note that with this flexible approach it may be the case that not all of the Capital Investment is spent.

6. Q6 Capital Investment Plan and Programme Delivery

6.1 Q6 Programmes and Business Cases

The Strategic Programmes approach which started in Q5 will continue into Q6. Strategic Programmes are created to deliver benefits to Heathrow. This programmatic approach provides a structured framework to co-ordinate, communicate and manage all the activities involved across a multi-year plan (Crucially this is a cross functional arrangement and not only a development process).

The majority of the change required to support the capital investment will be carried out through the four Strategic Programmes. These are:

- Passenger Experience
- Airport Resilience
- Asset Management
- Baggage

The current Terminal 2 Programme will close down at the end of 2014, following the last airline move into Terminal 2, and Q6 Realisation will govern a few smaller business cases.

One change for Q6 is that whilst the Strategic Programmes are still responsible for the elements up to Gateway 3 and realising the benefits (which is the activity relating to bringing into use), the construction work will be done by four separate Delivery units – T1/T2/T4; T3/T5; Airside/Landside North; and Airside/Landside South. These geographical units will co-ordinate and manage all activities in their area, and be the focal point of contact with the operational teams. The overall approach is shown in Figure 6.1.
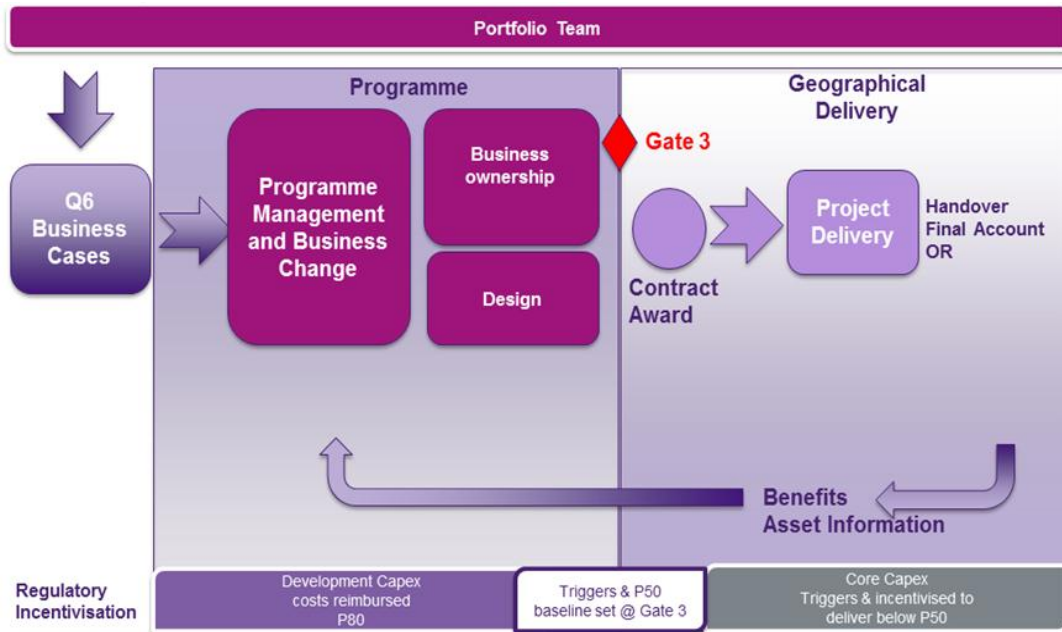
Figure 6.1: Development Process Diagram

As discussed in section 5.2, the planned Capital Investment for the Q6 Regulatory period is currently forecast to be £2.3 billion (outturn), and may increase to up to £3.3 billion, but this is subject to further scoping of the remaining individual projects and corresponding approval of the Business Cases.

Heathrow's full suite of Business Cases within the Strategic Programmes is explored further, below.

6.1.1 Passenger Experience

The overall purpose of the strategy is to understand what is important to passengers and identify how to deliver against these in the most effective possible way. The strategy provides:

• A strategic framework to guide all passenger investment choices

• A level of aspiration for the passenger experience in Q6 (and beyond) with specific targets

• A clear definition of which passenger segments should be targeted to drive differential improvement

• A proposal for a consistent and straightforward approach to project evaluation

The scope of the strategy is centred on the passengers' experience within the terminals but also covers the interdependencies with passengers' journeys to and from the airport and also the reliability of the airside operation (Resilience and Baggage Programme).

Our Passenger Experience vision for Q6 is to: *"Deliver a noticeably better passenger experience by creating stress free, smooth and memorable journeys"*.

The Passenger Experience Programme is made up of the Business Cases shown in the table below:

Business Cases	Capex (outturn in £millions)	Summary
Improve Passenger Experience		
B008 Crossrail	5.51	Heathrow must ensure that Crossrail services are able to operate on Heathrow infrastructure from May 2018 and that all HAL rail assets are regulated from 2015.
B010 Central Terminal Area Re-development	14.20	Phase 1 of the CTA Masterplan targeted at enhancing the experience of passengers using the CTA and to complement the quality of the new Terminal 2.
B014 Wayfinding	10.70	Investment to allow Heathrow to keep pace with competitor airports and rising passenger expectations for dynamic and real time information. Builds on improvements to Wayfinding in Q5.
B016 T3 Enhancements (Façade, Premium drop off)	27.00	The scope for these Business Cases include improvements to Zones B-G, T3 Façade, International Departure Lounge, Premium drop off and arrivals concourse.
B316 T3 Enhancements (International Departure Lounge seating & Arrivals)	20.00	
B029 Automation of the Passenger Journey	58.31	Aligned to aviation industry led initiatives to deliver a simplified and streamlined end-to-end journey. Automated solutions being considered are self-service bag drop and self-boarding; which are currently being trialled.
B129 Automation of the Passenger Journey (Asset Replacement)	9.66	Replacement of self-service check-in technology due to life expiry within Q6.
B018 T5 Security Capacity	23.52	These business cases provide for the business critical upgrade and expansion of transfer security facilities in Terminals 3 and 5. In combination this investment will improve connections service quality and enable the consolidation of BA and Oneworld operations into both of these Terminals. This scope will also enable the full implementation of a harmonised baseline security service in these facilities (see B068).
B116 T3 Security Capacity	39.95	

B059 Visitor Centre	0.21	Provision of a public facility for visitors to encourage active interest in the history and operation of the airport. Intended to promote key messages for growth.
B068 Security SQR Harmonisation	3.77	The CAA Licence Condition includes a harmonised security waiting time standard for direct and transfer passengers of 99% of passengers waiting less than 10 minutes. The technology to enable per passenger queue measurement will be implemented in all Heathrow terminals with the exception of Terminal 1 (due to its planned closure in Q6).
B082 T5 CIP Expansion	5.41	The capacity of existing CIP Lounge space in T5A is at capacity at peak. Facilities are not well placed to support British Airways' growth and lounge product strategy in their current configuration.
B092 UKBF Accommodation	5.22	Investment is required to bring holding rooms up to a consistent standard in line with UKBF's national standards. To be implemented in all Terminals, less Terminal 1 (due to its planned closure in Q6)
B094 Crossrail Contribution	86.70	Heathrow's contribution to Crossrail is as determined by the CAA.
B156 Surface Access Development Fund (Southern Rail)	2.03	Protect Heathrow's interests during the consultation and planning for Southern Rail access and development of other Surface Access initiatives.
B356 Surface Access Development Fund	6.59	

Grow Commercial Revenue		
B009 Northern Perimeter	9.68	Increased capacity to the car parking estate to satisfy passenger demand. Solutions are focused on opportunities to improve the T5 campus and create opportunity for incremental growth in car parking revenue.
B020 Commercial IT and Telecoms	14.97	Targeted investment in income generating Commercial IT & Telecoms to enable the continued development of products that keep pace with technology advancements, and the needs of the Airport community and passengers.
B023 E-business Development for Heathrow	8.29	Scope includes a number of initiatives that build on Q5 success to launch and develop a multi-channel communication strategy. Digital channels enable greater personalised service making it easier for passengers to use Heathrow and generating additional revenue through new ways of marketing Heathrow's commercial offering.
B024 Commercial Advertising and Sponsorship	34.23	Refresh and enhance the media estate in Q6. Scope is a mix of asset enhancements, end of life replacements, and new infrastructure to protect income and drive incremental revenue from direct advertising & sponsorship of 'assets'.
B025 Premium Passenger Products and Services	6.61	Differential investment in support of lead passenger segments (Premium & UK Business). The objective is to identify and generate incremental revenue streams which also enhance the premium passenger experience.
B041 Commercial BAU Fund	32.81	High volume, low value (capex) investments, invested tactically over the Q as opportunity or need arises. Supports Retail, Commercial Passenger Services and Property teams.
B044 Commercial Systems Replacement and Upgrades	2.76	Investment in retail concessions systems providing real time sales data. The solution facilitates improved decision-making and the accuracy of concession fee payments through the transition to automatic sales reporting. The system has been installed in Terminal 2. This investment extends the system to all retailers in Terminals 3, 4 and 5.
B045 Enhanced Terminal Facilities for Passengers	20.55	Investment in hosting facilities to meet the growing expectations of passengers (in particular connections) that do not have access to airline lounges.
B081 T4 IDL Masterplan Phase 4 and Enhancements	8.20	Final element of the redevelopment of the T4 Independent Departure Lounge solution commenced in 2012. Drives commercial income through the creation of additional retail space and new merchandising opportunities.

Realise Operational Cost Efficiencies		
B026 Security Fixed Post Modernisation	10.23	Targeted initiatives that maximise the efficiency of the security operation through deployed technology. Capital investment is necessary to reduce the reliance on fixed post security officers to protect passenger routes and boundaries and deliver cost savings.
B030 T1 Closure	8.40	Phased closure of Terminal 1 (excluding the baggage system which is required to support T2). Terminal 1 will be closed for passenger operations at the earliest possible date.
B037 Airline Moves	23.64	Terminal 1's airlines will be relocated to other Terminals per the agreed move sequence.
B038 Ops Efficiency & Continuous Improvement	6.05	Set of workforce initiatives focused on continuous improvement and reducing the operational cost base.
Q5 Rollover		
B204 Passenger Experience Programme Rollover	23.20	These projects are contained in a single business case and consist of Q5 rollover projects. Completion of this remaining Q5 scope will draw to a close several key Commercial and Restoration initiatives in Terminals 3, 4 and 5. Passenger Experience Programme Q5 Rollover projects include: OP10652 – T3 CIP Lounge OP10711 – T3 Refurbishment OP10847 – Premium security Fast Track OP10870 – T4 Independent Departures Lounge OP10816 – T5 Gate Luxury & T5 Concessions OP10858 – T5 Automated Systems OP10653 – Passengers with Reduced Mobility Lifts & T5 Lifts
Total	**528.40**	

6.1.2 Airport Resilience

The Programme vision is to provide '*A resilient airport with capability to meet demand and recover quickly*'.

This Programme will achieve its vision through a series of objectives. The cumulative effect of meeting these will provide more headroom for the operation. The objectives are as follows:

- Create headroom with efficient use of technology, enhanced processes and airport infrastructure.
- Accommodate future demand for new generation wide bodied aircraft
- Build resilience to adverse weather and other events, enabling a quick & safe recovery of the operation.
- Drive resilience, safety and efficiency improvements in the operation (facilities and processes), whilst maintaining a safe airport.

The Airport Resilience Programme is made up of the Business Cases shown in the table below:

Business cases	CAPEX (outturn in £millions)	Summary
Infrastructure		
B017 T4 (High Voltage)	20.00	Provision and installation of new high voltage electrical infrastructure in T4. This also includes improvements to T4 arrivals forecourt.
B033 Additional Fuel Infrastructure	160.30	The Airline Community and Heathrow Airport Fuel Company (HAFCo) have articulated a requirement for additional fuel storage capacity. This capacity is to mitigate against the risk of supply perturbations. This Business Case will involve the construction of new fuel farm that will increase fuel stocks to the equivalent of 3.0 days peak demand (currently ~1.5days).
B034 PCA additional Infrastructure	3.00	Provision and installation of pre-conditioned air units for long haul stands that do not currently have the facility.
B134 PCA Additional Infrastructure	2.11	
B035 De-icing	55.00	Allows Heathrow to provide a centralised de-icing facility for aircraft to be de-iced during winter operations.
B062 Cargo Area South Side	16.00	Support the cargo community with improved access to the airfield and cargo facilities, by redesigning the control post infrastructure and operational controls in the cargo area.
B073 Vehicle Charging	5.00	Provision of vehicle charging infrastructure enabling HAL and 3rd parties to utilise alternative fuels.
B098 Kilo taxi lane and Stands 234/5	113.00	Removal of Europier and existing stands, construct the kilo taxilane and stands 234/5 along with safeguarded tunnels infrastructure below.

B111 Enabling New Generation of Wide Body Aircraft - Airfield	85.04	This work will enable airlines to introduce new generation of aircraft types, assisting Heathrow in meeting Passenger forecasts. Work will include Code F Taxiway Upgrades and New Stand Capacity.
B311 Enabling New Generation of Wide Body Aircraft - Airfield	112.00	Further airfield ground infrastructure improvements to enable airlines to continue bringing new wide body aircraft, and for HAL to utilise the runways in a new operational configuration through the following work: Airports Commission related items; Airfield (Easterly Alternation and Rapid Access Taxiway); Airfield Efficiency Items (Stands, Rapid Exit Taxiway); and, Fixed Electrical Ground Power (FEGP).
B117 T4 Infrastructure Improvement	26.72	To provide appropriate infrastructure in and around Terminal 4 to facilitate the forecast wide-bodied growth in Q6. The work will include: Conversion of stands 410 & 411 to a pier serving Code F, conversion of stands 404 and 461 to 1 pier serving code E stand, and to Provide a 3rd A380 baggage belt.
Technology & Process		
B015 Operational Systems Critical Asset Replacement (OSCAR)	22.64	To rationalise, update and optimize the IT estate. Protect the operational use and functions of the seven critical IT systems utilised by HAL and the airport community.
B039 Noise Compliance	2.48	To provide an improved and automated system for the management of aircraft noise data, which will enable Automatic aircraft noise reporting, an increased horizon, near live data (15mins vs. 24 hrs.), ground movement monitoring, monitor/analyse Time Based Separation, and directly supports airspace changes.
B043 APOC	10.02	A new operations centre to plan, predict and proactively manage the flow of aircraft, passengers, employees and baggage, providing one holistic view.
B112 Airfield Efficiency and Resilience	32.01	To enable consistent and cost effective delivery of the forecast aircraft schedule (including next generation aircraft) by operating to plan, increased precision of arrivals and maintaining departures punctuality. Work includes: Time Based Separation, airspace changes, independent arrivals, and new approach aids.
B312 Airfield Efficiency	19.00	
Other		
B206 airport Resilience Programme Rollover	28.01	These projects are contained in a single business case and consist of Q5 rollover projects. This single business case comprises expansion of the T4 baggage reclaim hall, T5 TTS Enhancement, T3 and T4 loading Bay, T3 pier 5 Capacity Phase 2-3, Airside Operations Facility, Heathrow Resilience, and Snow Operations.
Total	712.33	

6.1.3 Asset Management

The objective of the Programme is to deliver assets at the lowest possible cost whilst optimising risk and performance. This will be done for each of the Engineering, IT, and Rail parts of our business.

The judgement required to make these decisions will be made utilising the overarching Asset Management Objectives. These objectives are aligned to the business vision, priorities and service propositions.

The Asset Management objectives are the requirements against which all business cases in the Q6 Portfolio will be expected to show a contribution towards.

The Asset Management Programme is made up of the Business Cases shown in the table below:

Business cases	CAPEX (outturn in £millions)	Summary
B001 Engineering Asset Replacement	39.00	Asset replacement or refurbishment aligned to the principal Asset Management objectives to reduce opex and optimise for risk and performance
B003 IT Asset Replacement	26.00	Provide Heathrow with a reliable and performing IT estate that will continue to efficiently support, at minimum operating cost, the operations of the airlines and the wider airport community. In addition, as a result of the refresh activity, the IT estate will have been further rationalised, optimised and updated.
B103 IT Asset Replacement	81.30	
B028 Metering and Energy Demand Management	14.00	Provide improved energy consumption analytics for HAL Engineering to reduce costs and achieve the target set for carbon emissions reduction. This will be enabled through Automatic meter Reading technology installation across Heathrow. Delivery of a range of projects to reduce energy consumption through introduction of new technology, on-demand assets and optimisation of set point controls.
B049 Engineering Operational Efficiencies	0.00	To continue the strategic improvements delivered in Q5 via the Engineering Change Programme throughout Q6. This continuous improvement will ensure that the current strategies are delivered in their entirety with benefits realised. This is to be delivered in line with the Engineering & Facilities Maintenance strategy, focussing on both procurement and workforce.
B066 Energy & Utilities Management and supply	21.55	To provide new heating assets including additional boilers at the Heathrow Energy Centre, header building and district heating pipework, and conversion of heat exchangers from High Temperature Hot Water to Low Temperature Hot Water.
B090 Lakeside	5.28	Installation of connecting infrastructure from Heathrow's Heat and Power distribution systems to the Lakeside facility enabling heat and power to be imported from the energy from waste facility. This delivers sustainability, resilience, and efficiency targets.

B101 Engineering Asset Replacement	595.08	Targeted asset replacement or refurbishment aligned to the principal Asset Management objectives. Focussed on controlling risk and incurring the least cost in order to remain safe, compliant, and with an operational airport.
B102 Rail Asset Replacement	52.08	Refurbish and replace key Rail Operating and Infrastructure assets. This will be done to sustain current operational performance levels, to deliver Heathrow Express service throughout Q6 and ensure assets are fit for purpose when Crossrail commences.
B027 Surface Water Management Infrastructure	8.00	Improve the performance of the surface water pollution control system across the various catchments at Heathrow.
B127 Surface Water Management Infrastructure	16.11	
B036 VIP Strategy	7.00	Maintaining the existing suites.
B047 Consolidated HAL landside & Engineering facility	5.00	To enable the full cost benefits of the Heathrow Engineering change programme; service efficiency and overall cost benefits. The business case looks to consolidate multiple buildings.
B131 CTA & Cargo tunnels	117.30	Tunnels compliant with appropriate legislation and best practice, this includes: Refurbishing and replacing the tunnel asset systems; ventilation system; fixed fire suppression; structural fire protection; lighting; electrical and water systems; and, emergency sign and closure systems.
B165 Waste Management Infrastructure	5.52	Provide compliant waste management processes and infrastructure for HAL Operations and 3rd parties to enable the effective segregation and recycling for cost recovery from the waste stream.
B169 Asset Management	12.11	To embed good practice asset management capability throughout our business, by introducing a management system for the asset base built on industry best practice; process changes; and, organisational change.
B207 Asset Management Programme Rollover	36.50	These projects are contained in a single business case and consist of Q5 rollover projects, which include: T3 refurbishment programme, core electrical distribution upgrades, sweeper tip, IT data centre capacity and desktop services, T3 roof works, runway rehabilitations project, replacement of HV intake cables
Totals	**1041.83**	

6.1.4 Baggage

The vision for the Baggage Programme is, *'to deliver leading end-to-end baggage performance amongst European Hubs, at a competitive cost, by working safely together as a community'.*

The Baggage Programme's objectives are:

- To comply with Department for Transport hold baggage screening requirements.
- To reduce the baggage misconnect rate.
- To simplify and consolidate systems to deliver efficiencies.
- To reduce the rate of injuries associated with baggage operations.
- To enable growth in passenger numbers.

The Baggage Programme is made up of the Business Cases shown in the table below:

Business Case	CAPEX (outturn in £millions)	Summary
B005 Baggage Standard 3 Hold Baggage Screening	339.59	The following number of new Standard 3 HBS machines will be installed, to be compliant with The Department for Transport's requirements: T1 14no (transfer bags) T2 10no (check-in bags) T4 13no (check-in and transfer bags) T5 30no (check-in and transfer bags) Total 67no
B006 Improved Baggage Capacity and Resilience	38.80	A number of elements are being considered, including: T5 Early Bag Store; T4 TBF enclosure; T5C ULD storage (power); T5 dual off load; T5 sorter to/from reclaim; T5 bag check units; and IT led performance improvements.
B051 T3IB Q5 Rollover	92.30	To complete the facility the project will deliver: Integrated baggage system which provide integrated make-up facilities for direct and transfer out-bound baggage Automated baggage build capability using 2 robots Semi-automated baggage build capability using 3 powered handling aids Manual handling aids to be fitted to build laterals
B097 T1 Baggage Resilience	11.76	The proposal is to provide a transfer break and pre-sort facility close to the T1 baggage system with sufficient capacity to handle the T1&T2 inbound transfer traffic during contingency.
B099 T3 baggage enhancements	9.13	An addition loop will provide resilience to Baggage operations. The Arrivals Road will also be upgraded to current standards.
B104 Baggage Asset Replacement	168.75	Targeted asset replacement or refurbishment aligned to the principal Asset Management objectives. Focussed on controlling risk and incurring the least cost in order to remain safe, compliant, and with an operational airport.

B205 Baggage Programme Rollover	17.30	These projects are contained in a single business case and consist of Q5 rollover projects, which include: T5 WBU and HIBS
Programme Total	**677.63**	

6.1.5 Terminal 2

The objective of this programme is to complete the works commenced in Q5 on Terminal 2. The opening of T2 will enable us to improve the overall passenger experience and realise our vision of becoming Europe's Hub of Choice.

An allowance has been made to start with the planning application and enabling works for the expansion of Terminal 2 in future quinquennia.

The Terminal 2 Programme is made up of the Business Cases shown in the table below:

Business Case	Capex (outturn in £millions)	Summary
B054 T2A Phase 2 and T2C	184.84	Initial funding for design and enabling works for the extension of T2A and the construction of T2C.
B150 Terminal 2 Phase 1 Completion	64.90	Completion of T2 Phase 1.
Total	**249.74**	

6.1.6 Q6 Realisation Programme

The Objective of the Programme is to *'Integrate and optimise Heathrow's plan to deliver the settlement and our vision'.*

The programme seeks to achieve this objective through continuously aligning our strategy with our portfolio, to achieve our vision.

The Q6 Realisation Programme is made up of the Business Cases shown in the table below:

Business Case	Capex (outturn in £millions)	Summary
B164 Back Office IT	31.78	Provide Heathrow with a reliable and performing IT estate that will continue to efficiently support, at minimum operating cost, the operations of the airlines and the wider airport community. In addition, as a result of the refresh activity, the IT estate will have been further rationalised, optimised and updated.
B208 Q6 Realisation Rollover	3.32	These projects are contained in a single business case and consist of Q5 rollover projects, which include the following work: CCTV work; document management; and, treasury accounting.
B077 Hillingdon Community Trust.	2.84	This reflects commitments made as part of the planning processes for T5 and T2.
B078 LACC Project Manager	0.59	This is a continuation of the approach in Q5 where Heathrow funds a resource to assist the airlines to respond in a consolidated manner to capital consultations and engagement.
B158 Innovation, Research & Trials	5.15	This business case will be used to fund new ideas and very early concept work, as the Portfolio evolves during the Quinquennium.
B176 Funds for Independent Funds Surveyor (IFS)	6.70	This business case will facilitate the implementation of Gardiner and Theobald as the IFS.
Totals	**50.38**	

6.2 Consultation on Strategic Programmes

As advised previously, to comply with Condition F1.1 of the Licence, Heathrow has an obligation to consult on, agree and publish one or more protocols by 1ˢᵗ October. One output of this will be the Capital Protocol, which will replace Annex G, as of 1ˢᵗ October 2014. Work is well underway with the Airline community in developing this new protocol.

Until 1ˢᵗ October, Heathrow will work with the Airline Community, following the requirements set out in The Enhanced Information and Consultation Protocol (Annex G, November 2011).

The current governance structure is illustrated in the diagram below.

Figure 6.2: Current governance structure

6.2.1 Key and Triggered Projects

Through the Constructive Engagement process for the Q6 Regulatory period and subsequently through the Q6 Trigger Sub-Group, Heathrow and the Airline Community agreed the process and principles of Trigger Management.

The output of this is the Q6 Capital Investment Triggers Handbook, which is available on the CAA website. This Handbook outlines how Triggers are developed and set for a selection of Key Projects.

6.2.2 Introduction of the IFS

Heathrow and the Airline Community agreed to create the new role of Independent Fund Surveyor (IFS) in Q6, through Constructive Engagement.

The role of the IFS in Q6 is a new and important one. Heathrow's compliance with its regulatory requirements in relation to the efficient delivery of the Capital portfolio will be reviewed by the IFS.

The purpose of the IFS is to provide an on-going assessment of the reasonableness of all key decisions made on Key Projects and to ensure that capital is being used effectively to deliver the outcomes determined by the Business Case.

The IFS will report at all Gateways and on a monthly basis during delivery of the project.

The key benefits are:

- Provision of real time reviews / reporting through the gateway lifecycle process.
- Add value to the delivery of the Q6 Capital portfolio, drive the correct behaviours and provide an increased level of confidence to all parties.
- Significantly reduce the regulatory burden around capex efficiency reviews.
- Will avoid assessment in hindsight.

Gardiner & Theobald (G&T) have been jointly appointed by Heathrow and the AOC to provide IFS Services.

G&T have a contractual obligation to carry out their duties for the benefit of Heathrow, the Airline Community and the CAA. The IFS will report to the Capital Transition Group.

The IFS will be employed on selected Triggered Business Cases or projects. The initial list of Key Projects which may be Triggered and/or have the IFS on board, is below. This list may be updated at any time in Q6.

Key Projects / Business Case	Trigger(s)	Trigger Scope	IFS	IFS Scope
B101 Engineering Asset Replacement				
Airbridge, FEGP, PCA	1	T3 Airbridge Replacement	Y	T3 Airbridge Replacement
Electrical Power Infrastructure	1	T4 LV Electrical Infrastructure	Y	T4 LV Electrical Infrastructure
Life Safety systems H & S	2	Fire main replacement/pressure reduction T3 Life Safety Systems	Y	Fire main replacement/pressure reduction T3 Life Safety Systems
B005 Baggage Standard 3 HBS	4	4 x Std3 HBS (T1/2/4/5)	Y	4 x Std3 HBS (T1/2/4/5)
B104 Baggage Asset Replacement			Y	Asset Replacement scope related to Std3 HBS
B006 Improved baggage capacity and resilience	1	T5 Early Bag Store	Y	T5 Early Bag Store
B111 Enabling Wide Bodied Growth - Airfield	1	Bravo North taxiway	Y	Bravo and Sierra A/C taxiways
B311 Enabling Wide Bodied Growth - RAT, RETs, Remote Stands and FEGP	1	Pier 4a Code E stands	Y	Pier 4a Code E stands
B112 Airfield Efficiency and Resilience	1	TBC	Y	TBC
B312 Airfield Efficiency and Resilience				
B116 T3 Transfers Security Capacity	1	T3 Transfers Security capacity	Y	T3 Transfers Security capacity
B316 T3 Refurb/Enhancement - Facades, IDL and Arrivals Concourse				
B117 T4 Infrastructure Improvement	1	Code F Stand 410 (Rollover trigger)	Y	Code F Stands (410,411,412)
B317 T4 Infrastructure Improvement - HV and Arrivals	1	T4 HV	Y	T4 HV
B018 T5 Transfers Security Capacity	1	T5 Transfers Security capacity	Y	T5 Transfers Security capacity

B129 Automation of the Passenger Journey			Y	TBC
B329 Automation of the Passenger Journey	1	TBC	Y	TBC
B030 T1 Closure				
B031 CTA & Cargo Tunnels	1	Main tunnel (Rollover trigger)	Y	Main and Cargo tunnels
B033 Additional Fuel Infrastructure	1	TBC	Y	TBC
B035 Aircraft De-Icing Infrastructure & Process	1	TBC		
B037 Airline Moves				
B051 T3IB Q5 Rollover	1	Cut-ins complete / baggage system operational (Rollover trigger)	Y	T3IB Rollover spend
B154 T2A Phase 2 and T2C - planning			Y	TBC
B354 T2A Phase 2 and T2C - enabling	1	TBC	Y	TBC
B098 Kilo taxilane and stands 234/5	1	TBC	Y	TBC
B150 Terminal 2 Phase 1 Completion				
B207 Asset Management Programme Rollover	1	Northern runway (Rollover trigger)	Y	Northern Runway

Figure 6.4: Table showing the initial List of Q6 Key Projects, Trigger, and IFS appointment.

7. Financial Projections

7.1 Q6 Capital Spend forecast (From 1st April 14)

The CAA based the Q6 Settlement on Heathrow's Alternative Business Plan (ABP) submitted in July 2013, which gave a forecast of spend per year in Q6. We have created a baseline plan from which we will monitor and track performance and changes to the Capital Investment Plan.

Heathrow has formed a baseline taking into consideration the ABP, the Q6 Settlement and Q5 Rollover project expenditure, using the January 2014 Oxford Economics RPI forecast, to create the table below. This new baseline plan is known as the Q6 Realisation Plan (Q6 RP).

As discussed, planned Capital Investment for the Q6 Regulatory is currently forecast to be £2.3 billion. The Capital Investment Plan may increase to up to £3.3 billion.

The annual spend shown here is an aggregation of all the Business Cases across the Programmes totalling to approximately £3.3 billion, as detailed in Section 6.1, and has been shared with the Airline Community at the Capital Transition Group.

	14	15	16	17	18	Total
CAA Settlement (11/12)	439.1	669.0	645.6	528.8	533.9	2816.4
CAA Settlement (outturn)	475.0	745.1	744.1	631.3	661.5	3257.0
HAL new Q6 RP (outturn)	481.6*	732.3	669.4	627.5	752.5	3263.4

*Does not reflect the CAA deduction of £37.9m (£35m in 11/12 inflated to 2014) for T3IB.
Figure 7.1: Q6 Spend forecast in £m

8. Appendices

Equitable Treatment Metrics

		Measurement	Definition	Terminal 1		Terminal 2		Terminal 3		Terminal 4		Terminal 5		Notes
				Current	Mplan Intention*	2014	Mplan Intention*	Current	Mplan Intention*	Current	Mplan Intention*	Current	Mplan Intention*	
1.0	Traffic	1.1 MPPA	Million Passengers Per Annum (MPPA) - defined as quantum of total passengers served in each terminal per annum. Calculation: - for existing terminals based on an annual terminal throughput for a last calendar year - for new terminals calculated as sum of airlines' (who are planned to occupy a new terminal) annual	13.8		16.1		18.4		10.4		29.8		Data from BOSS 2013 - T2 calculated using 2013 figures from expected airline tenants (as per Occupancy Option 9.91) [Does not include Avianca since new entrant in 2014] *General Aviation excluded*
		1.2 ATMPA	Air Traffic Movements (ATMs) per annum - defined as quantum of aircraft movements in each terminal per annum. Calculation: - for existing terminals based on air traffic movements in each terminal for a last calendar year - for new terminals calculated as sum of aircraft movements for all airlines (who are planned to occupy a new terminal) for a last calendar year	114,797		116,856		92,628		60,101		199,623		Data from BOSS 2013 - T2 calculated using 2013 figures from expected airline tenants (as per Occupancy Option 9.91) [Does not include Avianca since new entrant in 2014] *General Aviation excluded*
		1.3 Peak hour departing flow - all pax	Peak Hour Passengers - number of enplaning and deplaning passengers (including transfer passengers) served in each terminal counted as 30th peak hour (clock hour) of the last calendar year	2,137 (ATD) 1,954 (STD)		2,189 (ATD) 2,310 (STD)		3,606 (ATD) 3,821 (STD)		2,411 (ATD) 2,072 (STD)		4,434 (ATD) 4,191 (STD)		Clock Hour ATD and STD figures used for 2013, T2 calculated using 2013 figures from expected airline tenants (as per Occupancy Option 9.91) [Does not include Avianca since new entrant in 2014] *General Aviation excluded*
2.0	Terminal area - total	2.1 Terminal, campus GFA (sqm)	Terminal, campus GFA (Gross Flow Area) - floor area inside the building envelope, including the external walls, and excluding the roof. For terminal or campus it is calculated as a sum of GFAs for all levels and all piers and satellites. In case, there is an external building which process either passengers or baggage for particular terminal, but it is not a part of main terminal or satellite structure, then area of this building	199,250		297,900		223,100		132,400		526,000		Rounded to nearest 100m2. Terminal 1 excludes T2B, T2 does not assume TTS i.e. walkway included, T2 includes T2A & T2B, T5 includes T5A. B & C

		Measurement	Definition	Terminal 1		Terminal 2		Terminal 3		Terminal 4		Terminal 5		Notes
				Current	Mplan Intention*	2014	Mplan Intention*	Current	Mplan Intention*	Current	Mplan Intention*	Current	Mplan Intention*	
3.0 Passenger Infrastructure	3.1	Number of check-in desks & bagdrops	For each terminal sum of all check-in desks and bagdrops which have connection to baggage system.	113		116		214		129		150		Check-in desk numbers as per S13 CAT allocations for T1, T3 and T4
	3.2	Number of self service kiosks	For each terminal sum of all self service units (either check-in or transfer)	81		66		94		49		96		Based on info received from Terminal Integrated planners (14May14), only includes active kiosks
	3.3	Number of security lanes (machines)	For each terminal sum of all security lanes (departure and transfer) which are used for passengers processing. Security machines dedicated for staff processing are not included.	22		31		25		19		31		Data according to OPM, includes machines on satellites / piers signed off from a health & safety perspective
	3.4	Number of ticket desks (total)		48		44		73		64		26		Data from Property Portfolio Managers, excludes 'Check in desks' that are being used as 'Ticketing/Assistance/Upgrade desks'. Counts individual serving positions, landside only
	3.5	Number of immigration lanes + ACS	For each terminal sum of all immigration lanes and eGates (arrivals and transfer) which are used for passenger processing.	38		45		52		43		45		As per eGate development project layouts, base Aug 2013
	3.6	Published intra-terminal MCT	Published intra-terminal MCT for each terminal. If there is a different MCT for different flows, then separate MCTs should be indicated for each flow.	60mins		60mins		70mins		60mins		60mins		MCT reflects both passenger and baggage processes. Note the T3 MCT will change to 60min once T3IB is functional
	3.7	Distance to walk unaided from IDL to furthest aircraft gate (m)	Unaided walking distance measured from central security search exit to the furthest aircraft gate either in terminal building or satellite. All aids such as sidewalks, elevators, escalators, people mover systems are excluded. Distance for each terminal should be presented on drawings.	650		915		855		730		450		Rounded to nearest 5m, T2 not assumed to have TTS, T1 does not include T2B gates
	3.8	Number of CIP Lounges available (total)		6		8		12		6		4		Data from Property team, T1 figure is pre-T2 opening - once airlines have moved out the Lounges will be vacant. T2 figure is once T2 is fully occupied by end of S14
	3.9	Number of CIP Lounges requested		0		0		1		2		1		Does not include Lounge expansion requests
4.0 Baggage Infrastructure	4.1	Length of reclaim belts	For each terminal sum of re-claim belts' length (in meters) which is presentable to passengers; length of feeds to the belts is excluded; both domestic and international.	527		686		699		480		718		
	4.2	Number of MUPs	Number of MUPs (make-up) positions in each baggage hall (both departures and transfer)	204 (used by T1 & T2)		0		250		162		345		Only currently usable MUPs have been included, T3 figure pre-T3IB, T2 uses T1 facilities
	4.3	ADP (avg time to input belt - arrivals)	Arrivals Delivery Performance for departure baggage - measured as average for first bag (FB), last bag (LB) and % in target (25,35,45mins)	LB ADP 71% in 35min		(FB) 85% of flights in 15min, (LB) 85% of flights in 35 min		LB ADP 78% in 35min		LB ADP 64% in 35min		LB ADP 61% in 35min		Source: didFly data, May'13 to Apr '14 incl., T2 is target performance
	4.4	ADP (avg time to input belt - transfers)	Arrivals Delivery Performance for transfer baggage - measured as average for transfer bags and % in target	Tx avg 20 mins; Tx ADP 77%		85% of bags in 25min		Tx avg 23 mins; Tx ADP 71%		Tx avg 21 mins; Tx ADP 68%		Tx avg 25 mins; Tx ADP 57%		Source: Merlin data, May'13 to Apr '14 incl., T2 is target performance

39

	Measurement	Definition	Terminal 1		Terminal 2		Terminal 3		Terminal 4		Terminal 5		Notes
			Current	Mplan Intention*	2014	Mplan Intention*	Current	Mplan Intention*	Current	Mplan Intention*	Current	Mplan Intention*	
5.0 Aircraft Infrastructure	5.1 Number of aircraft stands (centrelines)	For each terminal / campus sum of aircraft stands (both contact and remote) which are adjacent to terminal / campus area. MARS'ed (Multi Aircraft Ramp System) stands should be counted as one large stand	Pre T2 opening: 31 Post T2 opening: 19		35		46 (192L & 192R counted as two small stands)		33		60		Declared physical stand supply for Summer 2014
	5.2 Number of pier served aircraft stands (centrelines)	For each terminal / pier / satellite sum of aircraft stands which are contact / pier served. MARS'ed (Multi Aircraft Ramp System) stands should be counted as one large stand	19		27		28		21		45		Physical stand supply, T1 post T2 opening
6.0 Terminal access	6.1 Number of car park spaces	Number of car park spaces in a car park which is adjacent and linked to each terminal.	MSCP1: 585 MSCP1a: 1,670		Phase 1: 1,327 Phase 1A: 1,524		1,540		898		3,654		Data from Retail Services, noteT5 MSCP is also utilised by staff
	6.2 Walking distance (m) to check-in area from underground	For each terminal unaided walking distance from the platform to the closest entrance to the terminal building. All aids such as sidewalks, elevators, escalators, people mover systems are excluded. Distance for each terminal should be presented on drawings.	295		565		405		45		140		Rounded to nearest 5m
	6.3 Walking distance (m) to check-in area from HEX	For each terminal unaided walking distance from the platform to the closest entrance to the terminal building. All aids such as sidewalks, elevators, escalators, people mover systems are excluded. Distance for each terminal should be presented on drawings	105		310		185		120		80		Rounded to nearest 5m
	6.4 Walking distance (m) to check-in area from public bus	For each terminal unaided walking distance from the a bus stop to the closest entrance to the terminal building. All aids such as sidewalks, elevators, escalators, people mover systems are excluded. Distance for each terminal should be presented on drawings.	310		370		500		125		165		Rounded to nearest 5m

*Masterplan figures will be populated with the expected facilities at 2019, once the Q6 regulatory settlement has been concluded.

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