UK - Ireland FAB

Europe's North Atlantic Gateway

ANSP Report 2012

FINAL 18th June 2013

IAA NATS

Chief Executive Forward

We are very pleased to report that our FAB had another very successful year in 2012 and during the first half of 2013, to reduce costs to airspace users, increase airspace efficiency, and support the implementation of SES. We have continued to progress improvements to the FAB airspace. The IAA and NATS, supported by its airline and military partners are achieving more operational, and cost efficiencies through ever closer integration.

Optimisation of FAB airspace through more direct routings has delivered over €70m of enabled savings to customers, including 232,000 tonnes of CO2 and 73,000 tonnes of fuel.

Through our collective ANSP, customer and military partnership, we have successfully implemented a number of projects which have resulted in real capacity, environmental, safety and cost-efficiency benefits to our airspace users or projects which are laying the framework for the future, such as;

- Completion of the TEN-T funded FAB High Level Sectors (HLS) feasibility study [in December 2012], which has led to a decision to implement a 12-month operational trial into dynamic sectorsation by the end of this year,
- Implementation of a single integrated FAB Network Management organisation [in March 2013] which enables us to manage demand with capacity in the most efficient manner across the whole FAB airspace,
- Implementation Point Merge at Dublin airport [in December 2012], which involved substantial support and collaboration from the UK CAA and both the Irish and UK Military,
- Agreement by the IAA to fully support the implementation of the UK Future Airspace Strategy in a FAB context,
- Agreement on a joint FAB Queue Management Strategy [February 2013], with plans for operational trials in 2014, in close cooperation with FABEC,
- Agreement between the ANSPs on the necessary FAB Safety Management Arrangements, and
- Joint customer engagement on FAB matters through the NATS OPA forum.

The information contained in this Report sets out our continued commitment to enable optimisation of our air navigation services for the benefit of our customers and to move us ever closer to the achievement of the SES goals. We are delighted to commend this Report to you.

Eamonn Brennan
Chief Executive
Irish Aviation Authority

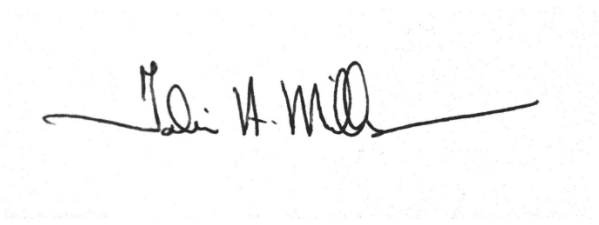
Richard Deakin
Chief Executive
NATS

Joint Customer Representative Foreword

We are pleased to be able to support the work of the UK-Ireland FAB and to ensure that the interests of NATS/IAA customers remain firmly at the heart of FAB planning through our membership of the FAB Management Board. We are confident that those airlines using the FAB airspace have noticed a number of operational improvements that have brought about efficiencies – be they in terms of cost, delay reduction or emissions.

We would ask that you read the FAB Report and take note of a number of programmes that are in place to build on the continued success of the FAB. These include the planned Dynamic Sectorisation trial, Integrated Network Management and Queue Management.

We realise that most of the 'Quick Win' projects have been achieved and as the FAB moves forward into RP2 it is going to be increasingly difficult to continue finding improvements. At the same time this can be considered advantageous in that additional effort will continue to be made within the FAB through the use of new technologies brought in as a result of SES mandates. We would also ask that our airline colleagues continue to provide suggestions for how to further progress the FAB so that these can be put forward for consideration at the most appropriate level within the FAB.



Tobin Miller
UK-Ireland FAB Long-haul Airlines Customer Representative
American Airlines

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Executive Summary

The UK-Ireland FAB is fully committed to the successful implementation of the Single European Sky regulatory requirements. The primary objectives of UK-Ireland FAB are to reduce costs to airspace users and increase the efficiency of FAB airspace and to enhance safety. Through this objective we will meet the EC performance targets regarding safety, cost efficiency, capacity/delay and the environment.

The ANSPs of the UK-Ireland FAB, the IAA and NATS, have continued to implement changes which are delivering operational efficiencies to airline customers. In 2012, it is estimated that the UK-Ireland FAB helped deliver €27m of enabled savings to airlines, including 25,000 tonnes of reduced fuel and 80,000 tonnes of reduced CO_2 emissions. This brings the estimated savings to customers since 2008, as a result of the optimisation of FAB airspace through more direct routings, to over €70m, including 232,000 tonnes of CO_2 and 73,000 tonnes of fuel.

During 2012 and early 2013, the FAB made further considerable progress in the delivering of enhanced operational efficiency. A total of 11 projects were closed (including some projects which have been transferred into the UK-Ireland FAB Opportunities Register[1] for reactivation when required in the future).

A further 13 projects remain open, which will be progressed by the ANSP FAB Management Board (FMB), supported by its various Task Forces during 2013/14 to ensure successful delivery.

Highlighted ANSP developments

At a high level, it is worth outlining the following key development areas:

- *FAB High Level Sectors (HLS):* The TEN-T funded feasibility study on the concept of high level sectors across the UK-Ireland FAB was concluded in December 2012. The HLS feasibility work confirmed that substantial savings can be made through dynamic sectorisation between the IAA and NATS. Short and medium term options are now being assessed for implementation in the years ahead, including the commencement of an operational trial to commence at the end of 2013.

- *Integrated FAB Network Management organisation:* Following the completion of the tactical management trial, single Integrated FAB Network Management is now in operation within the FAB with full NSA regulatory approval (March 2013).

- *Point Merge at Dublin airport:* Point Merge was successfully implemented in Dublin on the 13th December 2012. The FAB project involved substantial support and collaboration from the UK CAA and both the Irish and UK Military. Additionally, a new air route (Y124/UY124) for traffic departing from Dublin across the North Wales Military Training Area (NWMTA) was simultaneously introduced.

- *FAB Queue Management Strategy Plan:* In February 2013, the ANSPs agreed a joint FAB Queue Management (Q-MAN) Strategy Plan. The work is now being coordinated closely with FABEC in order harmonise implementation plans and maximise operational benefits.

[1] Project's transferred to the UK-Ireland FAB Opportunities Register can be reactivated by the FAB Management Board at any time in the future on the basis that the requirement and case for implementation is justifiable.

- *ICAO NAT 2025 Taskforce:* During 2012, the FAB engaged with ICAO North Atlantic (NAT) forums in order to secure the expansion of a previously agreed an Oceanic / Domestic Interface Concept of Operations (ODI ConOps) this concept to all Oceanic NAT service providers, resulting in the ICAO NAT 2025 Task Force.

- *Safety collaboration:* During 2012, a joint Safety Management Manual, which provides for the requirement Safety Management Arrangements was drafted and is waiting formal NSA agreement/endorsement. A "Just Culture" policy was agreed between ANSPs in Q3 2012, and Just Culture activities are planned for progression during 2013. Separately, joint Day-to-Day safety surveys were completed within the FAB (Shannon, in December 2012) and further joint Day-to-Day surveys and joint safety assessment and audit activities are planned in 2013.

- *Customer briefings:* The FAB has also improved in customer engagement processes through regularly briefings at the NATS OPA forum.

Support for SES

In terms of compliance with the SES FAB regulatory requirements, the UK-Ireland FAB submitted the required documentation to fulfil EU Regulation 176/2011 on the Establishment and Modification of FABs (Article 5, relating to FABs already established) in March 2012 and issued a detailed response in November 2012 to the Commissions "Comment Response Document". The ANSPs and NSAs have worked collaboratively to support the Member States in their formal responses. More recently, the Member States have received an "EU Pilot" letter seeking clarification on how the FAB fulfils the requirements of Article 9a of Regulation (EC) No 550/2004. As before, the ANSPs and NSAs are supporting this activity.

We are now focused on planning for RP2 of the Performance Scheme and contributing to the delivery of the targets through FAB projects. Although until the regulatory framework is fully in place, with EU targets agreed, it is difficult to commit to firm actions and targets; we do have a number of pieces of work planned for RP2 to deliver against the Key Performance Areas (KPAs), the intention would be to have these in place from the beginning of RP2 and set them out in full in our RP2 plan.

Governance and coordination within the FAB

The ANSP element of the UK-Ireland FAB governance structure (FAB Management Board and sub groups) has been amended in order to adapt to changing needs, in particular;

- The FAB needs to focus on cost efficiency as well as operational integration. Therefore, the FMB needs to monitor RP2 FAB Performance Plan (development and implementation).
- The FAB needs enhanced oversight and a more flexible 'task' orientated sub-structure.
- The FAB needs to ensure the necessary alignment with other national and EU developments, e.g. UK FAS and SESAR Deployment.

The ANSPs and NSAs have a close working relationship centred on regular engagement through the ANSP/NSA Coordination Group, which supports both the ANSP FAB Management Board (FMB) and the NSA FAB Supervisory Committee (FSC). Other formal engagement takes place through the joint ANSP/NSA Performance Advisory Group. The work of all joint groups, and regular direct engagement between the FMB and FSC will continue along the same lines for the foreseeable future.

In December 2012, the UK successful launched the Deployment Plan for the Future Airspace Strategy (FAS). In the context of the UK-Ireland FAB, the IAA actively supports the deployment of the UK FAS, primarily in relation to en route airspace initiatives, in order to support the modernisation of UK airspace.

Inter-FAB collaboration

The UK-Ireland FAB is continuing to pursue inter-FAB collaboration opportunities, including;

- *FAB-4:* Since March 2011, the ANSPs of the UK-Ireland FAB and of the Danish-Swedish FAB (Naviair and LFV) have been working together to assess possible collaborative opportunities, including the feasibility of a possible FAB-4 integration. A significant amount of engagement has occurred between the ANSPs to consider the potential options.

- *UK-Ireland FAB / FABEC relationship:* At an ANSP operational level, the FABs are currently assessing collaborative opportunities for certain operational areas of common interest, such as the implementation of Free Route Airspace and Arrivals Management. Plans are already in place regarding inter-FAB Queue Management trials to take place during 2014.

Concluding remarks

In previous years, the UK-Ireland FAB has published a rolling annual "FAB Plan", which contains an overview of the planned activities to be implemented by the ANSPs in the years ahead. The ANSPs, in agreement with the NSAs of the FAB, have elected not to produce an updated version of the FAB Plan in 2013 on the basis that work is now focused on preparing for RP2 of the EU Performance Scheme. The FAB Report therefore contains a "forward looking" ethos.

As illustrated in this Executive Summary, the FAB had a very successful year in 2012 and early 2013, and is continuing to fully support the implementation of SES. The IAA and NATS, supported by its airline and military partners will continue on this path to achieve more operational and cost efficiencies through ever closer integration.

1. Introduction

The UK-Ireland FAB was established in July 2008 and it has completed over four years of continuous operations. During 2012, the FAB partners (the ANSPs, the airlines and military) continued to implement the operational efficiency changes to the FAB airspace, thereby delivering measurable, sustainable benefits. Considerable engagement between the Irish and UK Governments and respective National Supervisory Authorities (NSAs) continued throughout 2012.

As a result of the on-going work to create seamless airspace between Ireland and the UK, the FAB delivered significant added value to its airline customers. In 2012, it is estimated that the UK-Ireland FAB helped deliver €27m of enabled savings to airlines, including 25,000 tonnes of reduced fuel and 80,000 tonnes of reduced CO_2 emissions. This brings the estimated savings to customers since 2008, as a result of the optimisation of FAB airspace through more direct routings, to over €70m, including 232,000 tonnes of CO_2 and 73,000 tonnes of fuel.

1.1. Purpose of this document

As part of the UK-Ireland FAB responsibilities, the ANSPs are required to provide the NSAs and Governments of Ireland and the UK with an annual report on an on-going basis. The Irish Aviation Authority and NATS are therefore pleased to deliver this UK-Ireland FAB Annual Report for 2012.

As well as this brief introductory material, this document is presented with two main sections, supported by one Annex, as follows:

- Section Two: Key developments of the UK-Ireland FAB during 2012.
- Section Three: Next steps for the UK-Ireland FAB.
- Annex: Detailed progress of the FAB against the delivery of the UK-Ireland FAB Plan 2012-15.

1.2. Forward looking document

In previous years, the UK-Ireland FAB has published a rolling annual “FAB Plan”, which contains an overview of the planned activities to be implemented by the ANSPs in the years ahead. The last FAB Plan was published in May 2012, covering the period 2012-15.

The ANSPs, in agreement with the NSAs of the FAB, have elected not to produce an updated version of the FAB Plan in 2013 for the following reasons:

- The FAB is currently focusing on preparatory work for the second reference of the European Performance Scheme (RP2), which involves the development and implementation of a FAB Performance Plan,
- A number of projects contained in the current FAB Plan 2012-15 remain valid and will be continued in the short-term, i.e. during 2013-15,
- This a more practical way ahead as we transition the FAB into RP2 from 2015 onwards.

Therefore this Report for 2012 also outlines the expected focus of the FAB in relation to a variety of activities for this transitional period up to RP2 commencement *(as per Section three and details contained in the Annex).*

[Please note: This document does not attempt to directly overlay the current work programme with the National targets of the reference of the European Performance Scheme.]

1.3. Key features of the UK-Ireland FAB

It is useful to highlight the key features of the UK-Ireland FAB:

1. Primary objective of UK-Ireland FAB is to reduce costs to airspace users and increase the efficiency of FAB airspace.
2. The highest safety standards and the maintenance and improvement of safety levels are at the heart of everything we do.
3. FAB is designed to contribute to the delivery of EC performance targets.
4. The UK-Ireland FAB is Europe's North Atlantic gateway and is strategically important to integrating airspace across Europe (90% of North Atlantic traffic passes through Irish or UK airspace). No other FAB or European ANSP has a similar role on this scale.
5. From 2008-12, we have delivered over €70m of enabled savings to customers, including 232,000 tonnes of CO2 and 73,000 tonnes of fuel.
6. The FAB is achieving SESAR deployment through technical interoperability and identifying areas for common procurement.
7. The FAB is a genuine partnership between ANSPs, NSAs, civil & military airspace users, and trade unions.
8. The FAB is achieving SESAR deployment through technical interoperability and identifying areas for common procurement.
9. UK-Ireland FAB is working with other FABs to ensure a harmonised implementation of the SES initiative at a European level (for example, Danish-Swedish FAB and FABEC).

2. Key developments of the UK-Ireland FAB in 2012

2.1. Summary of deliverables of the FAB during 2012/13

During 2012 and early 2013, the FAB made further considerable progress in the delivering of enhanced operational efficiency. A total of 11 projects were closed (including some projects which have been transferred into the UK-Ireland FAB Opportunities Register for reactivation when required in the future).

The Annex to this Report provides details on the progress of each project. At a high level, it is worth outlining the following key development areas:

1. FAB High Level Sectors (HLS): The TEN-T funded feasibility study on the concept of high level sectors across the UK-Ireland FAB was concluded in December 2012. The aim of HLS is to introduce airspace which provides aircraft with more optimum routings and allows them to remain at cruising levels for longer periods than is currently the case. This project is a step towards enabling the establishment of free route airspace in the upper sectors of UK airspace (established in Shannon FIR in 2009 above FL245), a concept at the core of SESAR work and a priority area for airlines and an objective of the SES initiative. The HLS feasibility work confirmed that substantial savings can be made through dynamic sectorisation between the IAA and NATS, including;
    - Capacity: +5% capacity increase [Note: used 2009 traffic plus 15%]
    - Distance: 7,124NM reduction in track mileage for aircraft per week
    - Fuel: 58,920kg saving per week
    - CO2: 178,365kg saving per week
    - Safety: Airspace deemed to be at least as safe as today

However, there will be a period (up to at least 2018) when the required interoperability between the UK and IAA systems to allow dynamic sectorisation will not be possible. The full achievement of the concept requires NATS to deploy its next generation Flight Data Processing (FDP) technology, ITEC, which is planned from 2016.

Notwithstanding the above, both ANSPs wish to ensure that we can fulfil the SES requirement to fully optimise the airspace within the FAB (including the introduction of Free Route Airspace in UK sectors in the near-term); as well as provide a direct cost-efficiency saving to users through this project in line with RP2 requirements.

Therefore, the ANSPs are currently assessing short to medium terms options prior to full interoperability allowing dynamic airspace sharing and sector configuration, as follows;

- Short term options are focussed on amendments to operating procedures around the FIR boundary areas and the route structure - taking significant steps towards extending Free Route airspace further into UK airspace. The High Level Sectors project team are in the process of implementing these quick wins on a priority basis. The expectation is that these changes will be ready from September 2013 AIRAC Build.

- The IAA and NATS have recently agreed to commence work on a 12-month operational trial, with an intention to implement by the end of this year, subject to regulatory approval. The trial will harness the good work of the HLS project to-date and will largely be based on sectors investigated within the HLS feasibility study, and will provide Free Route Airspace within the trialled UK sectors. The Regulators will play an integral part in the development of the trial from the beginning and conduct joint regulation of the trial, i.e. one single regulatory assurance model run by a single regulatory team drawn from both NSAs. It is anticipated that an output from the trial will include the regulatory model to be used by the FAB for similar changes and dynamic sectorisation in the future.

2. Integrated FAB Network Management organisation*:* Following the completion of the tactical management trial, single Integrated FAB Network Management is now in operation within the FAB with full NSA regulatory approval (since March 2013). This demonstrates enhanced capacity management capability in interface sectors and ensures we are interfacing with the European Network Manager at a FAB level. The UK-Ireland FAB is amongst the first FABs to have signed revised Letters of Agreement with the European Network Manager. There are significant benefits to airspace users, e.g. its introduction eliminated ATFM regulations in the Isle of Man sector during 2012 (compared to 60 in 2011).

3. Point Merge at Dublin airport: Point Merge was successfully implemented in Dublin on the 13th December 2012. The FAB project involved substantial support and collaboration from the UK CAA and both the Irish and UK Military. The new air traffic management techniques increases capacity through maximising arrival rates and assists airlines in flying more environmentally friendly Continuous Descent Approaches (CDAs) to Dublin airport. It almost eradicates the need to put aircraft into traditional circular holding patterns, thereby providing environmental benefits by cutting fuel burn and CO2 emissions, as well as reducing delays to passengers. Additionally, a new air route (Y124/UY124) for traffic departing from Dublin across the North Wales Military Training Area (NWMTA) was also introduced on the 13th December 2012, which is helping to reduce air traffic congestion, particularly during the busy morning period. There was significant cross-border co-operation required to achieve these changes.

4. FAB Queue Management Strategy Plan: Queue Management (Q-MAN) is a crucial area to deliver optimisation of the FAB airspace. London TMA arrivals and wider FABEC airport TMA arrivals require an efficient deployment of Q-MAN techniques. Therefore, on the 21st February 2013 the ANSPs agreed a joint FAB Q-MAN Strategy Plan which exceeded the original objective of this work package. The work is now being coordinated closely with FABEC in order harmonise implementation plans and maximise operational benefits. Q-MAN trials are scheduled to commence within the UK-Ireland FAB and between the UK-Ireland FAB and FABEC during 2014.

5. ICAO NAT 2025 Taskforce: The UK-Ireland had previously agreed an Oceanic / Domestic Interface Concept of Operations (ODI ConOps). During 2012, the FAB engaged with ICAO North Atlantic (NAT) forums in order to secure the expansion of this concept to all Oceanic NAT service providers. As a result, the ICAO NAT 2025 Task Force was established, which has met on a number of occasions during late 2012 and early 2013, and a working paper was developed, with a final report to be reviewed at the ICAO IMG meeting (number 42) in May 2013.

6. Safety collaboration: During 2012, a joint Safety Management Manual was drafted and is waiting formal NSA agreement/endorsement. A “Just Culture” policy was agreed between ANSPs in Q3 2012, and Just Culture activities are planned for progression during 2013. Separately, joint Day-to-Day safety surveys were completed within the FAB (Shannon, in December 2012) and further joint Day-to-Day surveys and joint safety assessment and audit activities planned in 2013.

2.2. FAB establishment under the FAB Implementing Rule

The UK-Ireland FAB submitted the required documentation to fulfil EU Regulation 176/2011 on the Establishment and Modification of FABs (Article 5, relating to FABs already established) on the 21st March 2012. Representatives from the Member States, the NSAs and the ANSPs participated in a follow-up consultation meeting in May 2012.

Subsequently to this, the ANSPs and NSAs worked collaboratively to develop material to respond to the Commissions "Comment Response Document", which was issued by the Member States on the 28th November 2012.

More recently, the Member States have received an "EU Pilot" letter seeking clarification on how the FAB fulfils the requirements of Article 9a of Regulation (EC) No 550/2004. As before, the ANSPs and NSAs are working collaboratively to support the Member States in their response.

2.3. Customer relations

Airspace users play a key role in the UK-Ireland FAB, with airline representatives having membership on the ANSP FAB Management. In 2012, the UK-Ireland FAB enhanced its engagement process with the wider airline community through participation at the regular NATS OPA meetings; progress of the UK-Ireland FAB is now reviewed at each meeting. On this basis, the FAB is satisfied that customer engagement is sufficient and will be continuously enhanced as an on-going improvement activity for the FAB.

2.4. Inter-FAB relationship developments

1. Update on FAB-4 relationship

Since March 2011, the ANSPs of the UK-Ireland FAB and of the Danish-Swedish FAB (Naviair and LFV) have been working together to assess possible collaborative opportunities, including the feasibility of a possible FAB-4 integration.

Since then, a significant amount of engagement has occurred between the ANSPs to consider the potential options. This work remains on-going. IAA, NATS, LFV and Naviair are committed to FAB-4 work as a continuation of the commitment to deliver the benefits of the already established FABs (UK/IRE and DK/SE). The focus is on the possibilities for integration of the existing FABs based on a closer ANSP cooperation for the further benefit of customers.

2. Update on UK-Ireland FAB / FABEC relationship

At an ANSP operational level, the FABs are currently assessing collaborative opportunities for certain operational areas of common interest, such as the implementation of Free Route Airspace and Arrivals Management. As mentioned previously, plans are already in place regarding inter-FAB Queue Management trials to take place during 2014.

2.5. Governance structure changes

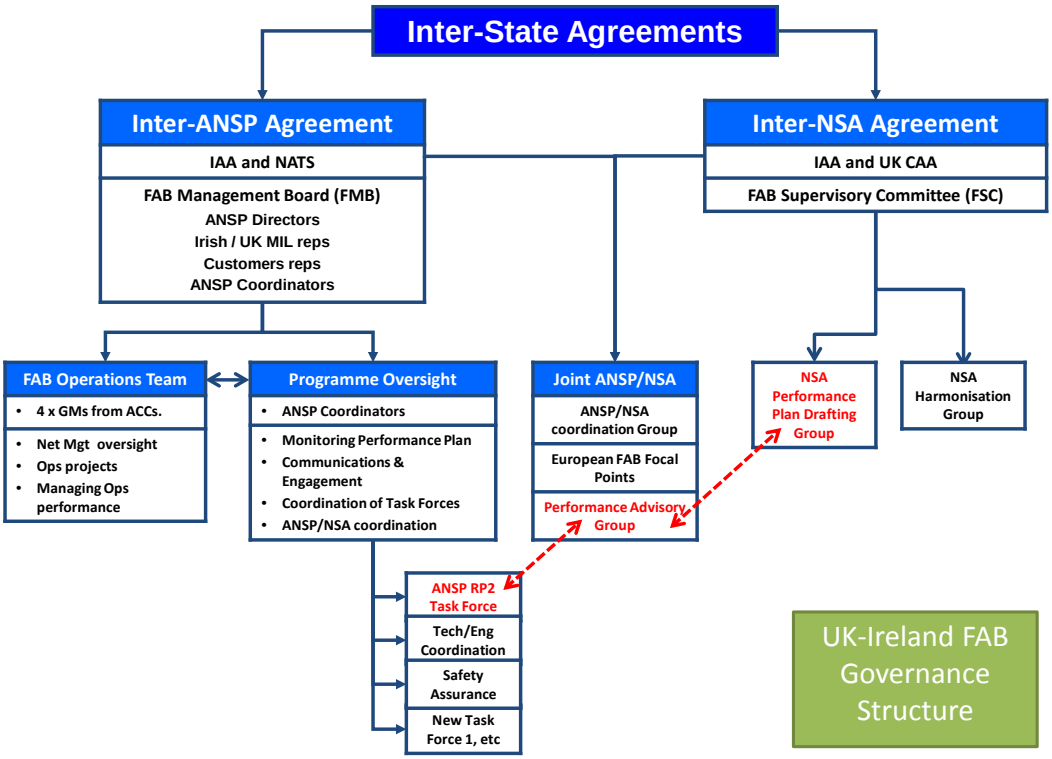
The ANSP element of the UK-Ireland FAB governance structure (FAB Management Board and sub groups) has evolved since the FAB was established in 2008. During 2012, the ANSPs concluded that the FMB and its sub-structure needed to adapt to meet changing needs, in particular;

- The FAB needs to focus on cost efficiency as well as operational integration. Therefore, the FMB needs to monitor RP2 FAB Performance Plan (development and implementation).

- The FAB needs enhanced oversight and a more flexible 'task' orientated sub-structure.
- The FAB needs to ensure the necessary alignment with other national and EU developments, e.g. UK FAS and SESAR Deployment.

The new governance structure presented below has been implemented to facilitate these needs. The existing three-way partnership arrangement between the ANSPs, the customers and the respective Militaries has been maintained, with representatives from all three stakeholders will continue to hold membership on the FMB. This is to ensure the most optimal FAB developments are considered, assessed and subsequently implemented across the FAB airspace.

The Airspace Design Working Group (ADWG) and Service Provision Working Group (SPWG) have been replaced by a FAB Operations Team (comprising of senior management from the four ACC's; Dublin, Shannon, Prestwick and Swanwick AC), which jointly oversees the current FAB activities such as Network Management. This team will initiate an operational improvement programme to cover safety and customer service. Another principle change is the move from a working group structure, to that of a task oriented structure. This allows more agile creation and oversight of projects.



2.6. UK-Ireland FAB engagement with the UK FAS

In December 2012, the UK successful launched the Deployment Plan for the Future Airspace Strategy (FAS). The FAS aims to enable a modernised air traffic management system that provides safe, efficient airspace, that has the capacity to meet reasonable demand, balances the needs of all users and mitigates the impact of aviation on the environment.

The IAA actively supports the deployment of the UK FAS in order to support the modernisation of UK airspace, in the context of the UK-Ireland FAB. The en-route airspace managed collectively by the UK and Ireland as a FAB

is within the scope of FAS and therefore, the activities of the UK-Ireland FAB make an important contribution to FAS Deployment in shared En-route (FAB) airspace.

In particular, the two key areas in which the IAA plays a crucial role are the Super High Level Sectors and Arrival Management, as follows;

- The High Level Sector (HLS) project is examining the prospect of flexible and cross border provision of Air Traffic Management between the UK and Ireland. This will allow a more flexible and cost efficient service to our airline partners.

- An arrival management system reduces the holding times for aircraft at Airports by optimising the flight profile to have the aircraft at its allocated time. This will reduce the amount of fuel used and therefore the emissions for each flight. The key benefit will be for North Atlantic traffic transiting Irish Airspace to European airports.

These areas are essential for the continued development and success of the FAB and the IAA is working closely with NATS to support the above.

3. Next steps for the UK-Ireland FAB

3.1 Work areas to be progressed from the 2012-15 FAB Plan

Aside from the 11 projects which were closed by the UK-Ireland FAB during 2012 / early 2013, a further 13 projects remain open. The FMB, supported by its various Task Forces will progress these projects during 2013/14 and ensure successful delivery of the necessary changes.

The Annex to this Report provides details on the progress of each project so far. The following table provides a brief snapshot of the next steps envisaged for each project:

FAB Project	Planned Progress During 2013/14
C3-1: Strategic Operations Plan	Work to progress during 2013 to agree a long-term FAB Strategic Operations Plan.
C3-2: Network Management Evolution Plan	Work to progress during 2013 to agree a long-term FAB Strategic Operations Plan.
C3-3: Technical Convergence Plan	The Technology Convergence Plan will be completed in 2013 and will be aligned with the development of the Strategic Operations.
SPWG-22: Queue Management for the FAB	Q-MAN trials are scheduled to schedule to commence within the UK-Ireland FAB and between the UK-Ireland FAB and FABEC in 2014
SPWG-23: H24 Operations Vs Quiet Hours	Swanwick assessment to be completed before a final decision is made
ADWG-9: Oceanic / Domestic Concept of Operations	Final Report from ICAO Task Force 2025 to be discussed at IMG 42 (May 2013)
ADWG-15: Deliver Plans for Long Term Operations at TMAs within the FAB maximising of efficiency of design	Prior to making any final decisions on the CTA, the UK-Ireland FAB is engaging other European ANSPs / Regulators. With regard to PBN, the progression of PBN will be aligned with the implementation of UK Future Airspace Strategy (FAS) Deployment plans.
ADWG-21: Feasibility study for High Level Sectors within FAB	Short term options are focussed on amendments to operating procedures around the FIR boundary areas and the route structure. The expectation is that these changes will be ready from September 2013 AIRAC Build. The medium term options are focussed on steps towards the High Level Sectors operational concept and include the possibility of transferring the provision of ATS for parts of the airspace around the UIR boundary from one ANSP to the others. These options will be fully evaluated for technical and operational feasibility.
ADWG-19 : Optimised cross-FIR FUA	Pending review at State level.
ADWG-25: FAB Free Route Airspace	A draft Concept of Operation, that seeks to extend the free route airspace volume over the less complex parts of the UK FIR, has been

FAB Project	Planned Progress During 2013/14
	produced
SWG-5: SMS Harmonisation	Discussions are being finalised between the ANSPs and NSAs regarding the approach to safety accountabilities, i.e. a statement that assurance by the Irish/UK NSAs will be mutually recognised; this will then be referenced or included in the FAB SMM (Arrangements).
SWG-7: Safety Culture Improvement	Just Culture activities to be progressed during 2013, as well as performance measurement work, i.e. review "Effectiveness of Safety Management Framework Survey" (EoSM) for a joint FAB activity.
SWG-8: Action Plan for Operational Safety Surveys Across FAB Interfaces	Joint Day-to-Day survey planned in Qtr 2 for Dublin and Prestwick, and joint Safety assessment / audit activities planned in 2013.

3.2 Support to States regarding full SES FAB implementation

The ANSPs of the FAB continue to work closely with the NSAs of the FAB to support the Member States in the full implementation of SES requirements. At all levels, the UK-Ireland is committed to the SES. All parties will continue to work collaboratively to meet the European Commission's regulatory requirements as well as to achieve the highest level of safety, the greatest customer value in terms of quality of service and cost-efficiency, and the least environmental impact that we are able to achieve through the FAB.

As previously mentioned in section 2.2., in February 2012, the Member States have received a "EU Pilot" letter seeking clarification on how the FAB fulfils the requirements of Article 9a of Regulation (EC) No 550/2004. As before, the ANSPs and NSAs are working collaboratively to support the Member States in their response.

3.3 Preparation work for RP2

We are now focused on planning for RP2 of the Performance Scheme and contributing to the delivery of the targets through FAB projects. Although until the regulatory framework is fully in place, with EU targets agreed, it is difficult to commit to firm actions and targets; we do have a number of pieces of work planned for RP2 to deliver against the Key Performance Areas (KPAs), the intention would be to have these in place from the beginning of RP2 and set them out in full in our RP2 plan.

In terms of possible areas which deliver direct cost savings to the FAB, work is at an early stage between the ANSPs, but areas under investigation which may yield benefits include;

- Airspace / Service delivery Optimisation (e.g. planned dynamic sectorisation operational trial harnessing the work of the High Level Sectors trial)
- Optimisation of engineering infrastructure Optimisations (a step towards CNS unbundling), and
- Joint procurement of utilities.

The Performance Advisory Group (PAG) is a joint ANSP/NSA of the UK-Ireland FAB entity, which is Co-Chaired by ANSP and NSAs representatives. Responsibility for the development of the FAB Performance Plan resides

with the NSAs. However, the PAG is being used as the primary entity for coordination, cooperation and consultation regarding the development of the FAB Performance Plan.

3.4 ANSP / NSA engagement

The ANSPs and NSAs have a close working relationship centred on regular engagement through the ANSP/NSA Coordination Group, which supports both the ANSP FAB Management Board (FMB) and the NSA FAB Supervisory Committee (FSC). Other formal engagement takes place through the joint ANSP/NSA Performance Advisory Group.

The work of all joint groups, and regular direct engagement between the FMB and FSC will continue along the same lines for the foreseeable future.

Further to the above, there are numerous examples of cooperation and coordination between the ANSPs and NSAs within the FAB. The two NSAs have also collaborated closely with the IAA and NATS in developing an agreed position with regard to the implementation of a common and raised Transition Altitude. Flexibility within the IAA means that this can be implemented in due course at a commonly agreed timescale that will have regard for emerging European legislation and major airspace changes in the UK.

Annex: Detailed progress of the UK-Ireland FAB

The table below outlines the progress made against each specified project in the UK-Ireland FAB Plan 2012-15.

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
C3-1: Strategic Operations Plan	This is a 5-year time horizon which outlines the operational evolution of the FAB up until 2017 and which commences the transition of the FAB operations towards the delivery of the SESAR concept of operations.	Various factors required a slow-down in the progression of this work during 2012. The document is now at the initial drafting stage and will bring together plans and concepts stemming from: • SESAR expectations (particularly relating to the pending Pilot Common Project), • Network Management developments and methodologies, • Airspace optimisation developments and methodologies (e.g. Free Route Airspace for the FAB, Cross-border High Level Sectors including dynamic sectorisation, Queue Management, FAB Common Transition Altitude, and Performance Based Navigation, and TMA initiatives), • FAB related aspects of the UK Future Airspace Strategy (FAS) • ICAO North Atlantic developments (e.g. ICAO NAT 2025 task force). <u>Project open:</u> Work to progress during 2013 to agree a long-term FAB Strategic Operations Plan.
C3-2: Network Management Evolution Plan	This is a plan which illustrates how the UK-Ireland FAB network management will continue to evolve over the next 5 years to support the FAB.	Various factors required a slow-down in the progression of this work during 2012. The document is now at the initial drafting stage and focusing on capacity management in the context of RP2 performance requirements. <u>Project open:</u> Work to progress during 2013 to agree a long-term FAB Network Management Evolution Plan.

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
C3-3: Technical Convergence Plan	This is a technical evolution roadmap for the FAB based on known operational functional requirements. The first stage will be a comparison of existing roadmaps and an assessment of planned deployments arising from SESAR work. Future activities will be planned on the basis of those assessments.	The first draft Technical Convergence Plan has been completed, which provides short, medium and long-terms options: 1. *Short-term initiatives (2013-16),* which will allow for the implementation of common functionality across systems in support of operational services, and harmonisation / streamlining of interfaces, etc (e.g. migration to PENS, CPDLC Alignment, Site Sharing/Site Access, and rationalisation of navigation facilities DVOR/DME) 2. *Medium-term options 2016-2018*, which take a common approach to ATM Master Plan requirements, joint work on SESAR Pilot Common Projects (PCP) and continue the integration of systems across the FAB. 3. *Long-terms possibilities (2018+),* which focuses on SESAR Deployment to that all technology developments and deployments are in line with the ATM Master Plan. <u>Project open:</u> The Technology Convergence Plan will be completed in 2013 and will be aligned with the development of the Strategic Operations.
SPWG-13: Reduced Longitudinal Separation on the NAT	Reduces the Longitudinal Separation on the North Atlantic Track structure for traffic exiting the NAT from 10 to 5 minutes. [Trial in place until March 2014]	In 2012, the completion of this trial was extended to March 2014 in order to assess this on a global ICAO basis (not just North Atlantic). On this basis, the activity has been closed by the FAB Management Board for formal tracking but continues to receive a regular update on the volume of aircraft using the procedure and resulting benefits. <u>Project Closed</u>
SPWG-14: UK-Ireland FAB Network Management Organisation	Continued development of an integrated Network Management function across the UK-Ireland FAB Airspace, managing both tactical and planning activities. This is articulated in the Network Management Plan.	During 2012 and Q1 2013, significant progress was made on the integrated of Network Management function across the UK-Ireland FAB Airspace. Having commenced at a trial in March 2012, necessary approvals were secured by the respective Regulators, enabling formal introduction on the 1st March 2013. Oversight of UK-Ireland FAB Network Management is now being provided on an on-going basis by the FAB operations Team. Customers are benefiting through a more optimised use of the FAB airspace network. For example, the introduction of Network Management led to the successful elimination of ATFM Regulation in the

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
		Isle of Man sector during 2012. A weekly report is shared between ANSPs to review Regulations (STAMs), including the location, rationale of the decision and number of aircraft involved. The UK-Ireland FAB has agreed a FAB level MOU with the Eurocontrol, which was signed-off during Q1 2013.
		Project closed.
SPWG-19: CPDLC ConOps alignment	Alignment of CPDLC implementation to meet the regulatory requirement by March 2013 is underway and ensure it is applied consistently from Feb 2013 onwards.	IAA and NATS have elected to implement CPDLC (FANS-1/A and ATN) at different stages during 2013 and 2014. Although the implementation process has not been aligned, there will be opportunities in the future to secure the usage of CPDLC is maximised across the FAB. Therefore, the FAB has moved this activity to the UK-Ireland FAB Opportunities Register for possible re-activation at a more opportune time in the future.
		Project closed.
SPWG-20: Enhanced Customer Communications	Continued improvements to customer engagement and consultation relating to the FAB.	Airspace users play a key role in the UK-Ireland FAB, with airline representatives having membership on the ANSP FAB Management. In 2012, the UK-Ireland FAB enhanced its engagement process with the wider airline community through participation at the regular NATS OPA meetings; progress of the UK-Ireland FAB is now reviewed at each meeting. On this basis, the FAB is satisfied that customer engagement is sufficient and will be continuously enhanced as an on-going improvement activity for the FAB.
		Project closed.
SPWG-21: Service Resilience and Contingency	A scoping exercise will be completed to determine if improvements can be made to service resilience at the FAB ACCs during normal operations and degraded modes such	The feasibility work was completed during 2012. Contingency is already available within IAA and within NATS. Therefore, there appears to be limited potential FAB-wide contingency opportunities at this time. It was agreed to move this work to the UK-Ireland FAB Opportunities Register for possible re-activation at a more opportune time in the future.

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
	as equipment failure.	Project closed.
SPWG-22: Queue Management for the FAB	Conduct a scoping project for Queue Management for the FAB.	Q-MAN is a crucial area to deliver optimisation of the FAB airspace. LTMA arrivals and wider FABEC airport TMA arrivals require an efficient deployment of Q-MAN techniques. IAA and NATS successful developed a joint FAB Q-MAN Strategy Plan for the FAB during 2012, which was endorsed by the FMB in Qtr 1 2013. This has exceeded the original objective of this work package. The work is now being coordinated closely with adjacent FABEC ANSPs in order harmonise implementation plans and maximise operational benefits.
		Project Open: Q-MAN trials are scheduled to schedule to commence within the UK-Ireland FAB and between the UK-Ireland FAB and FABEC in 2014
SPWG-23: H24 Operations Vs Quiet Hours	Conduct a review of operations during quiet hours to determine if some H24 network restrictions such as RAD restrictions and/or published descent standing agreements can be altered and updated to reflect the reduced dependency on these restrictions during quiet hours.	The feasibility work has commenced; Prestwick and Shannon ACC options have been investigated to date, with Swanwick ACC to be assessed in due course. To date, there appears to be limited potential opportunities, which would justify further work in this area at this time.
		Project Open: Swanwick assessment to be completed before a final decision is made.
SPWG-24: Enhanced OLDI	Assess the potential feasibility of increased 'forward coordination of messages beyond the OLDI boundary', e.g. from iFACTS (NATS system) on COOPANS (IAA system) and from COOPANS on EFD (NATS system).	The feasibility work was completed during 2012. The FAB identified only limited potential opportunities, which would justify further work in this area at this time. It was agreed to move this work to the UK-Ireland FAB Opportunities Register for possible re-activation at a more opportune time in the future.
		Project Closed.
SPWG-25:	Scoping exercise to determine if joint	The feasibility work was completed during 2012 and only limited potential opportunities, which would

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
Potential for collaboration on Air Traffic Control Training.	cooperation or collaboration on the provision of ATC training can provide a more efficient service with better use of resources.	justify further work in this area, were identified at this time. However, the utilisation of training resources across the FAB remains of interest. Therefore, it was agreed to move this work to the UK-Ireland FAB Opportunities Register for possible re-activation at a more opportune time in the future. <u>Project Closed.</u>
ADWG-9: Oceanic / Domestic Concept of Operations	Expansion of the UK-Ireland FAB Oceanic / Domestic Interface Concept of Operations (ODI ConOps) to ensure interoperability for the Oceanic airspace with SESAR and Nextgen Concepts through to 2020.	The UK-Ireland had previously agreed an Oceanic / Domestic Interface Concept of Operations (ODI ConOps). During 2012, the FAB engaged with ICAO NAT forums in order to secure the expansion of this concept to all Oceanic NAT service providers. As a result ICAO NAT 2025 Task Force was established, which has met on a number of occasions during late 2012 and early 2013, and a working paper was developed. <u>Project Open:</u> Final Report to be discussed at IMG 42 (May 2013)
ADWG-15: Deliver Plans for Long Term Operations at TMAs within the FAB maximising of efficiency of design	Focus upon how all TMAs can be developed consistently to take account for future needs, including MTMA, ScTMA, LAMP and Dublin for example. Sub-projects include Common Transition Altitude and Performance Based Navigation (PBN).	During 2012 and early 2013, this area focused primarily on the options relating to Common Transition Altitude (CTA). The original CTA proposal (by the UK CAA) of 18,000 feet was reviewed and other options investigated. Work on Performance Based Navigation (PBN) at a FAB level also progressed during the year. <u>Project Open:</u> Prior to making any final decisions on the CTA, the UK-Ireland FAB is engaging other European ANSPs / Regulators. With regard to PBN, the progression of PBN will be aligned with the implementation of UK Future Airspace Strategy (FAS) Deployment plans.
ADWG-16: Dublin TMA Development	This project covers the major enablers for the introduction of Point Merge approach system at Dublin Airport (December 2012) and the introduction of enabling routes in the UK.	Point Merge was successfully implemented in Dublin on the 13th December 2012. The new air traffic management techniques assist airlines in flying more environmentally friendly Continuous Descent Approaches (CDAs) to Dublin airport and almost eradicate the need to put aircraft into traditional circular holding patterns, thereby providing environmental benefits by cutting fuel burn and CO2 emissions, as well as reducing delays to passengers. Benefits data for Point Merge will be collated during 2013.

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
		Additionally, a new air route (Y124/UY124) for traffic departing from Dublin was also introduced on the 13th December 2012, which is helping to reduce air traffic congestion, particularly during the busy morning period. Project Closed.
ADWG-19 : Optimised cross-FIR FUA	Provide for the introduction of cross-FIR FUA.	Proposals have been shared to re-orientate and extend Danger Area EGD201 to traverse the FIR boundary. Project Open: Pending review at State level.
ADWG-21: Feasibility study for High Level Sectors within FAB	TEN-T funded feasibility study is to investigate the concepts supporting a High Level Sectorisation within the FAB, to allow optimal routeings, both laterally and vertically for aircraft which transit FAB airspace and which optimises service delivery.	This TEN-T funded study to investigate the feasibility of introducing cross-border high level sectors (HLS) within the FAB airspace was successfully completed in December 2012, with the delivery of an Airspace Concept Proposal (ACP). The general aim of HLS is to introduce airspace which provides aircraft with more optimum routings and remain at cruising levels for longer periods than is necessary. This project is a step towards enabling the establishment of free route airspace in the upper sectors of the UK-Ireland FAB, a concept at the core of SESAR work and a priority area for airlines. The work focused on the assessment of a future concept whereby technical innovation would enable dynamic sectorisation between the COOPANS and iTEC based systems, i.e. instantaneous sector swapping. A Dynamic Flight Level of FL335 was assessed [Note: Shannon already has free routes available above FL245]. The concepts that were simulated were proven to be feasible during the simulations, exceeded targets and indicated the following: • Capacity: +5% capacity increase [Note: used 2009 traffic plus 15%] • Distance: 7,124NM reduction in track mileage for aircraft per week • Fuel: 58,920kg saving per week • CO2: 58,920kg saving per week • Safety: Airspace deemed to be at least as safe as today However, there will be a period (up to at least 2018) when the required interoperability between the

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
		UK and IAA systems, i.e. dynamic sectorisation, will not be possible. The full achievement of the concept requires NATS to deploy its next generation Flight Data Processing (FDP) technology, i.e. iTEC, which is planed from 2016. Therefore, the ANSPs are currently assessing short to medium terms options prior to full interoperability allowing dynamic airspace sharing and sector configuration.
		<u>Project Open:</u> Short term options are focussed on amendments to operating procedures around the FIR boundary areas and the route structure. The expectation is that these changes will be ready from September 2013 AIRAC Build. The medium term options are focussed on steps towards the High Level Sectors operational concept and include the possibility of transferring the provision of ATS for parts of the airspace around the UIR boundary from one ANSP to the other, though not on a dynamic basis which is restricted by the interoperability levels of the technical systems. These options will be fully evaluated for technical and operational feasibility as well as customer operational and cost efficiency benefits by the end of 2013 with any trials or permanent changes to be implemented as soon as possible thereafter within normal project deployment timescales.
ADWG-24: Integration of AIS/AIM	Integration of Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM), focusing on Flight plans, NOTAM Contingency and Charting during the initial 2012/13 period.	Various factors required a slow-down in the progression of this work during 2012 directly by the UK-Ireland FAB. Furthermore, collaborative opportunities for AIS/AIM cost-efficiencies are also be investigated by the ANSPs with Borealis partners.
		Project open: Work to progress during 2013 to roll-out the integration of AIS/AIM across the FAB
ADWG-25: FAB Free Route Airspace	Investigate the extension of Free Route Airspace (FRA) as a progression from High Level Sectors and consider its extension to complement neighbouring ANSPs. This will initially be applied to less dense and more complex airspace but will in time ensure the right airspace environment for SESAR	There are parts of UK airspace which are extremely complex and the introduction of Free Route Airspace, in the short term, in those areas would prove to be very difficult. However, there are other parts of the airspace which would be able to accommodate FRA implementation now. A draft conops has been produced that recognises that benefits can be realised in a stages.
		<u>Project Open:</u> Although the vision of UK-Ireland FAB is that most benefits could be realised with the application of the FRA concept above FL 245 on a 24/7 basis FAB-wide, it is expected that intermediate steps are necessary to reach the final goal. Work continues to progress the intermediate

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13 Project Status (Open or Closed)
	trajectories.	steps.
SWG-5: SMS Harmonisation	Harmonised Safety Management Manual which will ensure the application of a common safety policy and principles within the FAB whilst providing for variability in implementation procedures.	The draft SMM developed by the ANSPs and shared with NSAs in 2012 in support of FAB IR requirements.
		Project Open: Discussions are being finalised between the ANSPs and NSAs regarding the approach to safety accountabilities, i.e. a statement that assurance by the Irish/UK NSAs will be mutually recognised; this will then be referenced or included in the FAB SMM (Arrangements).
SWG-7: Safety Culture Improvement	Work towards developing a safety culture improvement strategy that supports and prepares for joint assessment of safety performance in RP2 as measured by the Performance Scheme Safety KPIs.	Just Culture policy agreed between ANSPs in Q3 2012 (therefore, this element of Safety Culture Improvement is closed at a FAB level).
		Project Open: Just Culture activities to be progressed during 2013, as well as performance measurement work, i.e. review "Effectiveness of Safety Management Framework Survey" (EoSM) for a joint FAB activity.
SWG-8: Action Plan for Operational Safety Surveys Across FAB Interfaces	Work will continue on Operational Safety Surveys across FAB interfaces, to assure that safety risks can be minimised by identifying vulnerabilities before they fail and taking the necessary corrective actions	Joint Day-to-Day (D2d) safety survey completed in Shannon (Dec 2012)
		Project Open: Joint D2D survey planned in Qtr 2 for Dublin and Prestwick, and joint Safety assessment / audit activities planned in 2013.
TCG-2: Datalink infrastructure (ARINC/SITA)	NATS and IAA will benefit from a joint approach in the implementation of VDL Mode 2 infrastructure to support the Data linking Mandate planned for 2013.	NATS and IAA worked on a joint approach which lead to avoided costs. This was followed by the production of a commercial framework agreement which will be used in future projects.
		Project Closed.
TCG-3: 8.33Khz spacing below	Joint planning for 8.33Khz channel spacing	It was difficult provide any benefits from this project in advance of the Implementing Rule which is due in 2014. It was agreed that TCG-3 should be closed but the work still needed to be catered for

FAB Project	Aims and Scope of the work (as per original FAB Plan)	Progress During 2012/13
		Project Status (Open or Closed)
FL195	below FL195.	within the new Technology Convergence Plan.
		Project Closed.
TCG-5: CCAMS	Joint CCAMS testing strategy.	This project was focused on the sharing of "testing and validation" work. The joint IAA and NATS work was completed successfully in the early part of 2012 thus proving that joint testing and validation could be used in future projects.
		Project Closed.