

MIDFIELD EXECUTIVE STEERING COMMITTEE

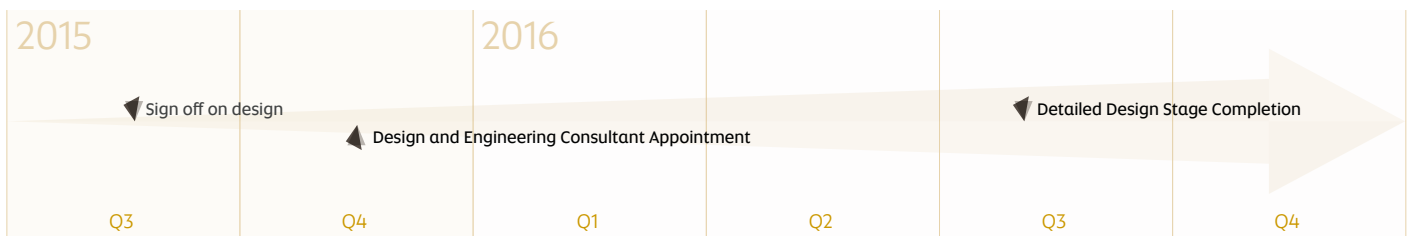


August 2015

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GUEST EXPERIENCE



Accomplishments

Planned Actions

DESIGN AND CONSTRUCTION

- ▶ Concept development complete including validation via guest research
- ▶ Concept design circulating amongst relevant stakeholders for review and feedback
- ▶ Identification of 13 key areas for development of detailed initiatives

- ▶ Midfield Guest Experience Concept to be presented for sign off at Product Committee meeting in October

ORAT

- ▶ Review of guest flows through the Midfield Terminal is ongoing (Departures/Transfers/Arrivals)

- ▶ Vision concept for Transfer Process to be prepared
- ▶ Self-service strategy to be developed

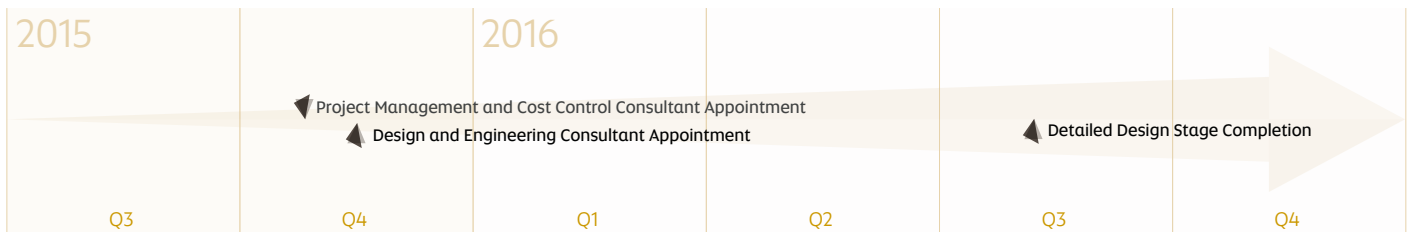
RISKS AND ISSUES

- ▶ Limited window of opportunity to influence and revise ADAC's proposed facilities plan
- ▶ Guest experience IT requirements to be scoped following validation and approval of concepts



Executive Guidance
Proceed with current works as planned.

PREMIUM AND LOUNGE SPACES FIT-OUT



Accomplishments

- ▶ Design and engineering consultant tender submissions closed 11-Aug-15
- ▶ Project management and cost control consultant tender closed 9-Aug-15

DESIGN AND CONSTRUCTION

- ▶ ADAC advised that the current planned access dates for Etihad Airways to MTC are: 19-Nov-16 for Level 2.0 and above and 17-Jul-17 for all other areas

ORAT

Planned Actions

- ▶ Design and engineering 4 shortlisted bidders presentation to stakeholders, initially scheduled for 15-Sep-15, has moved to end-September
- ▶ Business case for consultancy (design and engineer consultant and project management and cost control consultant) to be signed off by 07-Oct-15, in line with correct governance
- ▶ Guest Experience and Finance to agree on final premium space requirements for 2024 and the development of a phased fit-out strategy for this space and present to Senior Management for approval by end of 2015
- ▶ Property team to review the fit-out strategy with the objective of reducing the total duration required for the completion of the detailed design
- ▶ Etihad Airways and ADAC working group to be established for agreeing design and construction issues
- ▶ ADAC to provide proposal on commercial terms for lease agreements
- ▶ Etihad Airways and ADAC to detail the Government approvals and timelines, in alignment with the new planned access dates

RISKS AND ISSUES

- ▶ **Space requirements and phased development plan to be finalised based on revised growth plan once available. This plan has to be translated into a 5 year Capital Expenditure plan for Board approval. Delay in this approval process will put the appointment of the design consultant in Nov-15 at risk**
- ▶ It is not clear if the current ADAC target access date is providing actual access to site or mark the point in time when Etihad Airways can submit the designs for review and approval to Abu Dhabi Municipality (ADM)
- ▶ The current ADAC target access date for the premium and lounge spaces is 19-Nov-16. Based on our latest project delivery schedule, the fit-out contractor appointed by Etihad Airways will not commence until 12-Jul-17 driven by internal procurement and approval processes.



Executive Guidance

We recommend to develop the lounge designs on all spaces requested, irrespective the development phase. The project plan should be based on the current planned access dates provided by ADAC: 19-Nov-16 / 17-Jul-17. To meet the Nov-16 access date we need to evaluate all possible opportunities to expedite the internal procurement and governance approval processes.

HUB CONTROL CENTER FIT-OUT

A



Accomplishments

- ▶ Existing crew briefing room identified for interim HCC (after refit)
- ▶ Interim HCC project schedule drafted
- ▶ Agreed MEP requirements for Midfield HCC with ADAC

Planned Actions

- ▶ Review and agree timelines for procurement process to ensure accuracy of scheduled activities
- ▶ Prepare tender documents to appoint an interior design consultant for the Midfield HCC

DESIGN AND CONSTRUCTION

ORAT

- ▶ Stakeholder list agreed for departments to be represented in interim HCC
- ▶ NPA for Interim HCC has been circulated for sign off
- ▶ NPA for Midfield HCC is currently being prepared

- ▶ The operating concept for the Interim and Midfield HCC is being developed and will act as proving ground for Midfield HCC. Although the interim fit-out will not have the sophisticated consoles of a traditional command and control room, the concept and communication channels can be tested ahead of moving to MTB HCC
- ▶ The functionality of and procurement process for a Hub Control System will need to be initiated by stakeholders in the near future

RISKS AND ISSUES

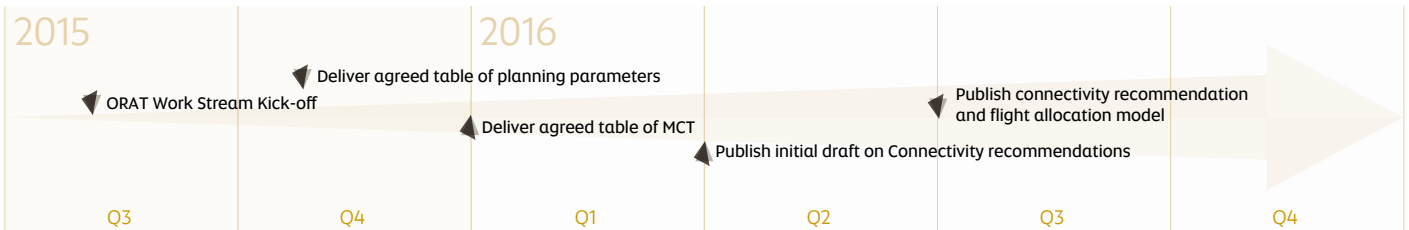
- ▶ **Signed ADAC lease agreements including agreed commercial terms is pre-requisite for initialising the ADM processes**
- ▶ It is not clear if the current ADAC target access date to Midfield HCC area of 19-Nov-16 is providing actual access to site or mark the point in time when Etihad Airways can submit the designs for review and approval to Abu Dhabi Municipality (ADM)



Executive Guidance

We recommend to base the planning of Midfield HCC fit-out on the target access date of Nov-16. This will enable a timely commencement of necessary design and procurement processes. However, there is no defined process stating if, and how, necessary design approvals from authorities can be obtained prior to access date, or will delay the begin of fit-out beyond that date.

NETWORK CONNECTIVITY ORAT MULTI TERMINAL (T1, T3, MTB)



Accomplishments	Planned Actions
<p style="text-align: center;">DESIGN</p> <ul style="list-style-type: none"> ▶ Preliminary inter terminal Minimum Connection Time (MCT) analysis for guests and bags completed ▶ Midfield Program, Network planning and Network Ops recognised the challenge deriving from future multi terminal environment (T1, T3, MTB) ▶ Recognition of planning horizon for network connectivity model: Summer 2017 to Summer 2025 (planned satellite opening) <p style="text-align: center;">PROCESS DEVELOPMENT</p> <ul style="list-style-type: none"> ▶ Developed a draft operational model for US CBP operation after MTB opening ▶ Developed a flexible MTB gate room layout taking advantage of new technologies and enabling priority transfer processes <p style="text-align: center;">ORAT</p> <ul style="list-style-type: none"> ▶ Long term agenda agreed and meetings set up ▶ Midfield Program, Network planning and Network Ops agreed that connectivity model wil have to apply to every scheduling season between Summer 2017 to Summer 2025 	<ul style="list-style-type: none"> ▶ Finalise proposal for inter terminal transfers MCT ▶ Gather data for all aircraft, guests and baggage capacity elements ▶ Define the terminal allocation of Etihad Airways partners and codeshare in 2025 scenario ▶ Define the terminal allocation of Etihad Airways partners and codeshare in 2017 to 2025 scenario <ul style="list-style-type: none"> ▶ Produce planning parameters <ul style="list-style-type: none"> ▶ Identify ADAC representative

RISKS AND ISSUES

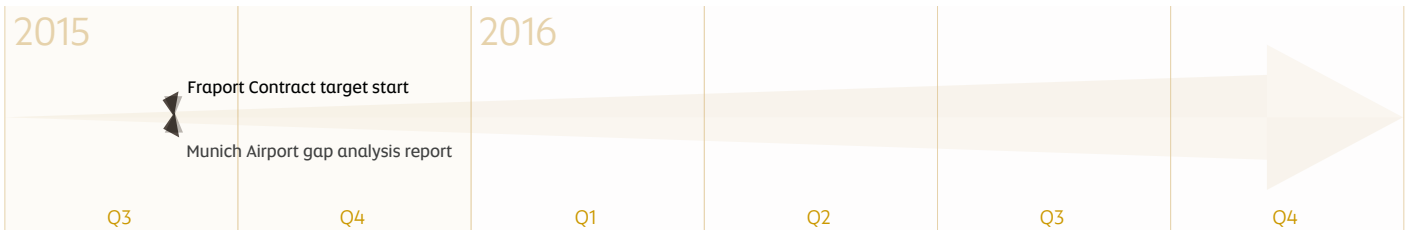
- ▶ **The schedule may not allow for extended ground times in case the aircraft rotation and flight allocation plan requires towing between terminals and across runways. If the inbound (IB) aircraft that becomes the outbound (OB) US flight comes into MTB, then it will need to be towed across a live runway to T3**
- ▶ **Etihad Airways, partner and codeshare airlines, will operate from different terminals once MTB is operational. Connectivity of guests and baggage in this multi-terminal environment requires an adjustment or further differentiation of the Minimum Connecting Time**



Executive Guidance

We recommend to conduct jointly with ADAC a simulation for the traffic flows at the airport based on 2017 / 2020 and 2024 flight schedules. Current ongoing work stream to produce the optimal allocation of routes and airlines to terminals and propose the inter-terminal MCT's. We propose to extend an official invitation to ADAC Operations to join the workgroup.

RAMP LOGISTICS



Accomplishments

Planned Actions

DESIGN AND CONSTRUCTION

- ▶ The design of the Cargo, EASG and Line Maintenance building at the 700 stands has been approved and the construction cost is AED 800K. Discussions ongoing between ADAC and Etihad regarding who should bear the cost. Construction estimated at 10 weeks

- ▶ With the uncertainty of the final location of the Cargo terminal, the Cargo, EASG and Line Maintenance building at the 700 stands takes on a new significance as a satellite handling location
- ▶ Clarify with ADAC who will develop and finance the facilities

ORAT

- ▶ ORAT work streams have been initiated with the following groups: Hub, Baggage, GSE Maintenance and EASG to design the operational model for 2017 and the required change management plan
- ▶ Munich Airport has conducted 25 interviews with key Etihad personnel and has observed a number of aircraft movements. Their first report on gap analysis has been presented on 03-Sep-15

- ▶ Munich Airport to develop functional requirements for a planning and real-time dispatch tool
- ▶ Support EASG to operationalise the available SITA Workbridge application for real-time dispatch of transport and aircraft handling resources

RISKS AND ISSUES

- ▶ No KPIs have been defined for Midfield Operations and hence no capability of continuously measuring and assessing quality of operations. Identify current measurement methods and develop a holistic concept for quality and KPI measurement and reporting
- ▶ Continuous delay in the construction of the Cargo, EASG and Line Maintenance buildings at the 700 stands, and further delay of using the capacity until the financing is clarified between Etihad Airways and ADAC



Executive Guidance

Proceed with current work stream works as planned.

CARGO TERMINAL DEVELOPMENT



Accomplishments	Planned Actions
DESIGN AND CONSTRUCTION	
<ul style="list-style-type: none"> ▶ RFP for design and build contractor is developed ▶ Validation of development phasing based on revised cargo forecast is complete; this considers 8% Compound Annual Growth Rate (CAGR) 	<ul style="list-style-type: none"> ▶ Release of RFP dependent on site approval
ORAT	
<ul style="list-style-type: none"> ▶ State Security has rejected the proposed East Midfield cargo facility location ▶ State Security advised Etihad Airways and ADAC at meeting on 28-Jun-15 to identify a new location for the cargo facility ▶ Projected development costs for enabling works on the alternate Southside plot were prepared – circa AED 1.6 b 	<ul style="list-style-type: none"> ▶ Prepare a presentation with ADAC showing similar airports, developed within last 15 years, where cargo terminals are located between two runways ▶ Following the meeting of Etihad Airways PCEO and ADAC CEO with State Security on 20-Aug-15, a comprehensive report highlighting financial and operational risks around the East Midfield and Southside plot needs to be prepared for Executive Council decision – deadline 06-Sep-15

RISKS AND ISSUES

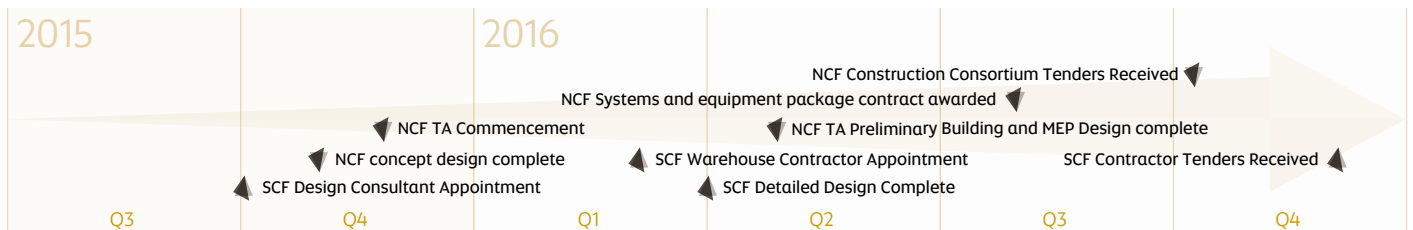
- ▶ **Approval from State Security for the new location for the cargo facility may lead to at least 9 month of redesign work and further delay in site availability for Etihad Airways**
- ▶ The award of the design and build contractor may require additional time considering the overall total investment and associated financial scrutiny
- ▶ Additional cargo capacity required by Q2-18. Current issues with plot extend the completion to Q2-20, presenting significant revenue risks



Executive Guidance

We recommend holding the release of the RFP until the plot for the New Cargo Facility is agreed with ADAC and approved by State Security. The absence of an allocated plot has created a delay in the overall project plan.

CATERING FACILITY DEVELOPMENT



Accomplishments

DESIGN AND CONSTRUCTION

- ▶ Southside Catering Facility (SCF) – Tender opening (Design Consultant) on 13-Aug-15. First deliverable of consultant is design and tender brief for Warehouse 14 extension
- ▶ SCF – Etihad Airways paid ADAC for Phase IIA works (electrical sub-station)
- ▶ New Catering Facility (NCF) – Tentative plot coordinates received from ADAC on 16-Aug-15

Planned Actions

- ▶ SCF – ADAC to confirm commencement of Phase IIA works
- ▶ NCF – Concept Design Development complete by 08-Dec-15
- ▶ NCF – Tender opening for Technical Advisor Consultant and Project Management and Cost Control Consultant on 06-Sep-15
- ▶ NCF – Issue RFP for geotechnical consultant
- ▶ NCF – Concept design ready for review by the consultant and EAS Catering on 14-Oct-15

ORAT

- ▶ Fortnightly project and steering group meetings covering NCF and SCF ongoing
- ▶ Identification of ORAT activities

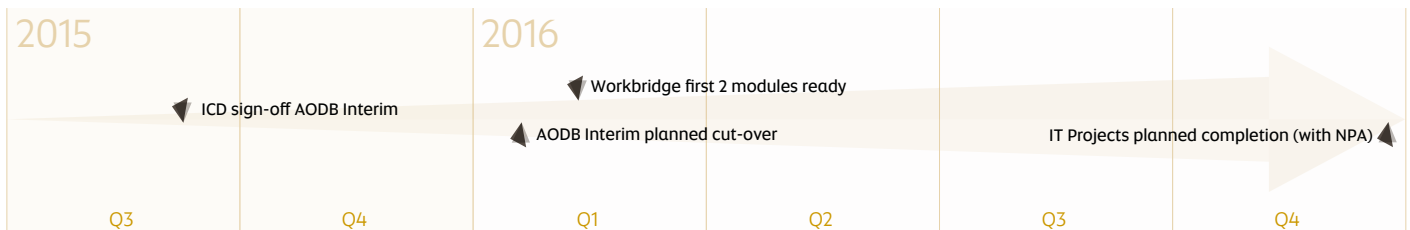
RISKS AND ISSUES

- ▶ **Size, location or coordinates of NCF plot tentatively confirmed. Any change may impact design delivery schedule and ultimately NCF's operational readiness, creating a catering capacity shortfall and potentially additional costs associated with variances to design works**
- ▶ Musataha Lease Agreements for existing and proposed SCFs to be re-negotiated and initialized. Awaiting formal lease extension (for a period of 8 years, ending in Dec-25) from ADAC



Executive Guidance

We recommend continuing with the design process for the NCF in order to avoid a delay in the program, accepting the risk that a change in plot configuration may require redesign efforts.



Action/System	Result/Process
DESIGN AND INTEGRATION IMPLEMENTATION	
<ul style="list-style-type: none"> ▶ ICD (Interface Control Document, definition document of how two systems are integrated and which data will be exchanged) sign-off for interim AODB transition. ADAC plans to change their AODB (Airport Operational Database) to another product which are interfaced to Etihad Airways systems. These interfaces have to be revisited and agreed on ▶ ADAC plans to activate the new Airport Operational Systems (interim solution) by 21-Jan-16 ▶ Current evaluation of EASG ground operations to align with world's best practice, taking into account roster/task allocation system eg Wokbridge, Sabre etc ▶ The majority of Etihad Airways planned IT projects, which are related to MTC, are scheduled to be finished by the Q4-16. These IT projects already have existing NPAs <p>(Please refer to risks below)</p>	<ul style="list-style-type: none"> ▶ First step (interim) to upgrade the Airport Operational System to support Midfield Program. ▶ Interim implementation aims to have a more stable integrated environment and increased data accuracy. ▶ Allows EASG to transform and improve the work force management to meet Etihad's operational/airline demands for current and future Midfield ground operations. ▶ According to the current schedule all IT projects (with NPA) will be ready for Midfield ORAT (Operational Readiness and Transition) trials planned for March 2017.

RISKS AND ISSUES

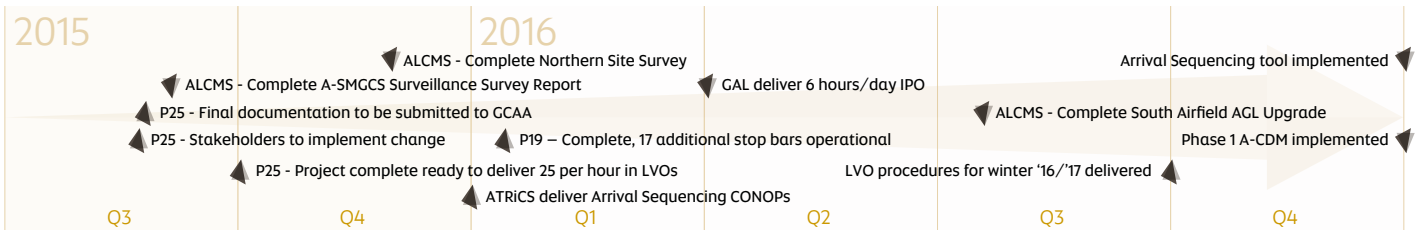
- ▶ ADAC plans to roll-out various Midfield applications in T1/T3, including AODB and FIDS. This may lead to possible disruptions and teething problems during the initial migration phase in the current operation
- ▶ Large number of Etihad Airways planned IT projects by the business units are without NPA, therefore no scope, cost estimate and schedule are available (A&NO list), and no project resources are available with IT
- ▶ The project schedule from ADAC CPC (Capital, Project and Construction) foresees completion of the final ICDs development for MTC by the end of the 2015. As Etihad Airways has not yet been engaged in the coordination of the integration, the end-year deadline may not be achievable



Executive Guidance

We recommend to continue with the AMS migration in T1&T3 as per the re-baselined schedule to de-risk the opening of the Midfield Terminal. Business units need to urgently complete NPAs in order to allow IT to plan project resources.

AIRFIELD PROJECTS



Accomplishments

- ▶ ADAC now producing 6 month look ahead airfield works schedule - a joint Etihad Airways / ADAC Works Approval Board has been established and the process continues to evolve
- ▶ ALCMS Southern Site survey complete
- ▶ Project 25 – Joint table tops conducted throughout August 2015 which included attendance from the GCAA
- ▶ Revised LVO taxi speed instruction issued
- ▶ Ongoing flight operations communications re. Project 25 have commenced

Planned Actions

- ▶ ADAC to contract ALCMS delivery including a validation platform for training and validation of operational concept, and start workshops with selected supplier
- ▶ Taxiways C and D, east of H, due to open mid September, which will alleviate taxi routes restrictions in Southern airfield during infrastructure works
- ▶ Project 19 – contingency option to Project 25, fast tracking of additional stopbar availability in the southern airfield over the next 6 months
- ▶ Project 25 – finalise infrastructure and software upgrade
- ▶ HCC and NOC teams to be briefed on Project 25 during disruption workshops
- ▶ Training and certification

DESIGN AND CONSTRUCTION

ORAT

RISKS AND ISSUES

- ▶ MART: Impact on aircraft movements (parking positions, taxiing routes and push-back limitations) during infrastructure work
- ▶ Independent Parallel Operations (IPO) Delivery: high number of changes required by the airport to deliver IPO by end of Q1-16. Required milestones have been requested from ANS
- ▶ Project 19 and 25: Impact of aircraft movements (taxiing routes and push-back limitations) during infrastructure work
- ▶ Project 25: mid-September software delivery date impacts training and certification requirements putting at risk project completion by 01-Oct-15
- ▶ Lack of SME resources/expertise in Etihad Airways to partake in this critical project



Executive Guidance

We recommend to continue with current ongoing work streams to enhance airfield infrastructure while closely monitoring the effect on the day to day operation and the alignment of all relevant stakeholders. To do so, we recommend to continue the SME provision by NATS for an additional 2 (+1) years to cover the entire development of interim changes and the Operating Concept.