SESAR Annual Report 2009

founding members

EUROPEAN COMMISSION

EUROCONTROL

SESAR JOINT UNDERTAKING

Today's partners for Tomorrow's aviation

The SESAR programme is the operational and technological answer to Europe's major air traffic management challenges. The aim of the SESAR Joint Undertaking is to ensure the modernisation of the European air traffic management system by coordinating and concentrating all relevant research and development efforts in the Community with a view to harmonising implementation. Partnership, sustainability and user orientation are founding principles of the SESAR Joint Undertaking's work approach.

The previous Annual Report (2007-2008) is available at **www.sesarju.eu**

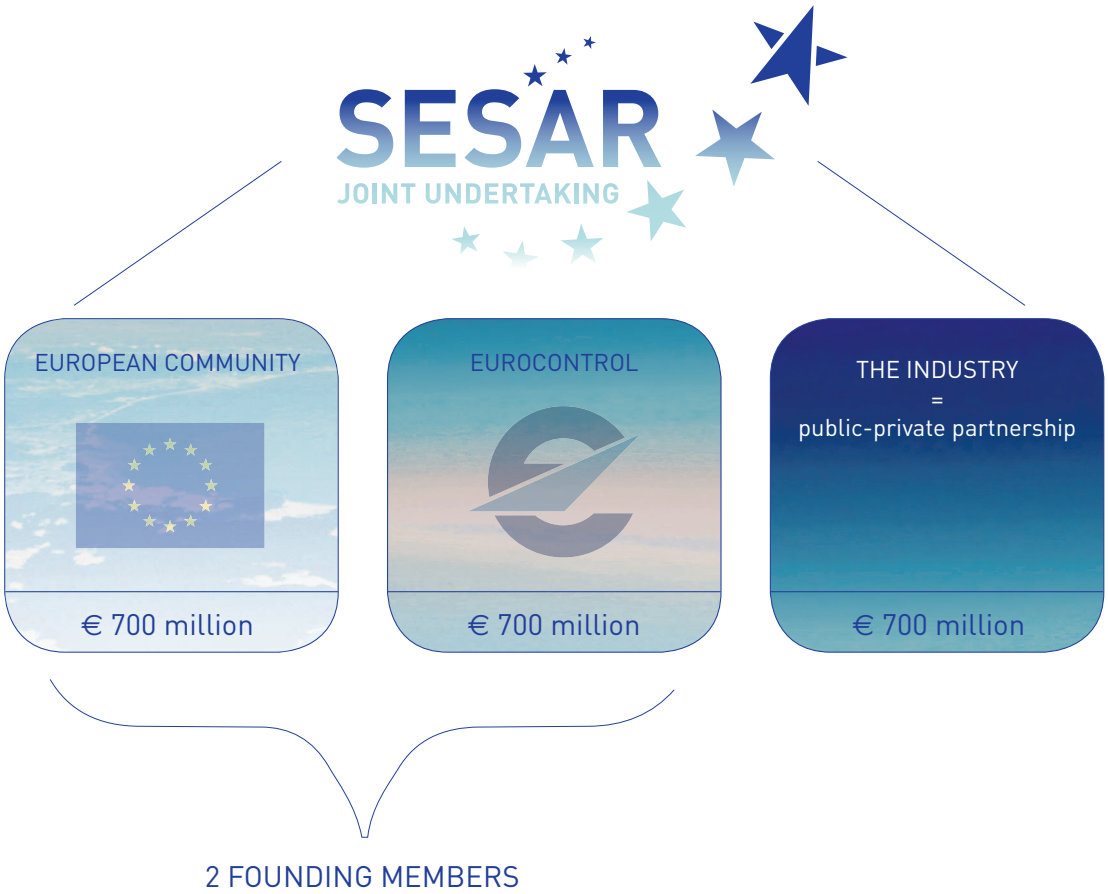
ANNUAL REPORT 2009

Content

SESAR JOINT UNDERTAKING

Corporate governance

The **SESAR Joint Undertaking (SJU)** was created under European Community law on 27 February 2007. The SJU is a truly public-private entity with three pillars:



The governance of the SESAR Joint Undertaking is ensured by the Administrative Board and the Executive Director.

The Administrative Board is composed of representatives of:

- the members of the SJU;
- the military;
- the civil users of airspace;
- the air navigation service providers;
- the equipment manufacturers;
- the airports;
- the bodies representing staff in the air traffic management sector;
- scientific institutions and the scientific community.

On **31 December 2009** the Board's members were:

SJU Founding Members	Member	Alternate Member
European Commission	Mr Daniel Calleja (Chairman)	Mr Luc Tytgat
EUROCONTROL	Mr Bo Redeborn (Deputy Chairman)	Mr Bernard Miaillier
SJU Members	**Member**	**Alternate Member**
AENA	Ms Carmen Librero Pintado	Ms Mariluz De Mateo
Airbus	Mr Bernard Rontani	Mr Patrick Schuster
ALENIA Aeronautica	Mr Nazzario Cauceglia	Ms Alessandra Saroglia
DFS	Mr Dieter Kaden	Mr Georg Dickhaut
DSNA	Mr Maurice Georges	Mr Thierry Liabastres
ENAV	Mr Iacopo Prissinotti	Mr Cristiano Baldoni
Frequentis	Mr Johannes Bardach	Mr Johannes Prinz
Honeywell	Mr Jean-Luc Derouineau	Mr Alexander Laybros
INDRA	Mr Rafael Gallego Carbonell	Mr Ramon Tarrech
NATMIG	Mr Aage Thunem	Ms Ann Kullberg
NATS	Mr Ian Hall	Mr Andrew Dobson
NORACON	Mr Thomas Allard	Mr Niclas Gustavsson
SEAC	Mr Giovanni Russo	Mr Thorsten Astheimer
SELEX Consortium	Mr Antonio Mattogno	Mr Stefano Porfiri
Thales Group	Mr Richard Deakin	Mr Luc Lallouette
Stakeholder Representatives	**Member**	**Alternate**
Military	Gp Capt John Clark	Gen. Jean-Robert Cazarré
Civil users of airspace	Mr Vincent de Vroey	Mr Pedro Vicente Azua
Air Navigation Service Providers	Mr Guenter Martis	Mr Bernard Martens
Equipment manufacturers	Mr François Gayet	Mr Patrick de Prévaux
Airports	Mr Roland Krieg	Mr Philippe Ahrens
Staff in the ATM sector	Mr Joël Cariou	Mr Jean-Pierre Etienne
Scientific community	Mr Peter Hecker	Mr Jean-Jacques Favier

Permanent Participants	
SJU Executive Director	Mr Patrick Ky
SJU Director of Administration and Finance	Mr Carlo Borghini
SJU Internal Audit	Mr Ross Walton
Secretary of the Board	Mr Federico Grandini

The Executive Director, Mr Patrick Ky, directs the execution of the SESAR programme within the guidelines established by the Administrative Board, to which he reports. To achieve this, he has the full commitment of the SJU team.

The management of the SJU is organised as follows:

Director Administration and Finance: Carlo Borghini
Chief Regulatory Affairs: José Antonio Calvo Fresno
Chief Programme Officer: Florian Guillermet
Chief Technology and Innovation: Peter Hotham
Chief Communication Officer: Eric Platteau
Chief Economics and Environment: Alain Siebert
Chief Operational Concept and Validation: Michael Standar

SESAR JU staff

Message from the Chairman of the Administrative Board

Daniel Calleja, Director Air Transport Directorate – European Commission

The Single European Sky policy promotes a holistic approach for developing a sustainable air transport system in Europe. SESAR is a fundamental and inseparable component of the Single European Sky. Technology in fact, remains a key enabler and driver for the implementation of the Single Sky. Furthermore, through SESAR Europe's innovation capacity and the competitiveness of its industry can be boosted.

SESAR is therefore a flagship Programme for Europe and today the SESAR Programme is the SESAR Joint Undertaking.

In 2009 the Joint Undertaking devoted most of its efforts to consolidating its structure, which was set up just over a year earlier. It managed to finalise a complex membership process, it established a comprehensive work programme and organised and launched the operational activities of the development phase.

Through the support of the European Union and EUROCONTROL Member States, the joint efforts and commitment of the members and staff of the Joint Undertaking, the SESAR Programme has made substantial progress. The results achieved in 2009 are described in detail in this annual activity report. However, I would like to highlight some of the major milestones achieved in this past year and which constitute a solid basis for SESAR development phase:

- On 1 January the SESAR Joint Undertaking formally became a European Union body. This new status provides the Joint Undertaking with the necessary legal and financial framework to accomplish its mission in the most efficient manner.
- On 30 March the Transport Ministers of the European Union endorsed the European ATM Master plan. This is our commonly agreed roadmap for the development and future deployment of SESAR and the basis for the Joint Undertaking's work programme.
- In June, 15 new members acceded, with binding commitments, to the Joint Undertaking, thus officially launching the first ATM public-private partnership in Europe.

The progress made has also enabled the European Union to enjoy a strong position in the international scene. This has facilitated launching cooperative projects and international cooperation agreements with third countries, especially with the United States. It is essential to ensure interoperability with other systems such as NextGen. To that extent, negotiations were launched with the United States by the European Commission with the active support of the Joint Undertaking.

We should be very proud of the results we have achieved so far. By engaging in such an ambitious programme Europe has shown its commitment to lead global change in ATM. However, the successful implementation of the Single European Sky can only be achieved with the full, synchronised and timely deployment of SESAR. We must therefore be conscious of the greater challenge that lies ahead of us in the years to come and of our responsibility to deliver and meet the high expectations that such ambition entails.

Daniel CALLEJA

Foreword from the Executive Director

2009 = SESAR work programme takes off.
Strong commitment to deliver.

SESAR coordinates and concentrates all EU research and development activities for the new generation Air Traffic Management (ATM) system that Europe needs. In 2009 the programme united strengths and expertise of more than 1.000 engineers and experts from 70 companies across Europe.

SESAR as the technological component of the Single European Sky, is a key element to achieve its ambitious vision. The results of SESAR, in particular standards and products, will support the creation of the Single European Sky by harmonising the technical systems in Europe. SESAR products will also be supported by EU legislation, through the mandating of SESAR standards in European airspace and airports.

We involve key stakeholders such as staff associations (pilots, engineers, air traffic controllers) to participate in the design and validation of their new tools. In 2009, we signed contracts with airlines and airline associations, including the association of private owners and pilots, to get their input into the programme. We discuss with regulatory authorities on the certification of the future SESAR products. And we talk to the Air Forces on how military systems, equipment and operational procedures must evolve to adapt to the SESAR environment.

SESAR is not about research for the sake of doing research. The programme is only starting but we have a clear implementation goal in mind. We will not succeed without the involvement and commitment of all parties.

2009 has marked a key step forward with the real take off of the SESAR programme. The SESAR community is growing fast. We are all eager to work hard in 2010 to move fast-forward!

Today's Partners for Tomorrow's Aviation

Patrick KY

OUR VISION

By 2012 we have created the change in European ATM that demonstrates to the world our ability to deliver benefits to the community.

Our strategic objectives by 2012

1/ Initial 4D trajectory is validated in an operational environment supported by satellite-based technology

2/ 5,000 flights, including 500 military, are SESAR labelled

3/ 80% of SESAR projects have tested their output in a real life environment

4/ First SWIM pilots are in place to exchange data across at least five domains

5/ The first remote tower is ready for operations

6/ SESAR benefits are demonstrated on city pairs connecting eight European airports

7/ Airspace users have signed up to the SESAR business case for time-based operations

Part 1: Start-up of all key activities

2009 was a critical year for the SJU, during which key elements of its structure and of the Public Private Partnership were established and the programme implementation made its initial steps. The objectives set for the year, therefore, reflect this status showing the determination of the SJU to be ready for a full speed implementation of the SESAR programme from 2010 onwards.

1.1. Programme objectives achieved to move fast-forward

The membership process was concluded on 26 March 2009 with the Administrative Board decision to award the membership to the 15 pre-selected candidate members together with the award of the activities included in the scope of IBAFO 1. 246 projects were awarded to the SJU members for a maximum co-financing of EUR 511 million.

The Multilateral Framework Agreement (MFA), the rules governing the execution of the programme, was signed on 11 August 2009, after the completion of the approval process by the EC of the new Financial Rules of the SJU. A second IBAFO was launched in July 2009. As a result, all the activities related to the SESAR programme were awarded by the end of 2009.

Programme Methodology, including Engineering Methodology, was established with a focus on the initiation phase of the programme and is in place as planned. SJU Engineering Methodologies are the procedures, processes and tools that are applied to ensure an overall consistency and coherence throughout the SESAR programme. The Engineering Methodology directly supports the execution of the programme by grouping projects together in ATM Services.

During 2009, an overall first SESAR Validation & Verification strategy was developed and agreed in order to establish at an early stage a common way and rationale to deal with validation & verification in the SESAR programme and to ensure that it is in line with the needs of the European ATM Master Plan. As SESAR contains many Work Packages and projects that need to be integrated into value adding manageable packages of projects for validation activities, the SJU started discussions with its members to agree criteria and principles to find suitable and reasonably justified validation infrastructure environments for ATC, airports, airborne and airspace user operations.

In accordance with the MFA, each project goes through an initiation phase. The initiation phase starts with a formal kick-off. In 2009, 126 R&D projects were launched; 62 Initiation Reports were received by the SJU by year end. 32 Initiation Reports were analysed out of which 13 projects were authorised by the Executive Director to start execution and 19 were considered as not fulfilling one or more of the acceptance criteria and a revised version was requested. 43 management activities were kicked-off and following the submission of Management Initiation Reports will be authorised to proceed to the execution phase at the beginning of 2010.

1.2. Critical involvement of stakeholders secured

The SESAR programme is based on a multi-stakeholder approach. The SJU is doing its utmost to integrate the input from all key actors of the air transport sector. This is the only way to make SESAR happen and to deploy at the end for the benefit of all.

In order to embed the view of the airspace users in the SESAR programme and to have technical feedback on their perception of the results of the development phase at an early stage, the SJU decided to award contracts to acquire airspace users' expertise in 2009.

The selection of staff associations was made through a negotiated procedure addressed to all staff associations of the sector. The five resulting framework contracts were sent to the selected associations and two were signed by year end. The other contracts are expected to be signed at the beginning of 2010. These contracts constitute a general framework for the provision of general support and expertise to the SJU by the staff associations in the framework of the SESAR Work programme.

Scientific Committee

In 2009, the SJU set up a Scientific Committee to reinforce its innovative and scientific approach. Twelve scientists have been selected and have held their first meeting in 2009. An astronaut, professors, researchers are now part of SESAR demonstrating the strong involvement of the Scientific Community to guarantee a high level of academic contribution to the SESAR programme.
The committee will meet at least twice in 2010 and deliver scientific advice on the SESAR programme at the SJU's request. They will also follow up their recommendations already placed in Work Package (WP) E content and monitor the outcome of WP-E networks and projects.

Stakeholders consultation process (Regulatory Authorities)

The SJU has maintained and increased its presence in the relevant forums in which Regulatory Authorities coordinate and take decisions, such as:

- The Single Sky Committee,
- The Safety Regulation Commission,
- The Regulatory Interface and Coordination Board – Area Northwest.

Since December 2009, the SJU also interacts with the National Supervisory Authorities through the newly created National Supervisory Authorities Coordination Platform, under the umbrella of the Single Sky Committee. The participation of the SJU in this forum will aim at obtaining the opinion of the National Supervisory Authorities on the deliverables of different SJU WPs, which could have relevance for the activity of the National Supervisory Authorities during the deployment phase (safety cases, security analysis, cost-benefit analysis, environmental studies...).

1.3. AIRE & OPTIMI making progress

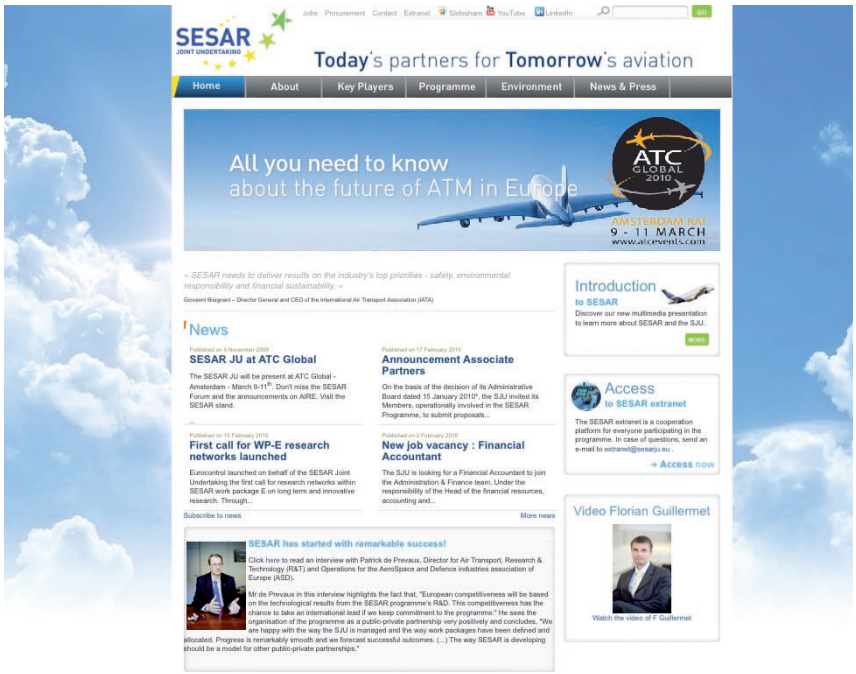
Mitigation of CO2 emission is a priority for SESAR. In the framework of AIRE, more than 100 trials were conducted in real operation in all ATM domains validating solutions to reduce the environmental impact of aviation in the short term, building on present aircraft capability levels. Final results of these activities will be communicated to stakeholders in March 2010. Besides the execution of AIRE projects directly co-financed by the SJU, the programme has also been strengthened with the overall coordination and integration of related EC funded projects (such as ERAT) and Eurocontrol funded projects (such as CASSIS II) to capture synergies.

Building on the success of AIRE, preparations have been made during 2009 to ensure the expansion of the programme in 2010 including strengthening of the cooperation with relevant partners outside Europe such as the Federal Aviation Administration (FAA) and NAV Canada. In addition to the execution of AIRE, a further boost to the environmental aspect is being achieved through the SESAR programme initiation phase accelerating the initiation of projects that are most likely to deliver environmental benefits in the short term.

New Initiative (OPTIMI)

Following the tragic air accident that occurred last summer over the South Atlantic, the SJU was tasked with launching and steering a specific initiative on flight tracking in oceanic and remote low-density airspace. This initiative, called OPTIMI (Oceanic Position Tracking Improvement and Monitoring) has been set up to promote appropriate monitoring in these areas, as well as an optimum coordination between ATS and SAR services. The initiative is based on existing ADS-C technology and initial CPDLC, and will also take into consideration air-ground download of safety relevant data from black boxes.

As a result of this call for tenders and the subsequent selection process, the SJU awarded in December 2009 the execution of the five lots to a consortium of 13 different entities and companies from Canada, France, Iceland, Portugal, Spain and the UK.



New website launched in November

1.4. Adequate administrative support to best manage the programme

During 2009, following the entry into force on 1 January 2009 of Council Regulation (EC) 1361/2008 of 16 December 2008, the SJU realised and completed the transition to a full European Union's Body. On 24 April 2009, the European Parliament adopted BR2/2009 which included the integration of the SJU staff establishment plan in the 2009 EU Budget. Furthermore, during 2009 the SJU started aligning its processes and procedures to ensure compliance with the new Financial Rules and the Staff Regulations.

Planning & Risk Management

Within the planning cycle, the SJU develops the Annual Work Programme (AWP) defining objectives and related activities; the document is the result of a dialogue between managers and staff ensuring that resources are concentrated on the achievements of the overarching European ATM Master Plan objectives. The SJU objectives are coupled with performance indicators which constitute the basis for performance measurement. The AWP 2010 was presented to the Administrative Board at its December meeting and approved on 15 January 2010. At the level of each project, during the initiation phase a specific schedule of deliverables to be monitored by the SJU programme managers is established. This schedule will constitute a roadmap towards the achievement of the results.

Evaluation and audit

In 2009 the Administrative Board established the internal audit function taking into account the size and scope of the SJU and the specificities resulting from its nature. The Board appointed the SJU Internal Auditor, approved the internal audit charter and the internal audit work programme defined by the Internal Auditor on the basis of a risk assessment. The internal audit work programme ensures a periodical evaluation of the systems and procedures adopted by the SJU. In accordance with Article 72(4) the internal auditor submits to the Administrative Board an annual internal audit report setting out, inter alia, the number and type of internal audits conducted, the recommendations made and the action taken on these recommendations.

The European Court of Auditors audits the SJU on an annual basis, in particular the annual accounts and assesses the respect of the principle of sound financial management, legality and regularity of the underlying transactions.

Communication

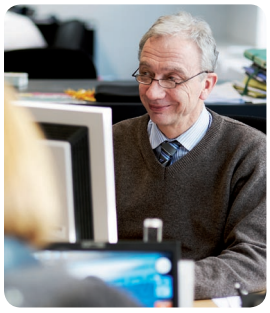
Effective communication is crucial to the success of SESAR; the SJU implements its communication strategy through a multiannual Communication Plan. The strategy is based on a two pronged approach: internal communication addressed to SJU's staff and to all SESAR dedicated staff at the members; external communication addressed to all stakeholders and citizens having interest in SESAR.

The Communication Plan, which was approved by the Administrative Board in October, describes how to communicate the objectives and activities of the SJU to all stakeholders and how to support the change management vital to SESAR's success. Internet technology is the main support both through the public website and the intranet. In order to reinforce and harmonise communications activities, the SJU has set up a Coordinated Communication Team involving the members aiming at sharing and adopting common guidelines on how to communicate on successes and milestones reached within the programme.

Part 2: Take off of the programme

On 03/06/09, the SESAR programme officially took off during a large meeting at the SJU premises. The programme defines all projects and activities to be undertaken in the 2008-2016 timeframe under the supervision of the SJU.

The programme is divided into WPs addressing ATM domains, themselves organised into Sub-WPs and projects dealing with a specific issue. Through the most appropriate tender procedure, the SJU has selected the best partners for each project.

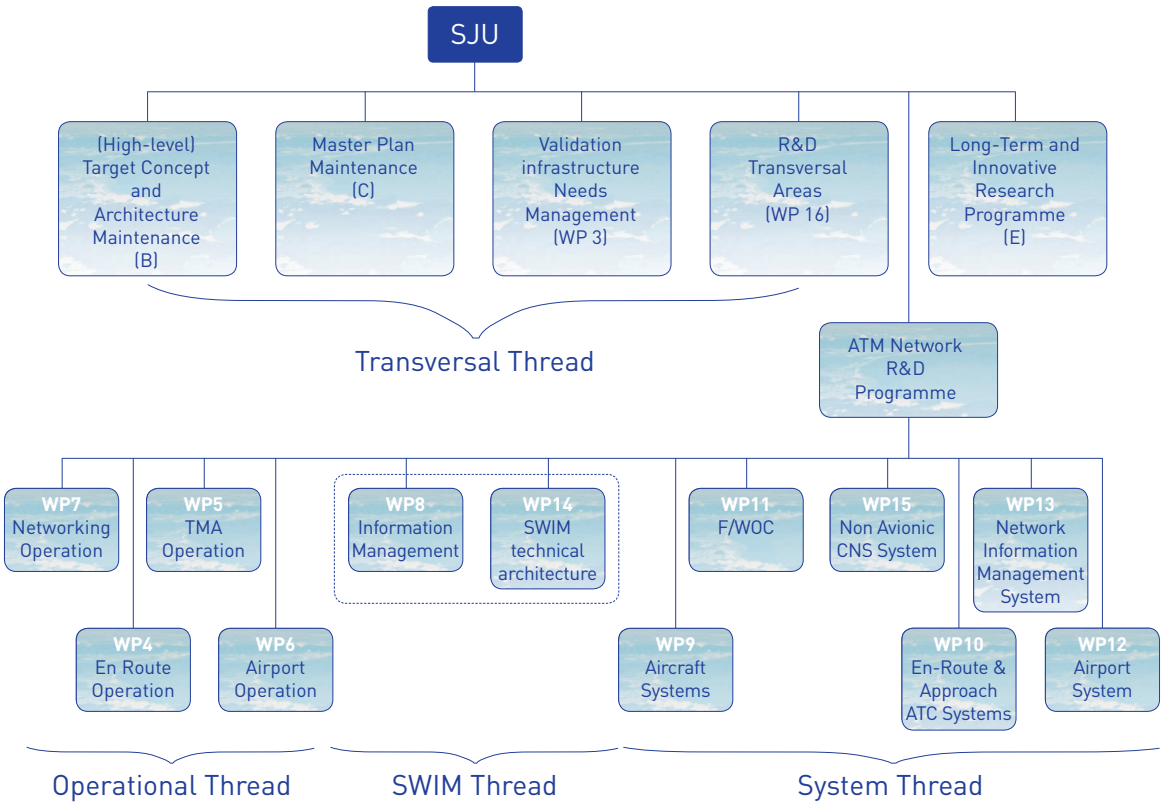



Figure: Work Breakdown Structure high-level overview

The programme is split in four different threads:

- Operational considerations are addressed under WPs 4, 5, 6 and 7,
- System considerations are addressed under WPs 9, 10, 11, 12, 13 and 15,
- System Wide Information Management (SWIM) considerations are addressed under WPs 8 and 14,
- "Transverse" activities, such as validation infrastructure, development of safety, security, environment and human performance cases, European ATM Master Plan, target concept and architecture maintenance, are dealt by a number of additional WPs (i.e. B, C, E, 3, 16).

It is expected that benefits provided by these transverse WPs will manifest themselves through their application through other operational and system WPs, and thus will contribute to maximising benefits of those WPs.

The R&D programme is further divided into a total of about 310 projects or transversal activities. The following sections give an overview of the achievements per work package for 2009.

On 03/06/09, Patrick KY commented the kick-off: "This is a very intense and promising period and we really feel now that the SESAR programme is alive and kicking. From a project management point of view, SESAR is one of the most complex programmes you can imagine: roughly 300 projects managed by a total of 70 companies. We know what the notion of "unique public-private partnership" means in practice at SESAR!"

Project kick off

The initiation phase of work packages B, 3, 4, 5, 6, 8, 9, 10, 12, 14 and 15 started with the overall programme launch on 3 June. The planning was done in close coordination with the corresponding WP leaders and based essentially on the links among projects and programme needs for delivering early results.
Work packages C, 7, 13 and 16 on the other hand were part of the second invitation for best and final offers (IBAFO 2). The initiation phase for these work packages is planned to start in February 2010. The sequence of the project initiations will be defined by the SJU in consultation with its members. During the project initiation phase, the project descriptions will be refined and a decision on whether to proceed to project execution will be made by the SJU Executive Director. The first project executions are foreseen to commence from September 2010 onwards.

WP-B – Target Concept and Architecture Maintenance

The leadership of WP-B was awarded to DFS.

WP-B is organised into five R&D projects; four projects were initiated with a kick off in June 2009 and one was re-opened for airborne and ground industry members as part of IBAFO 2. The results of the offer evaluation were presented to the Administrative Board in December 2009, and the project will be initiated in the first half of 2010. The Project Initiation Reports (PIRs) of the four initiated projects were presented to the SJU for assessment and approval at the end of November 2009.

WP-C – Master Plan Maintenance

WP was part of IBAFO 2. The leadership of WP-C was awarded to Eurocontrol.

WP-3 – Validation Infrastructure Adaptation and Integration

The leadership of WP-3 was awarded to ENAV.

The work in WP-3 is organised in eight projects that fall in three sub-work packages. Three projects were re-opened after the first IBAFO. In August the first WP-3 project was kicked-off following an agreement at the Programme Committee (PC) to start this re-opened project, working on the inventory of validation and verification infrastructure. The five projects in WP-3 that were not re-opened started towards late November 2009 so as to benefit from an initial

view on operational validation and technical verification plans described in initiation reports of projects in WPs 4-6 and WP09-15. The two remaining re-opened projects will not start until early February 2010.

Following uncertainty at the beginning of the work programme over the relationship between WP-3 and the other work packages, the SJU has engaged the members in several discussions to clarify the fit. The WP-3 members are actively involved in these discussions. It is expected that they lead to clarification early 2010, when most of the WP-3 projects will also have completed their initiation phase.

WP-4 – En-Route Operations

The leadership of WP-4 was awarded to DSNA.

WP-4 is organised into 16 R&D projects. Of these, ten projects were initiated in 2009, and two submitted their final PIR in Dec 2009. These are due for analysis by the SJU in view of the start of the execution phase.

Six projects of WP-4 were included in the IBAFO 2 procedure, and the results of the offers evaluation were presented to the Administrative Board in December 2009. These six projects will be initiated in the first half of 2010.

WP-5 – Terminal (TMA) Operations

The leadership of WP-5 was awarded to NATS.

WP-5 is organised into 17 R&D projects. Of these, twelve projects were initiated in 2009, and six projects submitted their final PIR in 2009. Three final PIRs were evaluated in Dec 2009 and two are currently (Feb 2010) under revision for scope clarification (one of them is the essential project 5.2) and one will be under revision in Jan 2010. The remaining final PIRs are due for analysis by the SJU in view of the start of the execution phase. Three projects submitted their final PIRs with a delay between two and ten days compared to deadline.

Six projects of WP-5 were included in the IBAFO 2 procedure, and the results of the offers evaluation were presented to the Administrative Board in Dec 2009. One of these 're-opened' projects (5.6.6) was initiated before the conclusion of the BAF 02 procedure due to its close links with other projects in WP-9 and 15 already initiated, and the remaining five projects of WP-5 will be initiated in first half of 2010.

WP-6 – Airport Operations

The leadership of WP-6 was awarded to AENA.

WP-6 is further organised into 22 projects and progress in 2009 has been:

- WP management activities launched;
- A schedule for the initiation of projects agreed;
- Eleven R&D projects initiated;
- Three final PIRs received of which two projects have been authorised for execution (the third was still subject to the formal SJU review process at the end of 2009).

WP-7 – Networking Operations

WP-7 was part of IBAFO 2. The leadership of WP-7 was awarded to Eurocontrol.

WP-8 – Information Management

The leadership of WP-8 was awarded to NORACON.

The work in WP-8 is organised in two sub-work packages focussing on AIRM and ISRM that are composed altogether

of 18 projects. One project was re-opened following the first IBAFO. Fifteen of the other projects were scheduled to kick-off between late August and mid October 2009. This happened in three batches. The initiation reports from the first batch were submitted just before the end of 2009 with minimal delay. Together with the other projects they will be evaluated early 2010 to prepare the decision on the start of their execution. First indications are that a few may be suspended until WPs 7 and 13 are kicked off.

WP-9 – Aircraft Systems

The leadership of WP-9 was awarded to Airbus.

During 2009, 22 projects were kicked off, out of which:

- Nine projects were authorised for execution (including 9.1 - Airborne Initial 4D Trajectory Management);
- No project was suspended;
- Additional clarifications were requested before a potential authorisation for the two other projects.

From an analysis of the initiation process and reports, it can generally be noticed that several projects do not strictly meet DMT1 (e.g. 9.1, 9.5, 9.13, 9.14). The main reason is related to the time frame required for the development and verification of the different airborne elements.

WP-10 - En-Route & Approach ATC Systems

The leadership of WP-10 was awarded to INDRA and THALES.

WP-10 is organised into 23 R&D projects. Of these, twelve projects were initiated in 2009, and eight submitted their final PIR in 2009. An essential project (10.1.7) was evaluated in Dec 2009 and is currently under revision for scope clarification. The remaining final PIRs are due for analysis within SJU in view of the start of the execution phase. Two projects submitted their final PIRs with a delay between two and five days compared to deadline. Two projects were unable to reach an agreement on final PIR (due in Dec 09) and are currently blocked, awaiting an SJU resolution on the issue.

Eight projects of WP-10 were included in the IBAFO 2 procedure, and the results of the offers evaluation were presented to the Administrative Board in Dec 2009. Therefore eleven projects of WP10 will be initiated in first half of 2010.

WP-11 - Flight Operations Centre System

The SJU initiated in October 2009 a competitive dialogue process for WP-11 that is intended to be concluded during the second half of 2010, with contract award by September 2010.

WP 12 - Airport Systems

The leadership of WP-12 was awarded to INDRA and SELEX (as part of IBAFO 2).

WP 12 is further organised into 29 projects and progress in 2009 has been:

- WP Management activities launched;
- A schedule for the initiation of projects agreed;
- A total twelve R&D projects initiated;
- Six final PIRs received, all of which are still subject to the SJU review process at the end of 2009.

WP-13 – Network Information Management System (NIMS)

WP-13 was part of IBAFO 2. The leadership of WP-13 was awarded to Eurocontrol.

WP-14 - SWIM technical architecture

SELEX Consortium
A Finmeccanica Company

THALES

The leadership of WP-14 was awarded to SELEX and THALES (as part of IBAFO 2).

The work in WP-14 is organised into nine projects, two of which were re-opened after the first IBAFO. One WP-14 project was initiated particularly early in June because its principal objective is to assure integration of relevant material from SWIM-SUIT into the SESAR work programme. This is a short project since SWIM-SUIT will finish just after the summer of 2010. Its initiation report was amongst the very first to be approved in November and the first project activities were to attend a SWIM-SUIT user forum in December and establish coordination with that project.
The other WP-14 projects were authorised to be kicked off between late August and late October in two groups of three projects. The first set of initiation reports was due around the end of 2009 and all will be reviewed early 2010 to prepare the decision on the start of their execution.

WP 15 – Non Avionic CNS System

SELEX Consortium
A Finmeccanica Company

THALES

The leadership of WP-15 was awarded to SELEX and THALES.

During 2009, twelve projects have been kicked off, out of which:

- Two projects have been authorised for execution;
- No project has been suspended;
- Additional clarifications have been requested before a potential authorisation for one project;
- The initiation reports of three projects have been received and are under analysis.

Among these twelve projects it has also to be noticed that, although being part of the second call (IBAFO 2), some projects have been kicked off in anticipation to the results of the IBAFO 2 results. This decision has been motivated by the need to feed dependant SESAR projects with necessary deliverables. The concerned projects are 15.2.4, 15.2.6, 15.3.1.

WP 16 – R&D Transversal Areas

EUROCONTROL

W-16 was part of IBAFO 2. The leadership of WP-16 was awarded to Eurocontrol.

WP-E – Long Term and Innovative Research Programme

In July, the Administrative Board agreed on the launch of WP-E which is being called by Eurocontrol on behalf of the SJU and funded as part of the Eurocontrol's contribution to the SJU.

WP-E type of activities as well as the level of contribution have been settled leading to a balanced mix of research networks with PhDs and research projects.

The Scientific Committee was established and met for the first time in October 2009. They defined their modus operandi and provided their advice to refine the proposed Research Themes.

The long term and innovative research themes were defined in December 2009.

In December, most of the legal and contractual issues have been resolved to satisfy both the SJU and Eurocontrol research procurement rules. A call for proposals for networks has been prepared (to be opened in January 2010) in line with FP7 principles.

Part 3: Cooperation at the heart of SESAR

NextGen

"NextGen is a wide ranging transformation of the entire US national air transportation to meet future demands and avoid gridlock in the sky and in the airports. It moves away from legacy ground based technologies to a new and more dynamic satellite based technology. Technologies and activities that support this transformation are currently part of the FAA's investment portfolio." (FAA, Feb14 2007)

During 2009 the areas of co-operation between the two programmes were determined and agreed, with a priority list for defining the specific co-operation activities and initial identification of the SESAR partner to lead the work.

Together with Eurocontrol, the SJU agreed the transfer of some existing areas of co-operation from the Eurocontrol/FAA Memorandum of Cooperation (MoC) to the management of the SJU.

Modernisation of ATM is a global endeavour

During 2009, the SJU was asked to take the floor at several summits to share its experience and voice the European way of modernising ATM. These worldwide forums and official gatherings took place in several countries: Ukraine, India, China, Japan, Turkey, Qatar. International cooperation is key to achieve large interoperable systems across the globe.

Other coordination activities

The SJU has also established coordination with the **ESA**/IRIS programme. ESA launched the IRIS programme, with the objectives to: develop a new satellite-based air-ground communication system for ATM on the basis of the SESAR requirements, and validate its end-to-end performance.

Coordination was established with **Clean Sky**. Clean Sky and SESAR are two major initiatives launched by the European Union, aiming at improving air transport with regard to environmental performance. Following the establishment of Clean Sky, agreement was reached on points of contact in both SESAR and Clean Sky at the end of November 2009. The first coordination meeting is scheduled for January 2010, where areas such as 4D trajectory activities will be discussed.

To maximise the benefits to the SESAR development from R&D efforts, and reduce the risk of fragmentation, the SJU worked very closely with **FP6 Research Framework Projects** dealing with relevant ATM issues. In fact, the SJU assisted the European Commission in reviewing and aligning these projects with the SESAR programme, in accordance with the European ATM Master Plan. Upon request from the EC, projects including NEWSKY, iFLY, RESET, EPISODE 3, CATS, CAATS II and SWIM-SUIT were reviewed and appropriate recommendations made. In particular, as result of the SESAR review of SWIM SUIT, changes were made to the scope and partner constitution to focus on demonstrating concept viability and interoperability. Alignment with SESAR WP-14 was crafted during the initiation phase of SESAR WP-14.

"SESAR needs to deliver results on the industry's top priorities - safety, environmental responsibility and financial sustainability."

Giovanni Bisignani – Director General and CEO of the International Air Transport Association (IATA)

Timeline

30 Mar 2009
Signature of administrative agreement between the SESAR Joint Undertaking and the Kingdom of Belgium

30 Mar 2009
Endorsement of the European Air Traffic Management Master Plan by the Council

1 Jun 2009
SESAR Joint Undertaking moves to its new premises in avenue de Cortenbergh 100

3 Jun 2009
SESAR programme kick-off meeting in Brussels with all members and partners

12 Jun 2009
SESAR Joint Undertaking signs agreements with 16 partners totalling €1.9 billion for the creation of Europe's future ATM system


18 Aug 2009
Set-up of SESAR Scientific Committee
15 Sep 2009
Major airlines, business & general aviation, associations on board of SESAR to modernise the European sky
25 Nov 2009
AIRE project MINT demonstrates savings of 165 kg fuel and 500kg CO2 emissions
14 Dec 2009
First four SESAR projects start research
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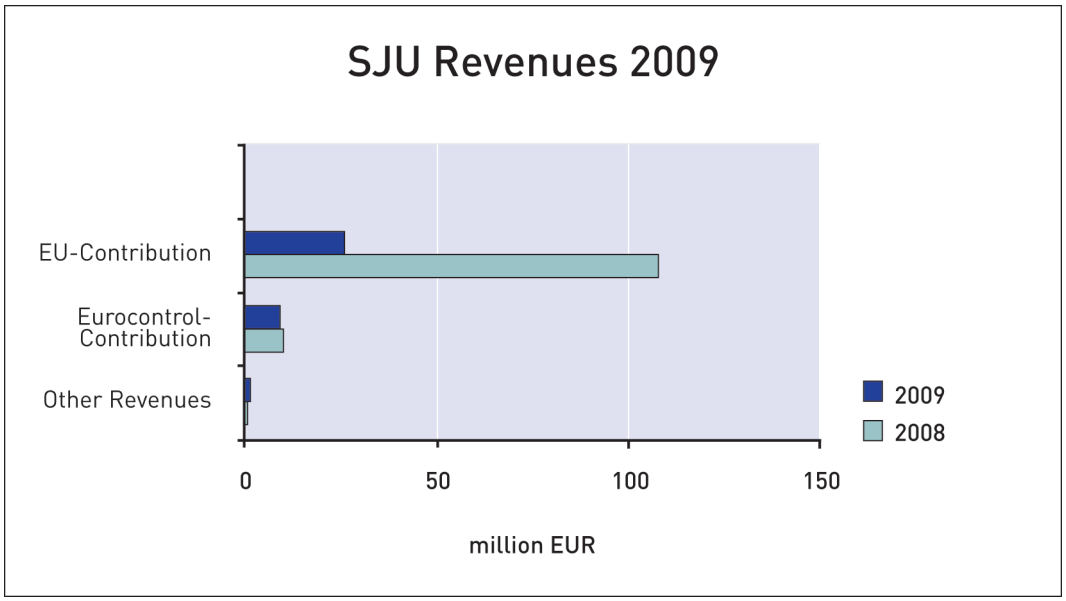
Part 4: Financial Information

Budget Revenues

The SJU received in total €27.7 million in cash (€55.0 million in terms of Commitments) from the European Union in 2009; with €13.5 million deriving from the 7th Research & Development Framework Programme (FP7) and €14.1 million from the Trans-European Transport Network funds (TEN-T). Furthermore, €9.0 million in terms of cash (€18.4 million in terms of Commitments) were transferred to the SJU by Eurocontrol in 2009 as part of its Cash Contribution. Other Revenues amounted to €0.6 million and included revenue from non-reimbursable interest received on cash deposits as well as recovered taxes from 2008.

The following chart summarises SJU revenues for 2009

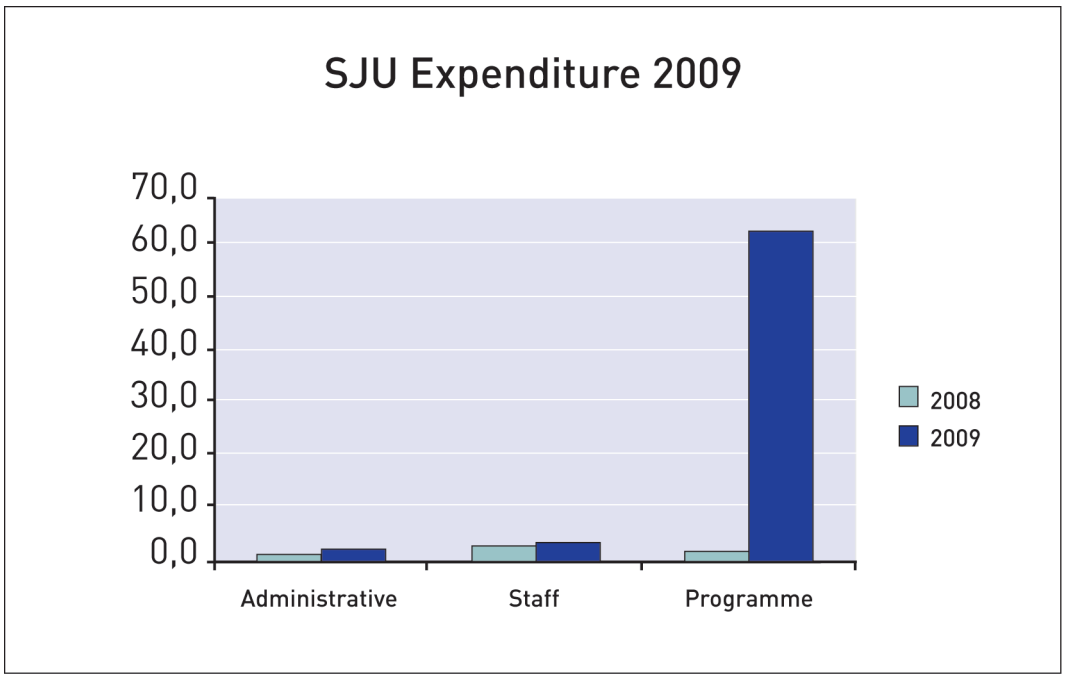


Budget Expenditure

At year end, €54.1 million in terms of payments had been disbursed to the Members to pre-finance 151 projects pertaining to 10 Work Packages, whereas €236.7 million of the programme related expenditure was committed already. The number of projects in execution phase will steadily grow in 2010 and it is expected that the initiation phase of all the projects will be completed by mid 2010. The first deliverables are scheduled for 2010 and they will be co-financed following technical acceptance and assessment of the related eligible costs. Estimated accrual costs related to the initiation phase amounted to €30.3 million. Other operational costs included €8.4 million in terms of cash disbursements (€63.9 million in terms of Commitments) for industrial-, management-, technical- and legal-support for building up and initiating the execution of the Programme.

The overall administrative and staff expenses in 2009 amounted to €5.4 million of which €3.4 million were disbursements for staff-related costs such as salaries, taxes and social security. The remaining €2.0 million comprised administrative expenditure such as Rentals, IT and PR costs.

The following chart summarises SJU expenditure for 2009



Balance Sheet

All figures in EUR		31/12/09	31/12/2008 restated
I. NON-CURRENT ASSETS		55 317 524	12 569
Intangible fixed assets		624 536	1 572
Tangible fixed assets		572 400	10 997
	Furniture and Vehicles	5 673	7 323
	Computer Hardware	156 460	3 674
	Other tangible assets	410 267	0
Long-term Pre-Financing		54 120 588	0
II. CURRENT ASSETS		87 174 787	116 487 846
Short-term receivables		348 772	480 277
	Current receivables	196 778	294 522
	Sundry receivables	38 375	1 085
	Accrued income	1 128	96 557
	Deferred charges	112 491	88 113
Cash & Cash equivalents		86 826 015	116 007 569
TOTAL ASSETS		142 492 311	116 500 415
III. CURRENT LIABILITIES		48 859 601	3 757 157
Account payable		48 859 601	3 757 157
	Current payables	5 229 358	1 102 312
	Accured charges	1 115 410	2 029 400
	Taxes, salaries and solcial security	28 721	190 871
	Other accounts payable	1 724 483	434 574
	Co-Financing to be paid to the Members	11 926 870	0
	Other Members' Contributions to be recognised	28 834 759	0
TOTAL LIABILITIES		48 859 601	3 757 157
NET ASSETS (Total Assets less Total Liabilities)		93 632 710	112 743 258
IV. NET ASSETS		93 632 710	112 743 258
Members' Contributions		158 567 045	120 863 211
	EU Contribution	138 552 000	110 863 211
	Eurocontrol Contribution	20 015 045	10 000 000
Accumulated Net expenses for activities in the previous years		(8 119 953)	0
Net expenses for the activities in the year		(56 814 382)	(8 119 953)
TOTAL NET ASSETS		93 632 710	112 743 258

Economic Outturn Account

All figures in EUR		2009	2008 restated	2008
OPERATING REVENUE				
Contibutions from Members		0	0	8 119 953
Other Revenues		434 925	0	0
Total operating revenue		434 925	0	8 119 953
OPERATING EXPENSES				
Administrative expenses		(6 328 815)	(5 253 648)	(5 253 648)
	Staff expenses	(3 680 110)	(2 868 710)	(2 868 710)
	Fixed assets related expenses	(218 777)	(4 363)	(4 363)
	Other administrative expenses	(2 429 928)	(2 380 575)	(2 380 575)
Operational expenses		(51 204 330)	(2 990 250)	(2 990 250)
	Other operational expenses	(51 204 330)	(2 990 250)	(2 990 250)
Total operating expenses		(57 533 145)	(8 243 898)	(8 243 898)
DEFICIT FROM OPERATING ACTIVITIES		(57 098 220)	(8 243 898)	(123 945)
NON-OPERATING ACTIVITIES				
	Financial operations revenues	288 353	148 370	148 370
	Financial operations expenses	(4 515)	(24 425)	(24 425)
		283 838	123 945	123 945
NET EXPENSES FOR ACTIVITIES OF THE YEAR		(56 814 382)	(8 119 953)	0

Disclaimer:

All financial figures contained in this report are derived from the Provisional Annual Accounts 2009 (as of 01 March 2010) and are thus still subject to the observations of the European Court of Auditors and the final approval by the SJU Administrative Board (in accordance with Article 5 (i) of the Statutes of the SJU annexed to Council Regulation (EC) No 219/2007 of 27 February 2007 and as amended by Council Regulation (EC) No 1361/2008 of 16 December 2008).

For the latest information, please consult our website:

www.sesarju.eu

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