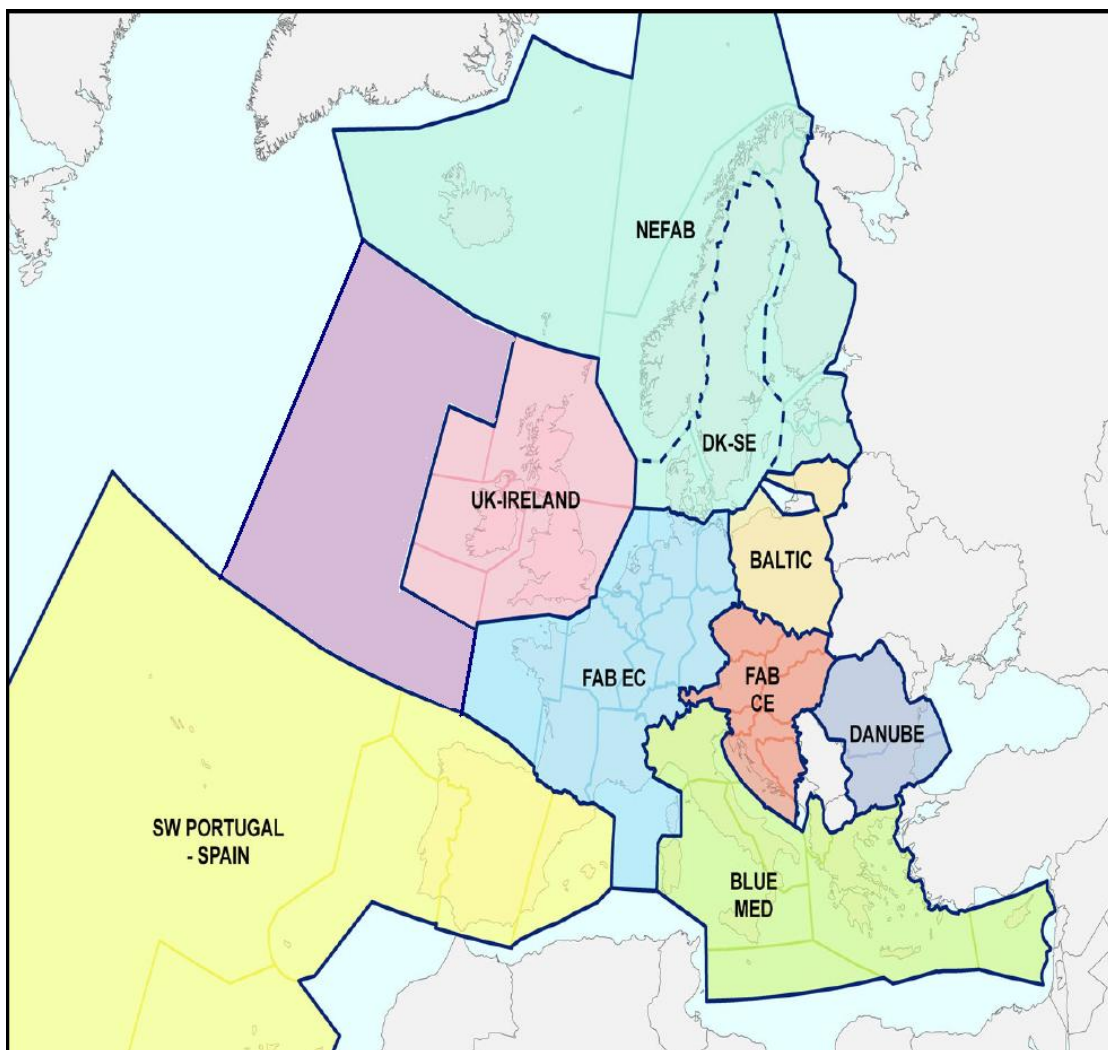


## UK-Ireland – Functional Airspace Block



**UK-Ireland FAB Plan 2011-14**

**FINAL  
05.04.11**



## Introduction statement to the UK-Ireland FAB Plan 2011-14

It is with great pleasure that we present to you the third rolling UK-Ireland FAB Plan for the period 2011 – 2014. This is a working document containing a technical description of activities. The FAB has been operating highly successfully since it was first established in June 2008. Our programme of work is helping to meet the objectives of the Single European Sky. All planned projects have now been introduced and are delivering repeat financial and operational savings to customers in terms of reduced CO<sub>2</sub>, fuel burn costs, and track miles. Other projects are feeding into the lifetime of this new FAB Plan and they too will further enhance safety, improve operational efficiency, reduce combined ANSP costs, and generate customer savings.

Demand for air travel improved during 2010 and a number of our major customers returned to profitability but this is now threatened by increased fuel costs. Therefore, it is the intention of the UK-Ireland FAB to intensify its efforts to further reduce the cost of ATM service provision to our customers. In that context, this Plan sets out the programme of work for the near future, which includes;

- Improvements to the processes for the assessment and measurement of FAB benefits to aid the prioritisation of FAB initiatives,
- All Working Groups will continue to implement their “follow-through” projects in accordance with the new FAB Plan, including the ODNET project which is seeking to “**O**ptimise **D**omestic, **N**orth Atlantic and **E**uropean **T**raffic” flows,
- Technology collaboration projects have been added for the first time,
- Inter-FAB Coordination will be enhanced, through the Memorandum of Understanding between the ANSPs of the UK-Ireland FAB and Danish-Swedish FAB and through the Borealis framework (of wider integration between all NEAP members aimed at greater operational and cost efficiency across the whole airspace),
- FUA will be enhanced between Ireland and the UK, supported by our Irish and UK military partners,
- All SESII FAB Implementing Rules will be met as required,
- The UK-Ireland FAB National Performance Plans will be developed for the SESII first Reference Period,
- Coordination between the ANSPs and Regulators will be enhanced,
- Work will be jointly conducted to align with emerging SESAR activities, and
- Joint IAA/NATS customer engagement will be facilitated.

We are confident that the execution of the programme of work contained in this FAB Plan will deliver repeat savings to our airspace users and helps Ireland and the UK to meet the underlying objectives of the Single European Sky.

Yours sincerely,

Co-Chairmen of the UK-Ireland FAB Management Board



Donie Mooney  
Director of Operations  
Irish Aviation Authority



Ian Hall  
Director Operational Strategy and Standards  
NATS



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# Executive Summary

## Background of this document



The UK-Ireland FAB Plan 2011-14 is the third rolling FAB Plan and was developed by the FAB Management Board. The Plan should be viewed in conjunction with the UK-Ireland Annual FAB Report 2010, which sets the context of the successes achieved by the FAB to-date.

This is a working document containing a technical description of activities, which was endorsed at the ninth meeting of the FAB Management Board (March 25<sup>th</sup> 2011). Advanced draft copies were shared with the FAB Supervisory Committee for comment and to secure alignment with the respective National Supervisory Authorities of Ireland and the UK.

The document refers to activities planned during the period 2011-14, which are intended to deliver operational, safety, and financial benefits to our customers. The FAB Plan layout is as follows: (1) Project Implementation, and (2) Supporting Areas, together with four Annexes;

- Project coding structure,
- Rationale for inclusion/exclusion of customer proposals,

- Updated UK-Ireland FAB Opportunities Register, and
- Benefits breakdown

**1. Project Implementation:** This section confirms plans for specific projects, including:

- Follow-through activities from the outgoing FAB Plan 2010-13, which will continue to be implemented by the Airspace Design, Service Provision and Safety Working Groups,
- The addition of technology activities, which will be implemented by a newly formed Technology Coordination Group,
- The addition of customer proposals,
- Other planned implementation activities, including reference to Common Transition Altitude, the integration of AIM, and Performance Based Navigation, and
- The procedure to enhance the data and benefit assessment processes.

**2. Supporting Areas:** This section outlines plans in relation to various supporting activities that enable the FAB to successfully develop, including:

- Inter-FAB Coordination,
- SES Implementing Rules and European coordination,
- ANSP/Regulatory coordination,
- SESAR IP1 alignment, and
- Meeting Schedule 2011.

## UK-Ireland FAB: Project Implementation to-date

The UK-Ireland FAB was established in July 2008 and it has now completed over two whole years of operations. A substantial amount of work has been undertaken by the UK-Ireland FAB ANSPs, the Airlines and Military contributors. As was the case in 2009, the year 2010 was a productive year in terms of output, ensuring that customers continue to benefit from further savings as a result of ongoing FAB Plan implementation.

### 2009 and 2010: The first years of full operation

A number of projects were successfully delivered during 2009, which are generating repeat savings

to customers, amongst which were: Enroute Shannon Upper Airspace Redesign (ENSURE); the first part of Night Time Fuel Saving Routes (NTFSR); P600 airway; removal of MNPS requirements in SOTA; common En-route Safety Significant Events Scheme; Safety Culture measurement; and Common Operational Safety Methodology.

These initial improvements were built upon through the addition of new projects in the second UK-Ireland FAB Plan 2010-13. Many of these projects were successfully delivered during 2010 and are generating additional savings to customers.

Selected UK-Ireland FAB Projects Implemented during 2009-2010	
Project Name	Implementation date and comment
P600 airway	<u>May 2009:</u> Changing the P600 airway to a dual route – this was the first major airspace development under the FAB.
Removal of MNPS requirement in SOTA	<u>May 2009:</u> Provides flexibility to non-MNPS equipped air carriers to utilise SOTA airspace.
Safety Culture Improvement	<u>November 2009:</u> Enabler to joint development of common methods for managing safety culture improvement within the FAB.
ENSURE (En Route Shannon Upper Airspace Redesign)	<p><u>December 2009:</u> Substantial customer savings via the removal of ATS routes from Shannon Upper to allow direct routing and flight planning from entry point to exit planning.</p> <ul style="list-style-type: none"> <li>• Estimated annual savings: 2.2m kms flown; 14,800 tonnes fuel; 46,800 tonnes CO2</li> <li>• Over €40m in fuel savings alone over next 5 years (2009 fuel prices).</li> </ul>
Continuous Descent Approach for Manchester Arrivals	<u>March 2010:</u> CDA introduced following a successful trail.



Selected UK-Ireland FAB Projects Implemented during 2009-2010	
Project Name	Implementation date and comment
Night Time Fuel Saving Routes (NTFSRs)	<p><u>Various dates in 2009/10:</u> London UIR (December 2009), Scottish UIR (March 2010) and further NTFSRs added for London and Paris Arrivals in November 2010. Substantial customer savings via the allowance of flight plannable direct routes, covering over 1,000 nautical miles.</p> <ul style="list-style-type: none"> <li>• Estimated annual savings: 5,700 tonnes fuel; 18,100 tonnes CO2.</li> <li>• Over €15m Euro over next 5 years (2009 fuel prices).</li> </ul>
Common En-route Safety Significant Event (SSE) scheme	<p><u>December 2009:</u> Using a common SSE for en-route events to ensure that operational safety performance and targets are assessed using a common scheme.</p>
Oceanic Domestic Interface Concept of Operations (ODI CONOPS)	<p><u>March 2010:</u> This is a crucial activity as it identifies the high level operating concept at the North Atlantic and domestic airspace interface within the FAB to support enhancements to safety, flight efficiency, cost effectiveness and capacity through to 2020.</p> <p>The first full version was agreed in March 2010; this document to be refined annually.</p>
Daily FAB Pre-Tactical Network Brief	<p><u>April 2010:</u> Joint publication which allows airlines to identify the most efficient routes, plan for more direct routes across the airspace and therefore save on fuel burn.</p> <p>This is also an enabler for network management.</p>
Single FAB RAD Publication	<p><u>April 2010:</u> This project is based on making the information from the RAD in the Irish and UK airspace accessible in one area and to review the possibility to construct a single RAD Plan for the airspace as one continuum as part of the Network Management Process.</p> <p>The initial phase is complete and the publication is now available on the CFMU web site.</p>
NERS reduction from 12 to 4 NERS	<p><u>July 2010:</u> The reduction in NERS airports (North Atlantic Europe Routing Scheme) improves air operator efficiency.</p>
8-week Strategic Brief	<p><u>September 2010:</u> Joint publication which provides more effective coordination. It is also an enabler for network management.</p>

*UK-Ireland FAB Projects Implemented During 2009 and 2010*

## UK-Ireland FAB: Other Significant Achievements



### Progress of the Working Groups

The Service Provision Working Group (SPWG), Airspace Design Working Group (ADWG), and Safety Working Group (SWG) continued to implement their respective projects in accordance with the outgoing FAB Plan, many of which are contained in this latest version as “follow-through” projects for the period 2011-14.

### ODNET Global Project

In relation to the ongoing UK-Ireland FAB global project, “ODNET” (Optimisation of the Domestic, North Atlantic and European Traffic), work commenced on all identified sub-projects during 2010, including the TEN-T funded project involving a Feasibility Study of FAB High Level Sectors.

### Customers Engagement

During 2010, the UK-Ireland FAB enhanced its customer engagement process by hosting a workshop in October to discuss customer expectations and considerations for the UK-Ireland 2011-14 FAB Plan.

This was an important development and customer proposals have been incorporated into this plan as a result of the workshop.

### Technology

In line with the “design and build” principle of the UK-Ireland FAB, the scope of the operationally-driven FAB has been enhanced through direct Technology domain input. During 2010, a Technology Coordination Group has now been established between the IAA and NATS to implement collaborative opportunities which will generate customer savings and a number of related activities have been included in this FAB Plan.

### ANSP and Regulator Coordination

The ANSPs and NSAs continued to work closely together in dealing with European matters, in particular, the joint Performance Advisory Group (PAG), with representatives from both NSAs and both ANSPs. PAG is ensuring that the UK-Ireland FAB performance plan will be consistent with Community-wide performance targets for safety, environment, capacity and cost efficiency. At an aligned level, the UK-Ireland FAB is engaging fully with the EC FAB Focal Point Group.

### Promotion

The promotion of the FAB was enhanced through the publication of two newsletters in March and December 2010 by the ANSPs, entitled *FAB News*. These were widely distributed to FAB staff, external stakeholders, and customers and also produced on the internet.

## Focus for 2011-14

At a high level, during the lifetime of the FAB Plan 2011-14:

- Develop more robust methods for the assessment and measurement of FAB benefits during the lifetime of this FAB plan. The expectation is that this will aid the prioritisation of FAB initiatives based on a more consistent and reliable assessment.



- Implement the FAB projects in accordance with the new FAB Plan. The ADWG and SPWG will also continue to ensure the successful implementation of the numerous ODNET activities.

**Airspace Design  
Service Provision  
Safety  
ODNET Global Project**

- Commence further development, including: alignment of CPDLC Concept of Operations; common transition altitude; Performance Based Navigation, and the integration of AIS/AIM.

**Integration of AIM  
CPDLC Concept of Operations  
Performance Based Navigation  
Common Transition Altitude**

- Create joint plans for cross-FAB projects and progressive integration of FABs, through the Memorandum of Understanding between the ANSPs of the UK-Ireland FAB and Danish-Swedish FAB, and through the Borealis framework (of wider integration between all NEAP members aimed at greater operational and cost efficiency across the whole airspace), Cooperation with FABEC will also continue to be enhanced.



- Technology collaboration projects have been added to the FAB Plan for the first time.

**Technology Domain**

- FUA will be further enhanced between Ireland and the UK.



- Additional submissions will be made to demonstrate full compliance with all SESII FAB Implementing Rules. The FAB will work closely with the EC and EUROCONTROL on SES implementation, including Network Management.



- The UK-Ireland FAB National Performance Plans will be developed for the SESII first Reference Period.



- Coordination between the ANSPs and Regulators will be enhanced further with targeted improvements to cross-FAB.



- The FAB will work closely with SESAR. Both IAA and NATS are fully represented as members of the SESAR Joint Undertaking.



- Customer involvement will be further developed through joint engagement across our most active customer base:



Logo's represent the airlines who attended the UK-Ireland FAB Customer Forum (12<sup>th</sup> October 2010)

## Governance Structure of the UK-Ireland FAB

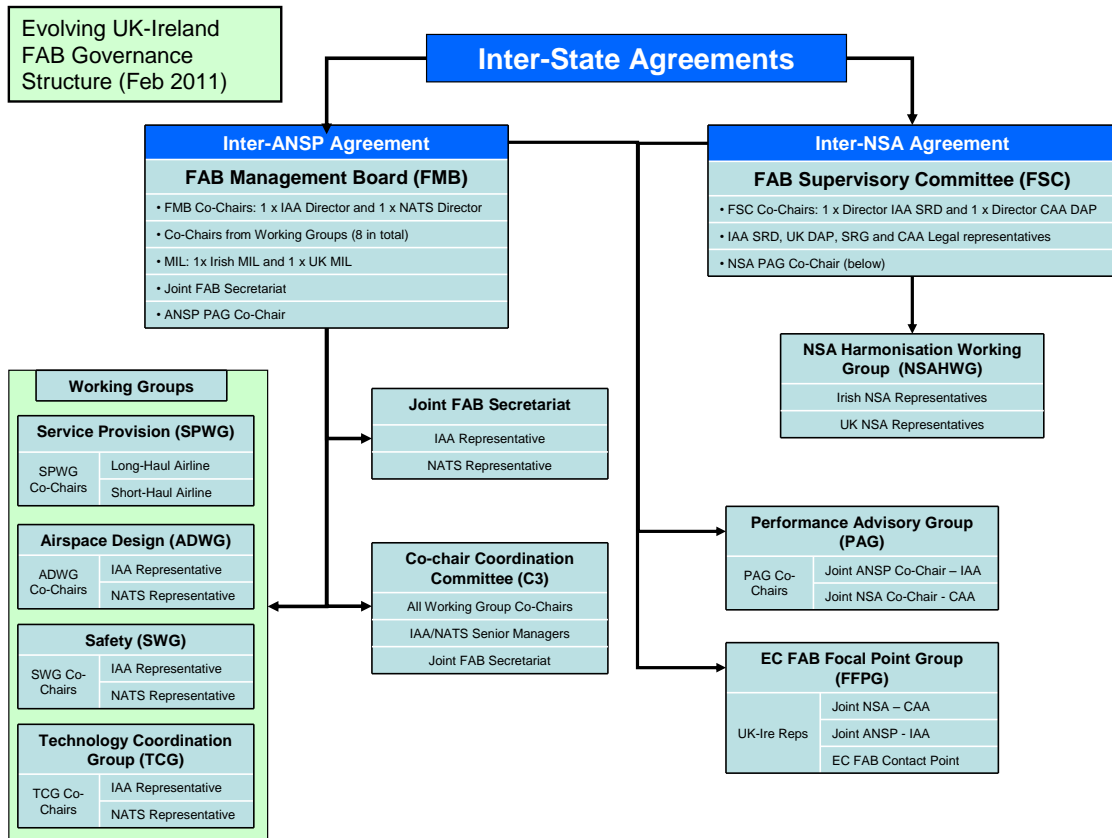
In line with the “design and build” principle of the UK-Ireland FAB, the FAB has continued to evolve since it was first established in June 2008. The organisation chart below reflects the current governance structure of the FAB (February 2011).

On the ANSP side, under the oversight of the FAB Management Board (FMB), the structure includes the addition of the newly formed Technology Coordination Group, and the Co-chair Coordination Committee, which comprises of the Co-chairs of each of the four working groups and senior ANSP managers.

On the NSA side, under the oversight of the FAB Supervisory Committee (FSC), resides the newly established NSA Harmonisation Working Group.

The structure also includes the joint ANSP/NSA Performance Advisory Group and the UK-Ireland FAB representation on the European FAB Focal Point Group.

One area of note is that there are a significant number of smaller working groups which feed into this formal structure and manage individual work programmes.



UK-Ireland FAB Evolving Governance Structure

# 1. Project Implementation

## 1.1. Benefits Process Enhancements

It has proved impossible to adequately validate the benefits of the projects delivered to date because of the lack of a reliable baseline and incomplete data on actual tracks flight planned and operated. It is therefore planned to improve the processes for the assessment and measurement of FAB benefits during the currency of this FAB plan. The expectation is that this will aid the prioritisation of FAB initiatives based on a more complete assessment of the benefits they can deliver and provide more robust reporting.

By the end of 2011 it is planned to have identified quantitative benefits for each project and to have developed metrics to measure and monitor the benefits delivered. From 2012 onwards regular reports will be made to FAB Management Board meetings on benefit delivery, and FMB prioritisation will be able to take benefit values into account.

### Process under development

Sections 1.2.1 to 1.2.5 contain tables with brief outlines for each of the projects which will be implemented

by each of the working groups. They also contain a qualitative benefits statement. The process under development builds on this by identifying the following:

- Areas in which benefits will be delivered: Safety, Service, Value (ANSP Cost Effectiveness) and/or the Environment,
- Other reasons to undertake the project: Customer requests, Mandate/Regulation, or if the project will function as an Enabler.
- Estimated capital cost and labour effort, in terms of Low, Medium or High.

Annex 4 contains a more detailed breakdown. The table below provides an example of the process under development in relation to establishment of a UK-Ireland FAB Network Management Organisation. In this example the implementation of this project will; provide service and value benefits, it is a customer request / provide value to customers, and it has a 'low' capital investment cost with a 'medium' labour investment requirement.

Reference Code and Project Name	Areas in which benefits will be delivered				Other reasons to undertake the project			Effort Estimate
	Safety	Service	Value ANSP Cost Effectiveness	Environment	Customer Request or value to customers	Mandate or Regulation	Enabler	
SPWG-14 (O): UK-Ireland FAB Network Management Organisation		✓	✓		✓			Capital: Low Labour: Med

## 1.2. Follow-through activities from the 2010-13 plan

The Service Provision Working Group (SPWG), Airspace Design Working Group (ADWG), and Safety Working Group (SWG) will continue to implement projects which were identified in the previous FAB Plan 2010-13. For each "follow-through" project, the tables below confirm the reference name, general status, and target implementation date.

In relation to the ongoing UK-Ireland FAB global project, "ODNET" (Optimisation of the Domestic, North Atlantic and European Traffic), a number of work-packages reside with the ADWG and SPWG. Work will continue towards the implementation of ODNET activities, which is detailed below in section 2.1.1.

### 1.2.1. Update on ODNET

The UK-Ireland FAB is uniquely located. One of the core functions of the UK-Ireland FAB is centred on the integration of North Atlantic (NAT) with domestic Ireland-UK and a gateway to European core area traffic. No other FAB has a role in traffic integration on this scale. NAT Eastbound traffic affects the management of FAB domestic and core European operations on a daily basis. The nature of NAT traffic integration is pivotal in ensuring that the FAB efficiently manages domestic

and European networks, thereby providing benefit to all stakeholders.

During 2010, the projects associated with the NAT/European interface were grouped into a programme known as "ODNET" (Optimisation of the Domestic, North Atlantic and European Traffic). ODNET encompasses many work stream elements, each designed to address NAT interface traffic flow issues. The ODNET projects, stemming from the 2010-13 FAB Plan, are summarised below.

Original ODNET Projects – Status	
Project Name	ODNET Status
Enhanced NTFSR ADWG-22(O)	Previously referred to as "Night Time Fuel Saving Routes (NTFSRs)", the FAB will continue to build upon the momentum and benefits gained through the 2009 and 2010 delivery of the NTFSRs across the FAB. The prefix 'NT' will be dropped to reflect the opportunities as Fuel Saving Routes in general.
Optimised cross-FIR FUA ADWG-19(O)	The project is being managed and coordinated by the Irish and UK Military authorities. The UK MoD has outlined a proposal to re-orientate and extend westwards, the EGD201 Danger Area to traverse the Ireland/UK FIR boundary.
FAB High level sectors ADWG-21(O)	TEN-T funding was obtained to facilitate the feasibility study; the fund awarded to the UK-Ireland FAB amounted to €1.15m. The planned study is to investigate the feasibility of a High Level Sectorisation within the FAB. This could



Original ODNET Projects – Status	
Project Name	ODNET Status
	<p>have potential to allow more optimum routings, both laterally and vertically for aircraft which transit IAA and NATS airspace.</p> <p>Scoping work commenced in Qtr 4 2010 and design and validation simulations are planned for Qtr 3 and Qtr 4 2011. The results of the Feasibility Study will be completed by the end of 2012 with a Final Report provided to the TEN-T Executive Agency during Qtr 1 2013.</p>
<p><b>Network Management in FAB</b> <b>SPWG-14(O)</b></p>	<p>The target date for implementation is March 2012. This project is to provide an integrated Network Management function across the UK-Ireland FAB Airspace. The four ATC centres (Dublin, Prestwick, Swanwick, and Shannon) will participate on a daily basis proving Network Management for all FAB traffic. The project has now subsumed work relating to other specific packages, including:</p> <ul style="list-style-type: none"> <li>• FAB RAD</li> <li>• TOMS Utilisation in FAB</li> <li>• LARA</li> <li>• North Atlantic Routing Scheme (NERS) reduction</li> </ul>
<p><b>TOMS Utilisation in FAB</b> <b>SPWG-11(O)</b></p>	<p>TOMS is a system for predicting traffic flows used by NATS and it is capable of deployment over the internet, known as TOTI. To enable Network Management, the IAA will be installing the tool by the end of 2011 after TOMS has been updated with the Irish Airspace traffic volumes.</p>
<p><b>NERS Management Group and Process</b> <b>SPWG-15(O)</b></p>	<p>A NERS Management Group was established in 2010, which successfully reduced the numbers of NERS airports from 12 to 4 (London Heathrow, Amsterdam, Paris and Frankfurt). To supplement the Network Management process, the NERS Management Group will seek to eliminate the remaining NERS airports.</p>
<p><b>Tactical Management of LHR-NAT departures</b> <b>SPWG-16(O)</b></p>	<p>This project relates to the tactical management of LHR departures on the westbound NAT structure. Current Traffic Management techniques create delays for airlines and complexity and congestion issues for airfields. A 'live dashboard' trial was commenced by NATS in December 2010 which includes demand by SID to determine what balancing of SIDs is necessary. Once the trial has been evaluated, the results could potentially form the basis for a process suitable to deal with the issue outlined above.</p>



Original ODNET Projects – Status	
Project Name	ODNET Status
<b>NAT Management Coordination / late running NAT traffic SPWG-17(O)</b>	<p>This project is to consider how the FAB can offer opportunities to mitigate the effect of late running eastbound NAT flows, including developing improved co-ordination with the FAA, Gander, Shanwick, and the Shannon / UK interface arrangements.</p> <p>This project was contained in the previous FAB Plan 2010-13. However, in line with the traffic downturn, the matter is not currently perceived to be an issue and a service improvement project is not currently deemed necessary. It has been transferred to the UK-Ireland Opportunities Register. The project can be reactivated in the future if deemed necessary.</p>
<b>Reduced lateral separation on the NAT SPWG-18(O)</b>	<p>This project involves the reduction in lateral separation from 60 to 30 miles on the NAT, with a target year of implementation in 2012. Its implementation is a mandated activity from ICAO. A number of NAT ANSPs are considering the viability and immediate necessity of the implementation of R-Lat. The UK-Ireland FAB is participating in this process and the project will be implemented in accordance with ICAO agreement.</p>
<b>Early morning routes across NWMTA ADWG-23(O)</b>	<p>A new departure route is planned for introduction coincidental with Point Merge (May 2012). This will facilitate early morning departures out of Dublin and will provide alternative routes to the East. Coordination between NATS and the IAA will allow optimum departure routing based on destination.</p> <p>This project has been subsumed into ADWG-16 Dublin TMA Development.</p>

*UK-Ireland FAB – Status of ODNET Projects*

## 1.2.2. Service Provision Working Group (SPWG)

The Service Provision Working Group (SPWG) is Co-chaired by two airline representatives. As well as operational managers from the ANSPs, the membership of the SPWG includes trades union and military representatives. Under the existing

work programme, there are seven specific service provision projects which will feed into the FAB Plan 2011-14. The projects listed in the table below commenced in 2010 and will be implemented during the lifetime of this FAB Plan 2011-14.

Service Provision Working Group (SPWG)	
Follow-through projects and status	Target Date
<p><b>SPWG-14(O) UK-Ireland FAB Network Management Organisation:</b></p> <p>This project is to provide an integrated Network Management function across the UK-Ireland FAB Airspace. The four ATC centres (Dublin, Prestwick, Swanwick, and Shannon) will participate on a daily basis providing Network Management for all FAB traffic. The planning functions will also be integrated. Information will be promulgated from a central Website for ease of use. The target date for implementation is March 2012.</p> <p>The UK-Ireland integrated Network Management function will link with the wider European Network Manager.</p> <p>Sub-projects of SPWG-14(O):</p> <ul style="list-style-type: none"> <li>• <i>FAB RAD:</i> This project is based on making the information from the RAD in the Irish and UK airspace accessible in one area and to review the possibility to construct a single RAD Plan for the airspace as one continuum as part of the Network Management Process. The initial phase is complete and the publication is available on the CFMU web site. The second phase will advance work on integrating the RAD into a single integrated process as part of the Network Management Function.</li> <li>• <i>TOMS Utilisation in FAB:</i> TOMS is a system for predicting traffic flows used by NATS and it is capable of deployment over the internet, known as TOTI. To enable Network Management, the IAA will be installing the tool by the end of 2011 after TOMS has been updated with the Irish Airspace traffic volumes.</li> <li>• <i>LARA:</i> The LARA tool is a toolset that aims to simplify the activation requests and cancellation of Danger Areas with earlier visibility, which will realise more optimal use of airspace. CDRs can be requested much in the same way as military Danger Areas can be booked. NATS, IAA and Military partners are currently assessing the LARA tool as part of the Eurocontrol development programme. Any solution will be delivered at a FAB level as part of the single Network Management approach. In Qtr 1 2011, the LARA project team commenced discussions relating to the installation of LARA at Shannon, with a potential limited system implementation date of August 2011. The inclusion of LARA within Shannon will provide greater visibility of</li> </ul>	<p>March 2012</p>

Service Provision Working Group (SPWG)						
Follow-through projects and status						Target Date
<p>active Danger Areas within the UK thus aiding flight routing in Irish airspace.</p> <ul style="list-style-type: none"> <li>• <i>North Atlantic Routing Scheme (NERS) reduction:</i> As part of the FAB Plan 2010-13, a NERS Management Group was established which successfully reduced the numbers of NERS airports from 12 to 4 (London Heathrow, Amsterdam, Paris and Frankfurt). To supplement the Network Management process, the NERS Management Group will seek to eliminate the remaining NERS airports.</li> <li>➤ <b>Benefit Statement:</b> The overall benefit of a regional UK-Ireland FAB Network Management process will result in a more efficient network which will reduce delays, reduce track miles, and reduce CO2 emissions. At a sub-project level; <ul style="list-style-type: none"> <li>○ FAB RAD: The airspace will be regarded as one continuum and restrictions will be assessed jointly and published as one integrated document.</li> <li>○ TOTI: Staff in all the centres can review the same data for decision making, thereby improving efficiency and the level of service to customers.</li> <li>○ LARA: Together with the daily and 8-week strategic brief from Pre-tact, the LARA tool will provide advance notification of route opportunities for more efficient routings.</li> <li>○ NERS reduction: Improved efficiency.</li> </ul> </li> </ul>						
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
	✓	✓		✓		
<p><b>SPWG-13 Reduced Longitudinal Separation on the NAT:</b></p> <p>This project reduces the Longitudinal Separation on the North Atlantic Track structure for traffic exiting the NAT from 10 to 5 minutes. It will be introduced on the 31 March 2011 for suitably equipped aircraft. The benefits are that more optimum levels for aircraft will be available reducing fuel burn and CO2 emissions.</p> <ul style="list-style-type: none"> <li>➤ <b>Benefit Statement:</b> The work load of ATC staff will be reduced at the interface sectors in the provision of climb for traffic exiting the NAT eastbound.</li> </ul>						Mar 2011
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
	✓		✓	✓		
<ul style="list-style-type: none"> <li>➤ Note that there is a potential dis-benefit to state operations – military workload in the area may be increased owing to the smaller spacing between civil aircraft.</li> </ul>						

Service Provision Working Group (SPWG)															
Follow-through projects and status	Target Date														
<p><b>SPWG-16(O) Tactical Management of LHR-NAT departures:</b></p> <p>Depending on the westbound NAT structure, peaks in demand on BRS/BCN/STU and DTY/LKS sectors have led to utilisation of Traffic Management techniques that create delays for AOs and complexity and congestion issues for airfields (mainly EGLL).</p> <p>As part of the Heathrow Hotspot, NATS are conducting a live dashboard trial, which includes demand by SID to determine what balancing of SIDs is necessary. The trial system went live on 20th Dec 2010 with a number of Airline Operators. Once the trial has been evaluated, the results could potentially form the basis for a process suitable to deal with the issue outlined above.</p> <p>➤ <b>Benefit Statement:</b> Potential reduction in ground delays by re-routing NAT departures to avoid regulation and potential reduction in workload at LHR.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td>✓</td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> </tbody> </table>	Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler		✓		✓	✓			<p>Completion of current trial: April 2011</p>
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler									
	✓		✓	✓											
<p><b>SPWG-18(O) Reduced lateral separation on the NAT:</b></p> <p>This project involves the reduction in lateral separation from 60 to 30 miles on the NAT, with a target year of implementation in 2012. Its implementation is a mandated activity from ICAO. A number of NAT ANSPs are considering the viability and immediate necessity of the implementation of R-Lat. The UK-Ireland FAB is participating in this process and the project will be implemented in accordance with ICAO agreement.</p> <p>➤ <b>Benefit Statement:</b> The benefit will be to increase the capacity onto the North Atlantic track structure.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td>✓</td> <td></td> <td>✓</td> <td></td> <td>✓</td> <td></td> </tr> </tbody> </table> <p>➤ Note that there is a potential dis-benefit to state operations – military workload in the area may be increased owing to the smaller spacing between civil aircraft.</p>	Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler		✓		✓		✓		<p>2012</p>
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler									
	✓		✓		✓										

### 1.2.3. Airspace Design Working Group (ADWG)


The Airspace Design Working Group (ADWG) is Co-chaired by senior operational experts from the IAA and NATS. The membership of the ADWG also includes trade union and military representatives. Under the existing work programme, there are eleven

specific airspace design projects which will feed into the FAB Plan 2011-14. The projects listed in the table below commenced in 2010 and will be implemented during the lifetime of this FAB Plan 2011-14.

Airspace Design Working Group (ADWG)															
Follow-through projects and status	Target Date														
<p><b>ADWG-9 Annual Update to the Oceanic Domestic Interface (ODI) Concept of Operations (CONOPS):</b></p> <p>The ODI CONOPS identifies the high level operating concept at the North Atlantic and domestic airspace interface within the UK-Ireland FAB to support enhancements to safety, flight efficiency, cost effectiveness and capacity through to 2020. It attempts to provide a vision of how the FAB will improve the performance and integration of NAT and domestic flights through the development and delivery of enhanced airspace arrangements, ATC procedures, ATM system support, network, airspace and arrival management processes.</p> <p>The UK-Ireland FAB will align all new FAB operational projects with the ODI CONOPS. All ODNET projects take full account of the ODI CONOPS. The CONOPS explains the operating concepts within each region based upon the output of the four work streams. It will align with the emerging SESAR CONOPS and existing NATS and IAA long term operational strategies.</p> <p>The initial version of the Concept of Operations was completed within the previous plan. A second iteration of the CONOPS will be developed during 2011.</p> <p>➤ <b>Benefit Statement:</b> Enabling process to ensure that future investments align around delivering a common future</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> </tr> </tbody> </table>	Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler							✓	Jun 2011
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler									
						✓									
<p><b>ADWG-11 Use of Operational Research Techniques to Design Fuel Efficient Organised Track Structures:</b></p> <p>Third party support has been secured to conduct R&amp;D into a possible change to the method of determining Oceanic Track structure. Follow on work within the FAB would develop and test a working prototype.</p> <p>Upon the production of an operational concept and estimated</p>	Late 2012														

Airspace Design Working Group (ADWG)															
Follow-through projects and status	Target Date														
<p>benefits for the technique, further work to develop and test a working prototype would:</p> <ol style="list-style-type: none"> <li>1 Develop Concept and assess benefits – End Qtr 1 2011.</li> <li>2 Review benefits and assess business case – Apr-Jun 2011.</li> <li>3 Prepare AIRE3 proposal – Jul-Sep 2012</li> <li>4 Conduct AIRE3 trial – Jan-Jun 2012</li> <li>5 Produce final working system Jul-Dec 2012</li> </ol> <p>➤ <b>Benefits aim</b> To take into consideration traffic loading in both oceanic and domestic sectors to improve fuel efficiency and domestic capacity through better alignment of tracks</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> </tbody> </table>	Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler				✓	✓			
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler									
			✓	✓											
<p><b>ADWG-15 Deliver Plans for Long Term Operations at TMAs within the FAB maximising of efficiency of design:</b></p> <p>Activities relating to safety, capacity and environmental requirements of FAB TMA airspace have been in place since the FAB commenced. The focus to-date has been on the identification of key tasks, work streams and schedules to enable NATS and IAA to implement airspace changes agreed by the FAB.</p> <p>During the lifetime of this Plan, the focus will now be on more strategic design considerations and apply generic design principles enabling their application at multiple TMAs. This activity shall focus upon how all TMAs can be developed consistently to take account for future needs, including MTMA, ScTMA, LAMP and Dublin for example.</p> <p>Sub-projects of ADWG-15 include:</p> <p>(A) <i>Common Transition Altitude</i>: A changed Transition Altitude will be an enabler for TMA improvements. In January 2011, the IAA and the UK CAA notified the aviation industry of their intention to harmonise the Transition Altitude in both UK and Irish airspace by the Winter of 2013-14, subject to consultation and coordination with neighbouring States.</p> <p>(B) <i>Performance Based Navigation (PBN)</i>: PBN is expected to bring significant advances in the accuracy of track following. PBN will enhance safety, capacity, and flight efficiency. It will also be a major enabler for optimised departure profiles and Continuous Descent Approaches (CDAs).</p> <p>➤ <b>Benefits Statement:</b> To enhance the provision of safe, cost effective and efficient ATM in this area.</p>	<p>Winter 2013/14 for Common Transition Altitude and PBN</p>														

Airspace Design Working Group (ADWG)						
Follow-through projects and status						Target Date
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
	✓	✓	✓			✓
<p>➤ Note there are issues for the states in this area – for example the cost of equipping military aircraft for PBN will be high. UK Mil have commented to CAA on this as part of the consultation process.</p>						
<p><b>ADWG-16 Dublin TMA Development:</b></p> <p>This project covers the major enablers for the introduction of Point Merge approach system at Dublin Airport (November 2012) and the introduction of complementing routes in the UK.</p> <p>This project has matured well during the lifetime of the previous Plan and substantial support and cooperation continues to be received from all stakeholders, including the Military and Regulatory authorities:</p> <ul style="list-style-type: none"> <li>• Dublin Point Merge designs are maturing well and joint workshops between NATS/IAA are progressing the project and meeting expectations.</li> <li>• A framework briefing has been delivered to UK DAP for the necessary changes at the IAA/NATS interface. NATS is furthering the Airspace Change Proposal and preparing for the associated public consultation.</li> <li>• The separation of the Point Merge outer arcs and UK Danger Area (EGD201B) needs endorsement between DoT/DfT Regulators as the protected area of the delegated ATS is adjacent to the Danger Area western most boundary.</li> <li>• Introduction of a new early morning departure routes out of Dublin across the NWMTA.</li> </ul> <p>➤ <b>Benefits Statement:</b> To provide a systemised approach procedure for Dublin approach including:</p> <ul style="list-style-type: none"> <li>• Continuous descent approaches,</li> <li>• Maximum capacity usage of the single runway operation at Dublin, and</li> <li>• Maximise the departure rate for Dublin airport especially during the first rotation.</li> </ul>						
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
✓	✓	✓	✓	✓		
<p>➤ Note that UK Mil see a potential dis-benefit in this project: they will have to realign airways into and out of Valley which will also incur training and procedure update costs.</p>						
						<p>Point Merge: November 2012</p> <p>L70/Y124 airspace changes: November 2012</p>

Airspace Design Working Group (ADWG)																				
Follow-through projects and status						Target Date														
<p><b>ADWG-19 (O) Optimised cross-FIR FUA:</b></p> <p>The UK MoD has outlined a proposal to re-orientate and extend EGD201 Danger Area to traverse the FIR boundary. The initial deliverable is to identify enablers at the State level to establish a cross-FIR boundary Danger Area.</p> <p>➤ <b>Benefits Statement:</b> Better utilisation of airspace through increasing flexible use and making existing routes more accessible.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler		✓	✓	✓				<p>Enabling process agreed: Dec 2011</p> <p>EGD201 extension: Dec 2012</p>
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
	✓	✓	✓																	
<p><b>ADWG-21(O) Feasibility study for High Level Sectors within FAB:</b></p> <p> <b>Co-financed by the European Union</b> TEN-T funding was obtained to facilitate the feasibility study; the fund awarded to the UK-Ireland FAB amounted to €1.15m. Considerable support has been provided by the Irish Department of Transport and the UK Department for Transport to facilitate the administrative requirements associated with this award.</p> <p>The planned study is to investigate the feasibility of a High Level Sectorisation within the FAB. This could have potential to allow more optimum routings, both laterally and vertically for aircraft which transit IAA and NATS airspace, which could also increase the number of direct flight plannable routes. Scoping work commenced in Qtr 4 2010 and early design workshops occurred during Qtr 1 2011. Design and validation simulations are planned for Qtr 3 and Qtr 4 2011. The results of the Feasibility Study will be completed by the end of 2012 with a Final Report provided to the TEN-T Executive Agency during Qtr 1 2013.</p> <p>➤ <b>Benefits Statement:</b> The Feasibility Study proposes the following benefits:</p> <ul style="list-style-type: none"> <li>• Increased capacity,</li> <li>• Increased Safety Benefits,</li> <li>• Reduced track mileage for over-flying aircraft,</li> <li>• Reduced operating cost for managing over-flying aircraft,</li> <li>• Reduced controller cost, and</li> <li>• Improvement to the environment by reducing CO2 emissions.</li> </ul> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler	✓	✓	✓	✓	✓			<p>Completion of Feasibility Study: Dec 2012</p>
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
✓	✓	✓	✓	✓																



Airspace Design Working Group (ADWG)						
Follow-through projects and status						Target Date
<p><b>ADWG-22 (O) Fuel Saving Routes:</b></p> <p>Previously referred to as "Night Time Fuel Saving Routes (NTSFRs)", the FAB will continue to build upon the momentum and benefits gained through the 2009 and 2010 delivery of the NTFSRs across the FAB. The prefix 'NT' will be dropped to reflect the opportunities as Fuel Saving Routes in general.</p> <ul style="list-style-type: none"> <li>• A number of new routes are expected to be introduced in March 2011, one of which is the off-load route to the south of (U)L975 LIFFY - WAL.</li> <li>• It was proposed that FSRs should be extended to Weekends and PH.</li> <li>• Separately, a 30-minute extension either side of the existing 'NT'FSRs is being assessed by operational units.</li> <li>• Extend benefits to non-NAT flights, i.e. night time routes from FABEC into the UK-Ireland FAB and north/south between UK-Ireland FAB and the Iberian peninsular.</li> <li>• Develop procedures to provide enhanced benefit for LTMA arrivals from the NAT.</li> </ul> <p>➤ <b>Benefit Statement:</b></p> <ul style="list-style-type: none"> <li>• Reduction in track mileage, fuel burn, fuel uplift and CO2 emissions through more direct flight-plannable routeings.</li> <li>• FDP contains actual routeing of aircraft thereby enhancing safety nets.</li> </ul>						Dec 2011
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
	✓		✓	✓		

### 1.2.4. Safety Working Group (SWG)

The Safety Working Group (SWG) is Co-chaired by senior safety experts from the IAA and NATS. Under the existing work programme, there are five specific safety projects which will

feed into the FAB Plan 2011-14. The projects listed in the table below commenced in 2010 and will be implemented during the lifetime of this FAB Plan 2011-14.

Safety Working Group (SWG)						
Follow-through projects and status						Target Date
<p><b>SWG-5 SMS Convergence</b></p> <p><b>Project Description:</b> To converge on an SMS at FAB level which allows the application of a common safety policy, principles and processes and provides for differences in implementation procedures.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Collaborate with NEFAB and NUAC within NEAP to ensure a consistent, pragmatic and future proof approach to compliance with the FAB Implementing Rules.</li> <li>• Consult with FABEC and NEAP to explore if a common approach to safety case and SMS convergence is possible.</li> <li>• Complete a compliance matrix against the SES Common Requirements for safety management (and their successors) and the FAB IR requirements for NATS and the IAA.</li> <li>• Converge on a common safety policy, principles and processes and provide for differences in implementation procedures (this is a common objective within NEAP).</li> <li>• Produce a revised FAB Safety Case based on a common safety case strategy within NEAP if practicable.</li> </ul> <p>➤ <b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Elimination of inconsistencies in SMS implementation.</li> <li>• Synergies in documentation, training, application etc.</li> <li>• Compliance with the FAB IR.</li> <li>• Future proofing the SMS against emerging IRs and wider integration of FABs and FAB members.</li> </ul>						2012
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
✓	✓	✓			✓	

Safety Working Group (SWG)																				
Follow-through projects and status						Target Date														
<p><b>SWG-7 Safety Culture Improvement:</b></p> <p><b>Project Description:</b> Establish clear guidelines for the improvement of Safety Culture within the FAB.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Research current established working practice (Eurocontrol, airlines, professional associations, legal etc.).</li> <li>• Make contact, with selected ANSPs and other organisations with mature SMSs to obtain further details on the process they have developed to manage a just culture.</li> <li>• Provide a framework for improving safety culture by the application of a just culture policy.</li> <li>• Follow the Eurocontrol step-by-step approach to enhancing safety occurrence reporting, investigation and improvement.</li> <li>• Promote safety leadership behaviour within the FAB by collaboration on safety leadership behaviour, skill-set development and skills training.</li> <li>• Develop a common approach to meeting ICAO's Amendment 47 (Framework for the implementation and maintenance of an SMS by an ATS provider) to Annex 11 (31 Mar 2009).</li> </ul> <p>➤ <b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Provide clarity for staff, management and regulators on how safety culture can be improved by the application of a just culture policy.</li> <li>• Consistency of safety occurrence reporting, investigation and improvement in the FAB.</li> <li>• Improved safety leadership behaviour within the FAB.</li> </ul> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td>✓</td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler	✓	✓	✓			✓		2012
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
✓	✓	✓			✓															
<p><b>SWG-8 FAB Action Plan for Operational Safety Improvement 2011-14:</b></p> <p><b>Project Description:</b> To consider the most effective safety process for identifying and prioritising operational safety improvement opportunities.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Further explore the output of the day-to-day safety observations carried out to date. Review and agree the</li> </ul>						2013														

Safety Working Group (SWG)						
Follow-through projects and status						Target Date
<p>strategy for future safety observations / surveys in conjunction with the operational units.</p> <ul style="list-style-type: none"> <li>Investigate the safety improvement process and initiatives at each operational unit with a view to identifying best practice and standardising activities between IAA / NATS and NEAP partners.</li> </ul> <p>➤ <b>Benefits:</b> Delivery of a measurable process for prioritising safety improvement across the FAB and sharing of best practice within the IAA and NATS and also with NEAP partners.</p>						
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
✓						
<p><b>SWG-9 Standardised European Rules of the Air (SERA) Integration:</b></p> <p><b>Project Description:</b> Minimise the differences from ICAO by standardising procedures based on the SERA initiative.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>Work together with the NSAs to remove the differences from ICAO</li> <li>Deliver a harmonised FAB approach to SERA in conjunction with the NSAs.</li> <li>Encourage the NSAs to resolve the use of the NATS non-standard procedures where appropriate. This action is carried over from SWG-4.</li> </ul> <p>➤ <b>Benefits:</b> Greater standardisation of procedures between NATS and the IAA; Provides the pre-cursor work in readiness for SERA Parts A/B/C Introduction.</p>						Q4 2011
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler
✓	✓				✓	

### 1.2.5. Technology Coordination Group

During 2010, investigations commenced regarding areas of possible technology collaboration between the ANSPs which would generate customer savings. Some projects have already commenced and some new areas have been

identified for implementation by the Technology Coordination Group (TCG). The table below displays the name, status and target implementation of the technology activities which will be implemented during the lifetime of this Plan.

Technology Coordination Group																				
Follow-through and new projects						Target Date														
<p><b>TCG-1 Line connectivity project</b></p> <p>A significant number of individual communication circuits are in use between UK and Ireland – by moving them to multiplexer links, repeat cost savings of approximately €250K per annum will be achieved. The project is underway with procurement and testing of lines in Jan 2011, transition of circuits commencing in Feb 2011 and completing in May 2011.</p> <p>➤ <b>Benefit statement:</b> Repeat cost savings of approximately €250K per annum</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler			✓					May 2011
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
		✓																		
<p><b>TCG-2 Datalink infrastructure (ARINC/SITA)</b></p> <p>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. IAA and NATS jointly met with ARINC in June 2010 and informally explored the options for joint implementation.</p> <p>Planned steps:                   NATS Datalink project enters PD: Apr 2011              Agreement on joint procurement: Dec 2011              Infrastructure contracts in place: Dec 2012</p> <p>➤ <b>Benefit statement:</b> The NATS and IAA datalink implementation projects will seek to deliver best value to the FAB in the provision of the infrastructure.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td>✓</td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler			✓			✓		Datalink in operation: Feb 2013
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
		✓			✓															

Technology Coordination Group																				
Follow-through and new projects						Target Date														
<p><b>TCG-3 8.33Khz spacing below FL195</b></p> <p>A European Implementing Rule for the introduction of 8.33MHz channel spacing below FL195 is expected during 2011. A co-ordinated introduction (particularly along the UK-Ireland FIR borders) will benefit airspace users as well as ANSPs. NATS and IAA will align their strategic plans for the introduction of 8.33KHz spacing.</p> <p>➤ <b>Benefit statement:</b> A service benefit through greater availability of VHF channels is expected and further possible benefits will become clear depending upon the detail of the IR.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler		✓				✓		TBA dependent on detail of IR
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
	✓				✓															
<p><b>TCG-4 Surveillance / Radar data sharing</b></p> <p>NATS and IAA could avoid future costs in some surveillance areas:</p> <ul style="list-style-type: none"> <li>• Share data from existing radars to improve coverage</li> <li>• When NATS moves to the ARTAS tracker, the IAA will gain access to the same surveillance tracker producing opportunities for track sharing.</li> <li>• Selection of future ABS-B and/or WAM installation sites for mutual benefit.</li> <li>• Sharing national surveillance data distribution expertise.</li> </ul> <p>A study into the potential sharing of surveillance data and surveillance infrastructure within the FAB will be conducted. NATS and IAA will then align their strategic plans for future surveillance infrastructure during the validity of this FAB plan.</p> <p>➤ <b>Benefit statement:</b> Reduction in costs of surveillance provision to both ANSPs and improved resilience in surveillance coverage.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler		✓	✓					<p>Study complete by Dec 2012</p> <p>Joint Plans agreed Dec 2014</p>
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
	✓	✓																		

Technology Coordination Group																				
Follow-through and new projects						Target Date														
<p><b>TCG-5 CCAMS</b></p> <p>CCAMS is expected to become operational in February 2012. By adopting a joint approach to testing and validating CCAMS there is the opportunity to reduce the overall cost of introduction.</p> <p>➤ <b>Benefit statement:</b> Overall level of testing and validation of CCAMS in the UK and Ireland is less than if tested separately.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler			✓					Feb 2012
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
		✓																		
<p><b>TCG-6 Potential for FAB wide infrastructure services</b></p> <p>There are a number of aviation services provided by NATS and the IAA for their respective FIRs (e.g. AFTN/AHMS, VOLMET).</p> <p>A study will be carried out into the potential to provide those services on a FAB-wide basis, reducing the amount of technical infrastructure needed to supply them. Depending on the outcome of the study, strategic plans for these services will be aligned and additional technology projects may follow in this or subsequent FAB plans to implement FAB-wide services.</p> <p>➤ <b>Benefit statement:</b> Cost savings for the FAB through a reduction in the amount of technical infrastructure needed to supply IAA and NATS aviation services.</p> <table border="1"> <thead> <tr> <th>Safety</th> <th>Service</th> <th>Value</th> <th>Environ.</th> <th>Customer Request</th> <th>Mandate / Regulation</th> <th>Enabler</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler			✓					Study complete by Dec 2012
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	Enabler														
		✓																		

Technology Coordination Group						
Follow-through and new projects						Target Date
<p><b>TCG-7 Navigation Rationalisation Study (SESAR 15.3.2)</b></p> <p>This SESAR Project will undertake initial planning and simulation to rationalise the conventional navigation infrastructure to support airspace operations in a future Performance Based Navigation environment.</p> <p>One of the current activities of this SESAR work package is to understand and validate (by comparison) two simulation tools, the Eurocontrol DEMETER and a tool developed for ENAV. The rationalisation of VOR within the UK-Ireland FAB is being used as the test scenario for the study.</p> <p>➤ <b>Benefit statement:</b> Cost savings for the FAB through a reduction in the VOR navigation infrastructure required to support operations within the FIRs.</p>						<p>FAB Study Complete by</p> <p>Dec 2011</p>
Safety	Service	Value	Environ.	Customer Request	Mandate / Regulation	
		✓				



### 1.3. Customer proposals



Logo's represent the airlines who attended the UK-Ireland FAB Customer Forum (12<sup>th</sup> October 2010)

The customer plays a central role in the UK-Ireland FAB. Customer representatives Co-chair the Service Provision Working Group and are also members of the FAB Management Board. To enhance the customer consultation and communication process, a joint IAA/NATS customer forum was held on the 12<sup>th</sup> October 2010 (supported by the Irish and UK NSA representatives). During this forum, various suggestions were made by customers, including;

- Enhanced customer communications,
- Free routing in UK airspace,
- Cross border high level sectors,
- Extend night time route availability,
- Centre Consolidation,
- Long-term FAB Roadmap,
- Civil/Military enhancements, coordination and tools
- Alignment of Ireland with UK "Future airspace strategy" (FAS),
- Alignment with Oceanic ANSPs,
- Airline representative on ADWG,
- Pursue work towards NEAP,
- Plans for how to manage the interface with FABEC, and
- Technology rationalisation.

The customer proposals were assessed by the FMB considering the following:

1. The customer proposals that are deemed feasible for further assessment and possible implementation during the lifetime of this plan (2011-14),
2. The customer proposals that are not deemed feasible at this stage.
3. Other customer proposals which are or will be addressed through existing planned projects.

Annex 2 of the Plan provides the results of the assessment process and confirms the following;

- A substantial number of areas identified by customers are being addressed by the FAB through the implementation of current planned projects.
- Two new activity areas have been officially added to the work programme of the working groups, including;
  - Seven new technology projects (TCG-1 to TCG-7)
  - Enhanced FAB customer communication (SPWG-20).
- The remaining proposals are deemed to be beyond scope of the current operational FAB but have been retained in the Opportunities Register (Annex 3).

## 1.4. Other UK-Ireland FAB projects

Aside from the work previously described, there are a number of other projects that are planned during the lifetime of the UK-Ireland FAB Plan 2011-14, which are presented below, including;

- CPDLC ConOps alignment
- Common Transition Altitude
- AIS activities (integration of AIM)
- Performance Based Navigation.

Benefit statements and benefits tables have not been presented in the Plan for these projects, primarily because they are currently immature initiatives. However, to complement the programme for enhancing the benefits assessment process (see section 1.1), the FAB does intend on developing appropriate benefits statements to support these initiatives.

### 1.4.1. CPDLC ConOps alignment

The Concept of Operations has been accepted and further work is anticipated before full alignment can be achieved. Useful information to support implementation was identified at the L2K/GOLD datalink workshop. Additional workshops have been arranged at Swanwick and

Prestwick when an assessment of the IAA and MUAC plans will be made to confirm alignment with NATS plans.

- The SPWG will be responsible for monitoring the implementation of this activity: "SPWG-19 CPDLC ConOps alignment."

### 1.4.2. AIS activities (integration of AIM)

The provision of Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM) are ICAO (State) obligations. As FAB partners, discussions commenced in 2010 between the IAA and NATS on possible future synergies in the area of service provision, possible at a FAB level. The short to medium objective is the transition from the

present Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM). NATS and IAA have agreed to continue discussions in 2011.

- The ADWG will be responsible for monitoring the implementation of this activity, which will be tracked through ADWG-24 Integration of AIS/AIM.

### **1.4.3. Performance Based Navigation (PBN)**

The regulatory authorities of Ireland and the UK, in conjunction with the IAA and NATS are working towards the implementation of a common PBN policy across the whole of the UK-Ireland FAB airspace. When implemented, PBN is expected to bring significant advances as it will facilitate the implementation of efficient and cost effective ATM procedures. PBN will enhance safety, capacity, and flight efficiency. It will also be a major enabler for optimised departure profiles and Continuous Descent Approaches (CDAs). Responses from some airlines to a

survey about PBN equipage have been received. No formal policy has yet been determined by EUROCONTROL or Aviation Authorities upon a date for its mandate.

- The ADWG will be responsible for managing the necessary ANSP support to PBN. The project will be tracked via ADWG-15 "Deliver Plans for Long Term Operations at TMAs within the FAB maximising of efficiency of design".

### **1.4.4. Common Transition Altitude**

The question of raising the Transition Altitude has previously been the subject of a number of studies both by EUROCONTROL and by individual States.

In January 2011, to make more efficient use of the airspace over Ireland and the UK, the IAA and the UK CAA notified the aviation industry of their intention to harmonise the Transition Altitude in both UK and Irish airspace. The UK CAA and the IAA Regulator have decided to jointly implement a common and higher Transition Altitude throughout UK and Irish airspace.

This decision followed a series of stakeholder engagement meetings held during 2010, involving the IAA (Regulator and ANSP), the UK CAA, NATS, the Irish Air Corps and UK MoD.

All parties agreed that a common Transition Altitude, significantly

higher than those that in operation today, was a requirement to facilitate future safety, environmental and ATM capacity benefits.

The aspiration is to implement the revised arrangements during Winter 2013-14, subject to consultation and coordination with neighbouring States. It is intended that consultation will take place in Spring 2011.

A UK-Ireland FAB Transition Altitude Oversight Group (FABTAOG) will be established and will report, via the CAA CNS/ATM Steering Group and the IAA Aeronautical Services Department, to the FAB Supervisory Committee.

- The ADWG will be responsible for managing the necessary ANSP support to the FABTAOG. The project will be tracked via ADWG-15 "Long-term Plans for TMA Operations".

## 2. Supporting Areas

There are a number of activities which support the implementation of the FAB Plan and day-to-day management of the FAB. This section gives a brief outline regarding the status of these supporting activities:

**“Section B: Supporting Areas”**, which outlines plans in relation to all the necessary support activities that enable the FAB to develop, including:

- ⇒ Inter-FAB Coordination,
- ⇒ Activities relating to Single European Sky Implementing Rules and European coordination,
- ⇒ ANSP/Regulatory Coordination,
- ⇒ SESAR IP1 alignment,
- ⇒ Enhancement of data and benefit assessment processes, and
- ⇒ Meeting Schedule 2011.

### 2.1. Inter-FAB Coordination

Inter-FAB coordination is becoming an ever increasing feature in the evolution of the UK-Ireland FAB.

In March 2010, NATS joined its FAB partner, IAA, as a member of the Northern European Air Navigation Providers (NEAP). This provided the impetus for a strategic review by NEAP which has resulted in the re-alignment of FAB priorities and the agreement by the ANSPs to define an alliance framework and work towards the possible integration of all three FABs with NEAP airspace.

Whilst this FAB Plan will maintain the momentum of the UK-Ireland FAB, there will be parallel activity to study a joint benefits with the Danish-Swedish FAB (NUAC) and further work to strengthen links to support NEFAB (Norway, Finland, Latvia, Estonia and participation by Iceland).

These activities hold great potential but must not distract the UK-Ireland FAB stakeholders from the immediate task of meeting UK-Ireland FAB commitments.

This section summarises these developments, whilst also making reference to coordination work with FABEC.

**Safety and inter-FAB coordination:** The FAB Safety Working Group (SWG) is collaborating with NEFAB and the Danish-Swedish FAB within NEAP to ensure a consistent, pragmatic and future proof approach to compliance with the FAB Implementing Rules. The SWG is also consulting with FABEC through NEAP to explore if a common approach to safety case and SMS convergence is possible.

## MoU between IAA, NATS, Naviair and LfV



On the 8<sup>th</sup> March 2011, the Air Navigation Service Providers of the Ireland/UK and Denmark/Sweden Functional Airspace Blocks have signed a Memorandum of Understanding, designed to drive forward progress towards greater flight efficiency, cost efficiency and operational consistency in line with SES performance goals.

Under the terms of the MoU, the IAA, NATS, Naviair and LfV will investigate the benefits of a closer, more integrated working relationship. The ANSPs will focus on practical performance improvements, such as enhancing flight efficiency in combined airspace, a Common Transition Altitude, network performance and development of centres of excellence. In doing so, they will continue to co-operate closely with their other Northern European ANSP partners, including the implementation of a new formal ANSP alliance (see next) and the establishment of a combined FAB in due course.

Both FABs - the only two to be formally established so far - have

already made significant progress. LfV and Naviair have together formed an operating company, NUAC, and have set up a common ATCO training college, Entry Point North. Achievements under the UK-Ireland FAB are illustrated in the Executive Summary of this Plan. The potential to drive further efficiencies and cost savings through the integration of these two existing FABs will also be considered as part of this initiative.

This agreement represents the natural next step to build on these successes; working together across a wider area and tackling new ways to improve performance, not between the FABs, but across them. This agreement keeps focus on the value of expanding integration of FABs and the enhanced benefits for the prerequisite of safety, the need to achieve highly efficient airspace and a flexible performance for the lowest cost. At the same time it is very positive that we together maintain a high momentum in the process of implementing the Single European Sky programme.

## North European ANSPs

On the 25<sup>th</sup> March 2011, the ANSPs of Iceland, Norway, Finland, Sweden, Estonia, Latvia, Denmark, Ireland and UK announced the start the process of defining a formal ANSP alliance. Over the next year, a new executive management team will prepare a framework of legal and financial agreements for specific joint ventures aimed at greater operational and cost efficiency across

the whole airspace. The aim will be not only to improve flight efficiency and reduce environmental impact, but to reduce the cost of services and operational/technical infrastructure across the whole area.

An initial alliance structure, with the temporary name of Borealis, will be established by June 2011 with the appointment of an executive

management team. They will develop candidate joint ventures and associated formal agreements to accelerate the benefits of closer harmonisation. Building on the progressive improvements in the region to date, these arrangements will be tailored to local needs whilst allowing faster deployment of changes where necessary.

This approach is reflected in the recent announcements where Norway, Finland, Estonia and Latvia, working closely with Iceland, have

agreed to concentrate on gaining formal Functional Airspace Block (FAB) status under the name NEFAB, and the MoU between Denmark, Sweden, UK and Ireland (see above).

A further MoU is under preparation to link these two FAB developments, harnessing the optimum benefits across the region whilst meeting the priorities of each with the possibility of full FAB integration in mind.

## FABEC



The UK is a collaborative Partner in FABEC and NATS plays an active role in the FABEC development activities. We will continue to coordinate flight efficiency measures enabling more direct routes between UK/Ireland and FABEC during this period while looking for more opportunities to ensure alignment of operational practices to deliver consistent performance. The FABEC West project forms a key part of delivering

the NATS Dover project, which will improve performance (capacity and flight efficiency) in the complex interface of SE England, improving routing, transfer conditions, airspace management arrangements, whilst cooperating on a cross border safety approach. NATS attends key influencing and decision making groups within the FABEC organisation in order to achieve these aims and to ensure a consistent development of the FAB and SES initiatives.

## 2.2. Activities relating to SES

In line with the implementation of SESII legislation (September 2009), the European Commission has significantly increased its activity in relation to FABs. The Commission has repeatedly described FABs as



one of the key tools to facilitate the full implementation of the Single Sky project.

### European FAB Coordination

There are a number of processes relating to FAB coordination at the European level. The UK-Ireland FAB will continue to engage with the EC FAB Focal Points Group (FFPG). It will also engage with the FAB Coordinator, Mr. Georg Jarzembowski, as required.

It is essential that official documentation developed at the European level is reviewed and supported by individual FABs. The UK-Ireland FAB will support the development of FAB-related documents, provided it is afforded the opportunity to do so.

## TEN-T Funding



Co-financed by the European Union  
Trans-European Transport Network (TEN-T)

The UK-Ireland FAB was successful in its application for TEN-T funding in 2010, amounting to a €1.15m award to support one of the ODNET projects, "Feasibility Study of High Level Sectors".

Further applications will be made by the UK-Ireland FAB, if the opportunity is made available by the TEN-T Executive Agency.

## Implementing Rules (See below)

The UK-Ireland FAB will meet the necessary requirements to fulfil Member State SES obligations. There are three specific Implementing Rules (IRs), which the UK-Ireland FAB is addressing on a FAB basis, namely;

- ⇒ Performance Scheme IR,
- ⇒ Network Management Function IR, and
- ⇒ FAB Establishment and Modification IR.

### Performance Scheme IR

Separate National Performance Plans for SES II first reference period 2012-2014 are required to be developed for both the UK and Ireland. The responsibility for this task rests with the State NSAs: Ireland's SRD and the UK's CAA. In addition, both NSAs are working together to jointly produce a document showing aggregated performance targets at a FAB level. However, the two States have plans to produce a common FAB Performance Plan for RP2 (2015-

2018) – although this is not yet a requirement.

The FAB Performance Advisory Group (PAG) is a coordination forum between the UK-Ireland ANSPs and NSAs which focuses on SES II performance issues; this body meets on a monthly basis. The PAG ensures that UK and Ireland will adopt a consistent approach with regard to Community-wide performance targets.

### FAB Establishment and Modification IR

The UK-Ireland FAB was established in 2008 in accordance with the then extant requirements under SES. The second legislative package contains some additional requirements. This IR has been developed to specify the documentation which must be provided by FABs to the EC, EASA and other Member States for the establishment of a FAB and for future modifications.

During 2011, the UK-Ireland FAB, via the FAB Management Board Joint

Secretariat, will coordinate the collation of any additional material deemed necessary, in order to ensure that the UK-Ireland FAB is fully compliant with the additional requirements contained in the new IR. This work has already commenced with the Safety Working Group; the SWG will complete a compliance matrix against the SMS Common Requirements (and their successors) and the FAB IR requirements.



## Network Management Function IR

The UK-Ireland FAB supports the concept of a European Management Function (NMF) and is committed to supporting the Network Manager in delivering benefits from increased European-wide coordination.

The regulation contains requirements for the Network Manager to perform the following functions:

- (A) The design of the European Route Network,
- (B) The coordination of scarce resources, in particular;
  - a. radio frequencies within the aviation frequency bands being used by general air traffic,
  - b. SSR transponder codes,
- (C) The performance of ATFM for the European Network.

Under the Network Management IR there are specific requirements relating to the cooperation and the coordination between FABs and the Network Manager (Article 7). In addition, the rule establishes FAB representation on the Network Management Board (Article 13.3.a).

The UK-Ireland FAB will:

- ⇒ Be ready to fully participate in, and contribute to the work of the Network Management Board.

- ⇒ Fully participate in the cooperative decision making processes that will create the Network Strategy and the Network Operations Plan.
- ⇒ Develop consolidated views on issues relating to operational performance of the network
- ⇒ Support achievement of operational interconnectivity with other FABs
- ⇒ Fully participate in crisis management processes to be established by the Network Manager.

The Network Management Implementing Rule has been subject to a number of amendments resulting in a proposed regulation that the UK-Ireland FAB was able to support.

It was decided in February 2011 that Eurocontrol was nominated as the Network Manager for the ATM network functions starting on the date of notification of the present Decision up to the end of the second reference period foreseen in Article 7 of the performance Regulation.

## 2.3. SESAR IP1 Alignment



Increasing efforts will be made to align FAB developments with emerging SESAR activities. Both IAA (via NORACON) and NATS are fully represented members of the SESAR JU. The Single Sky Committee approved the establishment of a SESAR IP1 Steering Group. Its membership is based on FAB lines, and the UK-Ireland FAB has an agreed joint ANSP representative on the Steering Group, as well as the Expert Group, which supports the

activities of the Steering Group. Coordination between the IAA and NATS is being managed accordingly.

Development of proposals for the permanent governance arrangements for SESAR deployment is being led by the European Commission and these are expected to be agreed by Council by the end of 2011 and implemented by the end of 2012. The UK-Ireland FAB will continue to maintain its continued involvement in the activities that drive SESAR deployment.



## 2.4. ANSP/Regulatory Coordination

Collaboration between the UK and Irish Regulators in the form of the FAB Management Board (FMB) and FAB Supervisory Committee (FSC) is essential to the effective governance and operation of the FAB. The ANSPs and NSAs will continue to enhance their working relationship to the benefit of all airspace users.

### FMB/FSC Workshop 2011

Aside from meetings at the committee level during 2011, a workshop is being proposed to take place between the FMB and FSC during 2011. Work is ongoing to consider how a common regulatory approach across the FAB might facilitate the way by which barriers created by current FIR boundaries could be eased. Therefore, the primary objective of the workshop will be to consider and address a number of areas which require a common regulatory approach or a clear understanding, such as;

- ⇒ Confirmation that the supervisory roles for accident / incident investigation in FAB airspace remain unchanged.
- ⇒ Clarification of how safety targets for the FAB (reference the FAB IR) will be developed and their relationship to the National Performance Plan(s).
- ⇒ Clarification of plans to evolve the safety regulatory regime as per the NSA MOU (e.g. oversight and enforcement mechanisms) in FAB.
- ⇒ Common interpretation and application of international requirements and rules for the FAB e.g. harmonising and then minimising differences from ICAO.

- ⇒ Clarification of whether the NSAs have a long term objective to achieve a common MATS Part 1, and which organisation will be responsible for its production and maintenance. (Note that the IAA ANSP produces its own MATS Part 1.)
- ⇒ A common approach to legal compliance from the two NSAs. This would ensure that both ANSPs have a consistent or compatible approach to complying with SES or other international legislation and regulation.
- ⇒ Confirmation that the existing FAB Safety Case remains valid subject to the development of a new Safety Case to provide compliance with the FAB IR.
- ⇒ Clarification of how the NSAs will provide governance and approval of the UK-Ireland FAB Safety Management System, and how they would address the integration of other FAB members.
- ⇒ Clarification and confirmation of the supervisory authority for cross border safety case issues including the common recognition of safety cases for the mutual use of technology e.g. the use of each others radar data for tactical control of aircraft relying on the safety assurance of the other party.
- ⇒ Single approval for shared technical systems. For instance could the UK approval for the introduction of CCAMS apply to the whole FAB without the IAA having to also make the argument? Or, would the IAA regulator recognise NATS assurance as part of IAA arguments?

- ⇒ Clarification on the Rescue Coordination Centre (RCC) function within the FAB.
- ⇒ Confirmation of NSA expectations following adoption of the SES FAB IR and Guidance Material (GM) and any resulting actions required of the ANSPs.
- ⇒ Clarification on how the NSAs intend to work with other FAB regulators to provide for integration between FABs.
- ⇒ Any other areas of NSA Policy, Strategy and Process which the FSC is investigating in accordance with the NSA MOU and which may affect the priorities and emphasis that ANSPs place on performance improvement activities.

## 2.5. Meeting schedule 2011

The UK-Ireland FAB is governed by the FMB and comprises of a Co-Chair Coordination Committee, four working groups and the Secretariat. The following dates are proposed for the FMB during 2011 and early 2012 (see table below).

Meetings of the C3 shall coincide with the ADWG and SPWG meetings. Working Groups (including Technology) will be expected to:

- ⇒ Meet as often as required to ensure successful implementation of their respective elements of the FAB Plan.
- ⇒ Expected to meet approximately one month before each FMB meeting (but are not limited to three meetings).
- ⇒ Joint WG workshops may be required.

FMB Meeting Number	Date	Location
FMB#10	14 <sup>th</sup> July 2011	Ireland
FMB#11	7 <sup>th</sup> December 2011	UK
FMB#12	14 <sup>th</sup> March 2012	Ireland

## Annex 1 – Project coding to support FAB Plan 2011-14

This annex collates all the projects listed in Section A of the Plan and confirms their respective project code and working group activity owner.

SPWG: Service Provision Working Group  
 ADWG: Airspace Design Working Group  
 SWG: Safety Working Group  
 TCG: Technology Coordination Group

Working Group	Project Reference Code	Project Reference Name (including sub-projects)
SPWG	SPWG-14 (O)	UK-Ireland FAB Network Management Organisation <ul style="list-style-type: none"> <li>• Development of the Network Management Organisation</li> <li>• FAB RAD</li> <li>• TOMS Utilisation in FAB (TOTI)</li> <li>• LARA</li> <li>• North Atlantic Routing Scheme (NERS) reduction</li> </ul>
SPWG	SPWG-13	Reduced Longitudinal Separation on the NAT
SPWG	SPWG-16	Tactical Management of LHR-NAT departures
SPWG	SPWG-18 (O)	Reduced lateral separation on the NAT
SPWG	SPWG-19	CPDLC ConOps alignment
SPWG	SPWG-20	Enhanced Customer Communications: <ul style="list-style-type: none"> <li>• More regular workshops</li> <li>• Explore possibilities of joint OPA/SPA</li> <li>• Regular progress reports / briefing emails</li> <li>• FAB Website</li> </ul>
ADWG	ADWG-9	Update to the Oceanic Domestic Interface (ODI) Concept of Operations (CONOPS)
ADWG	ADWG-11	Use of Operational Research Techniques to Design Fuel Efficient Organised Track Structures
ADWG	ADWG-15	Deliver Plans for Long Term Operations at TMAs within the FAB maximising of efficiency of design: <ul style="list-style-type: none"> <li>• Overall planning work</li> <li>• Common Transition altitude</li> <li>• Performance Based Navigation</li> </ul>

<b>Working Group</b>	<b>Project Reference Code</b>	<b>Project Reference Name (including sub-projects)</b>
ADWG	ADWG-16	Dublin TMA Development <ul style="list-style-type: none"> <li>• Point Merge</li> <li>• L70/Y124 airspace changes</li> </ul>
ADWG	ADWG-19 (O)	Optimised cross-FIR FUA <ul style="list-style-type: none"> <li>• Military agreement on process</li> <li>• Extension of EGD201</li> </ul>
ADWG	ADWG-21 (O)	Feasibility study for High Level Sectors within FAB
ADWG	ADWG-22 (O)	Fuel saving Routes
ADWG	ADWG-24	Integration of AIS/AIM
SWG	SWG-5	SMS Convergence
SWG	SWG-7	Safety Culture Improvement
SWG	SWG-8	FAB Action Plan for Operational Safety Improvement 2011-14
SWG	SWG-9	Standardised European Rules of the Air (SERA) Integration
TCG	TCG-1	Line connectivity project
TCG	TCG-2	Datalink infrastructure (ARINC/SITA)
TCG	TCG-3	8.33Khz spacing below FL195
TCG	TCG-4	Surveillance / Radar data sharing
TCG	TCG-5	CCAMS
TCG	TCG-6	Potential for FAB wide infrastructure services
TCG	TCG-7	Navigation Rationalisation Study (SESAR 15.3.2)

## Annex 2 – Customer Proposals

A joint IAA/NATS customer forum was held on the 12th October 2010. During this forum, various suggestions were made by customers.

- Customer suggestions which were deemed feasible for further assessment and possible implementation during the lifetime of this plan (2011-14) are included in the main document (see section 2.4).
- Customer proposals which were not deemed feasible at this stage are captured in the "Opportunities Register" (see Annex 3).
- It was noted that some other customer proposals were being addressed through other ongoing or planned projects.

The table provides a general description of each of the customer proposals and the assessment by the UK-Ireland FAB on how the customer proposal should be progressed.

Customer Proposal	UK-Ireland FAB Assessment of the Customer Proposal	Further Reference
Enhanced Customer Communications:	<p>This proposal includes the possible implementation of the following:</p> <ul style="list-style-type: none"> <li>• More regular workshops</li> <li>• Explore possibilities of joint OPA/SPA</li> <li>• Regular progress reports / briefing emails</li> <li>• UK-Ireland FAB Website</li> </ul> <p>This work has been included in the FAB and will be coordinated by the SPWG.</p>	SPWG-20
Free routing in UK airspace + Cross border high level sectors	Work relating to this area is being achieved through the "Feasibility study for High Level Sectors within FAB".	ADWG-21
Extend night time route availability / Increase NTFSR timeframe	This is being catered for in full via the Fuel Savings Routes project.	ADWG-22 (O)
Centre Consolidation	This is out of scope of the current operational FAB and the lifetime of this FAB Plan. The FAB has agreed to add this project to the Opportunities Register.	See Annex 3
Long-term FAB Roadmap	The UK-Ireland FAB Plan for the period 2011-14 contains the planned activities for the stated period under the remit of the ANSPs through the FAB Management Board. The FAB is a State entity and development of a longer-term roadmap for the UK-Ireland FAB is contingent on regulatory (State level) considerations.	N/A

Customer Proposal	UK-Ireland FAB Assessment of the Customer Proposal	Further Reference
Civil/Mil: Tool for better management of Danger Areas and potential for more flexible use of airspace.	As part of the introduction of UK-Ireland FAB Network Management, the FAB is currently assessing the LARA tool (a toolset that aims to simplify the management of Danger Areas).	SPWG-14 (O) – LARA
Civil/Mil: Better access to Military airspace via FAB coordination.	Through assessment, it is believed that this is already being achieved through various projects. This is a combination of ADWG-19(O) and also LARA. The customer request will be delivered through these activities as a consequence.	SPWG-14 (O) – LARA element and ADWG-19 (O)
Alignment of Ireland with UK "Future airspace strategy" (FAS)	This is primarily a UK regulatory issue. Includes policy elements such as Transition Altitude and Cross Border areas. The FAB has agreed to add this project to the Opportunities Register.	See Annex 3
Alignment with Oceanic ANSPs	Through assessment, it is believed that this is already being achieved through various projects.  An inaugural meeting of the European ANSPs who interface with NAT (at Operations Directors level) was held at Prestwick on 28 January 2011, which proved invaluable. It was proposed to reconvene at 6-monthly intervals	N/A
Airline representative on ADWG	The current governance arrangement, whereby the SPWG is co-chaired by two airline representatives (with a seat on the FMB) is to be maintained. Notwithstanding this, the FMB Co-chairs do not object to airline participation in other WGs, such as the ADWG but these representatives would not have a seat on the FMB.	N/A
Digitise LOAs / RAD & published	NATS have published standing agreements as part of RAD Appendix 6 November 2010. The SPWG will ensure this is at a FAB level under FAB RAD group.	SPWG-14 (O)
Pursue work towards NEAP	The UK-Ireland FAB is seeking to advance NAT/EUR integration via closer involvement in NEAP, and support the concept of enhancements to the NEAP governance structure.	See section 3.1

<b>Customer Proposal</b>	<b>UK-Ireland FAB Assessment of the Customer Proposal</b>	<b>Further Reference</b>
Aspirations/Plans for how to manage the interface with FABEC	The UK is a collaborative Partner in FABEC and as such NATS plays an active role in the FABEC development activities. We will continue to coordinate flight efficiency measures enabling more direct routes between UK-Ireland and FABEC during this period while looking for more opportunities to ensure alignment of operational practices to deliver consistent performance.	See section 3.1
Technology rationalisation	A Technology Coordination Group (TCG) has been established and a number of projects are included in this FAB Plan	TCG-1 through to TCG-7
Joint procurement	The FAB intends on conducting a strategic review of procurement to identify joint procurement opportunities. The FAB will also establish a process for contract renewal and a method of cross-check to ensure that no duplication exists within the UK-Ireland FAB.	N/A
Data sharing between FAA and FAB	NATS currently has access to relevant FAA data in Network Management through ECTL. As part of the delivery of a single UK-Ireland FAB Network Management cell, this will be available across the FAB.	SPWG-14 (O)
Investigate removal of T9 restrictions for non HF equipped aircraft	The ANSPs investigated the feasibility of this customer proposal and found that as the airspace does not have any supporting VHF Comms coverage, this is currently technically not feasible, during the lifetime of the FAB Plan.	N/A
Improved data quality – operational enroute CDM for FAB	The UK-Ireland FAB is providing this information. Operational data from the FAA has been made accessible to the FAB through ECTL and will be fed into the network management function of the FAB.	N/A

### Annex 3 – UK-Ireland FAB Opportunities Register

The objective of this Opportunities Register is to ensure that proposals which have previously been identified are recorded in a formal UK-Ireland FAB document. Some previously planned projects have been removed from the FAB Plan but have been retained on the Opportunities Register for future re-activation if deemed necessary. The Register is managed by the Co-chair Coordination Committee and it is reviewed on a regular basis. The following projects are formally recorded within the UK-Ireland FAB Opportunities Register:

Ref / Name	Brief Outline	Rationale for inclusion in the Opportunities Register
SPWG-n8 FAB Contingency Planning	Contingency between ACCs at a FAB level.	This is being retained on the Opportunities Register. Complementary work is being undertaken by the FAB to consider proposals for the "Coordination of service resilience and contingency strategies"
SPWG-n11 FAB Organisation Infrastructure Review	This project is to consider a root-and-branch review of all processes within the ANSPs.	This is being retained on the Opportunities Register. A number of integrated FAB groups have now been established or are under development (e.g. UK-Ireland FAB Network Management cell). Further integration between the ANSPs will occur as the FAB continues to evolve. Therefore, at this point in time a full review of all IAA/NATS management structures is not deemed necessary.
Customer Proposal:  Centre consolidation	Rationalisation of ACCs	This is deemed to be out of scope of the current operational FAB.
Customer Proposal:  Alignment with UK "Future airspace strategy" (FAS)	The UK FAS has been developed by the CAA, with contributions from the UK Department for Transport (DfT), Ministry of Defence (MoD) and NATS, and considers the development of the UK's airspace system from 2011 to 2030.	This is primarily a UK regulatory issue. It includes policy elements such as Transition Altitude and Cross Border areas. The FAB has agreed to add this project to the Opportunities Register.



Ref / Name	Brief Outline	Rationale for inclusion in the Opportunities Register
SPWG-n15 Strategy for night time operations	Rationalisation of night time operations between ACCs	This is being retained on the Opportunities Register.
SPWG-17 NAT Management Coordination / Late running NAT Traffic	This project is to consider how the FAB can offer opportunities to mitigate the effect of late running eastbound NAT flows, including developing improved co-ordination with the FAA, Gander, Shanwick, and the Shannon / UK interface arrangements.	This project was contained in the previous FAB Plan 2010-13. However, in line with the traffic downturn, the matter is not currently perceived to be an issue and a service improvement project is not currently deemed necessary. The project can be reactivated in the future if deemed necessary.
ADWG-5 Oceanic Domestic Interface Management System (ODIMS)	This project is to improve domestic sector traffic complexity (and reduce congestion in key domestic sectors) by optimising oceanic traffic in the planning phase using software tools.	This project was contained in the previous FAB Plan 2010-13. However, in line with the traffic downturn, the matter is not currently perceived to be an issue and the introduction of ODIMS is not currently deemed necessary. The project can be reactivated in the future if deemed necessary.
ADWG-18 DUB-LTMA city pair route optimisation	This project was to provide conceptual and visionary ideas to be applied to routes between Dublin and LTMA.	This project was contained in the previous FAB Plan 2010-13. A great degree of effort had been applied to the optimising of routes into and out of Dublin. The scope of this activity should be extended to wider city pairings and that it should be progressed within NEAP. The project can be reactivated as a stand-alone UK-Ireland FAB activity in the future if deemed necessary.

## Annex 4 – Benefits Breakdown

The objective of this Annex is to capture the analysis of benefits that each project in the FAB Plan is expected to deliver. This initial analysis focuses on identifying the areas in which benefits will be delivered; Safety, Service, Value and Environment. In some cases a quantitative value is given for a benefit area(s), but in most cases the area(s) is simply identified and further work throughout 2011 will quantify the benefits expected. In addition to the benefit areas there are three other reasons why the FAB may undertake a project; Customer Request, Regulation and Enabling. These areas, if they apply, are identified in the table below against each project. Each project also has an estimate of the likely capital and labour costs for implementation.

As this benefit information matures it will allow the FAB projects to be prioritised on a cost/benefit basis.

Reference Code and Project Name	Areas in which benefits will be delivered				Other reasons to undertake the project			Effort Estimate
	Safety	Service	Value ANSP Cost Effectiveness	Environment	Customer Request or value to customers	Mandate or Regulation	Enabling	
<b>SPWG-14 (O): UK-Ireland FAB Network Management Organisation</b>		✓	✓		✓			Capital: Low Labour: Med
<b>SPWG-13<sup>1</sup>: Reduced Longitudinal Separation on the NAT</b>		✓		✓	✓			Capital: Low Labour: Low
<b>SPWG-16: Tactical Management of LHR-NAT departures</b>		✓		✓	✓			Capital: nil Labour: Low

<sup>1</sup> Note that there is a potential dis-benefit to state operations – military workload in the area may be increased owing to the smaller spacing between civil aircraft.

Reference Code and Project Name	Areas in which benefits will be delivered				Other reasons to undertake the project			Effort Estimate
	Safety	Service	Value ANSP Cost Effectiveness	Environment	Customer Request or value to customers	Mandate or Regulation	Enabling	
SPWG-18 (O) <sup>2</sup> : Reduced lateral separation on the NAT		✓		✓		✓		Capital: Med Labour: Med
ADWG-9: Update to the Oceanic Domestic Interface (ODI) Concept of Operations (CONOPS)							✓	Capital: nil Labour: Low
ADWG-11: Use of Operational Research Techniques to Design Fuel Efficient Organised Track Structures		✓		✓	✓			Capital: nil Labour: Low
ADWG-15 <sup>3</sup> : Deliver Plans for Long Term Operations at TMAs within the FAB maximising of efficiency and design		✓	✓	✓			✓	Capital: nil Labour: High
ADWG-16 <sup>4</sup> : Dublin TMA Development	✓	✓	✓	✓	✓			Capital: nil Labour: Med

<sup>2</sup> Note that there is a potential dis-benefit to state operations – military workload in the area may be increased owing to the smaller spacing between civil aircraft.

<sup>3</sup> Note there are issues for the states in this area – for example the cost of equipping military aircraft for PBN will be high. UK Mil have commented to CAA on this as part of the consultation process.

<sup>4</sup> Note that UK Mil see a potential dis-benefit in this project: they will have to realign airways into and out of Valley which will also incur training and procedure update costs.

Reference Code and Project Name	Areas in which benefits will be delivered				Other reasons to undertake the project			Effort Estimate
	Safety	Service	Value ANSP Cost Effectiveness	Environment	Customer Request or value to customers	Mandate or Regulation	Enabling	
ADWG-19 (O): Optimised cross-FIR FUA		✓	✓	✓				Capital: Med Labour: High
ADWG-21 (O): Feasibility study for High Level Sectors within FAB	✓	✓	✓	✓	✓			F&O only Capital: nil Labour: High
ADWG-22 (O): Fuel saving Routes		✓		✓	✓			Capital: nil Labour: Med
SWG-5: SMS Convergence	✓	✓	✓			✓		Capital: nil Labour: Med
SWG-7: Safety Culture Improvement	✓	✓	✓			✓		Capital: nil Labour: High
SWG-8: FAB Action Plan for Operational Safety Improvement 2011-14	✓							Capital: nil Labour: Low
SWG-9: Standardised European Rules of the Air (SERA) Integration	✓	✓				✓		Capital: nil Labour: Med
TCG-1: Line connectivity project			✓ €250K per annum saving					Capital: Low Labour: Low

Reference Code and Project Name	Areas in which benefits will be delivered				Other reasons to undertake the project			Effort Estimate
	Safety	Service	Value ANSP Cost Effectiveness	Environment	Customer Request or value to customers	Mandate or Regulation	Enabling	
TCG-2: Datalink infrastructure (ARINC/SITA)			✓			✓		Capital: Low Labour: Low
TCG-3: 8.33Khz spacing below FL195		✓				✓		Capital: Low Labour: Low
TCG-4: Surveillance / Radar data sharing		✓	✓					Capital: nil Labour: Med
TCG-5: CCAMS			✓					Capital: nil Labour: Low
TCG-6: Potential for FAB wide infrastructure services			✓					Capital: nil Labour: Low
TCG-7: Navigation Rationalisation Study (SESAR 15.3.2)			✓					Capital: nil Labour: Low