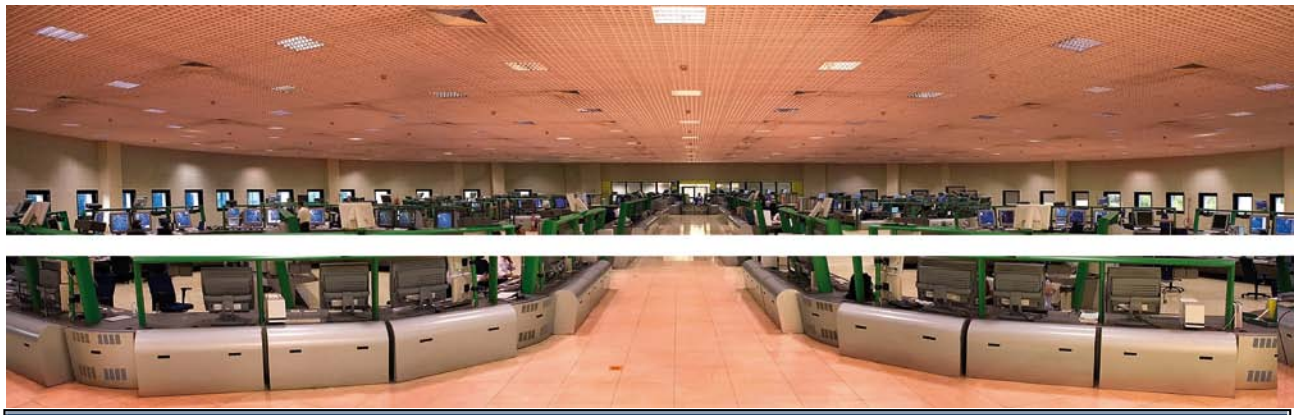

THE ITALIAN PERFORMANCE PLAN

for Air Navigation Services

Reference Period 1
2012-2014

ENAC Italian Civil Aviation Authority — Ente Nazionale per l'Aviazione Civile

ENAV S.p.A. — Italian Company for Air Navigation Services

Document Approval

The National Performance Plan for Reference Period 1 has been prepared by the Ente Nazionale per l'Aviazione Civile (ENAC) in accordance with the Single European Sky Performance Scheme Regulation (EC) No. 691/2010 and the data submitted by ENAV SpA and derived by its business plan.

The Ministero per le Infrastrutture ed i Trasporti, as the Ministry responsible for Civil Aviation, agrees to the adoption of the Italian National Performance Plan for Air Navigation Services.

ENAC has been authorised to sign and transmit to the European Commission the Italian National Performance Plan with letter 00001985/USCITA dated 5 May 2011.

Name	Signature	Date
Approval ENAC Director General	**Alessio Quaranta**	**30/06/2011**
Control ENAC CSA	**Antonio Pilotto**	**30/06/2011**
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Executive Summary

This documents is the Italian Performance Plan (IPP) for en route Air Navigations Services.

The Italian Performance Plan covers the first Reference Period (RP1: 2012-2014) and it is developed at National level, in compliance with the provisions of the Commission Regulation n. 691 of 29 July 2010. The Plan follows the template reported in Annex II of the EC Reg. n.619/2010.

ENAC, the Italian Civil Aviation Authority, has been designated as National Supervisory Authority and it is responsible for the preparation of the Plan. The plan is agreed by the Ministry of Transport and Infrastructures.

The accountable entities for the achievement of the declared targets are:

- ENAC, the Italian CAA;
- ENAV, the Company for Air Navigation Services;
- ITAF, the Italian Air Force.

The Plan reports the performance target to which Italy its committed in achieving. Performance targets refer to the Key Performance Areas of capacity and cost efficiency for en route service. For the Key Performance Areas of environment and safety, for RP1 specific indicators will be monitored.

A synopsis of the targets Italy is committed to achieve and the related a is reported in the table below:

KPA	KPI	National targets			National thresholds
		2012	2013	2014	
(a) Safety	1. Effectiveness of safety management	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	2. Application of severity classification				
	2.1 Separation Minima Infringement	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	2.2 Runway Incursions	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	2.3 ATM special technical events (ATM Specific Occurrence in ESARR 2)	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	3. Implementation of Just Culture	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
(b) Capacity	En-route ATFM delay (minutes per flight)	**0.14**	**0.14**	**0.12**	Italy deems appropriate the alarm threshold being triggered by the fluctuation reported in the STATFOR MTF for each year, or its variation over 1% tolerance (+/- 1%) with reference to the HIGH and LOW traffic growth as assumed from the baseline proposed by STATFOR, whichever smaller.
(c) Environment	FEP Implementation	Monitoring	Monitoring	Monitoring	n.a.
(d) Cost-efficiency	Determined en-route unit rate (2009 prices in national currency)	**€ 70,31**	**€ 68,21**	**€ 65,96**	1) For what concerns economic aspects, the threshold takes into consideration all those events which cannot be controlled by the State but that might have a relevant impact on the target (in terms of costs and/or revenues). The proposed additional threshold aims at taking into account the local specifities of Italy. 2) For what concerns traffic, the exceptional situation that is interesting the Mediterranean area is demonstrating that an alert threshold of 10% on traffic is too high for Italy because its effects could be devastating for the financial stability of the providers that would lead to significant and dangerous detrimental effects on the level of safety and quality of the service offered. Therefore, as local alert threshold on traffic, Italy will activate the process for a possible target revision for any variation higher than 4,5% on the forecasted level of traffic (flights or SU).

Table A - *Italy's national targets and thresholds for RP1*

For the scope of the IPP, all issues related to airport and terminal area are subject to NSA monitoring (during RP1 not national target are defined in these domain).

Italy foresees to apply only one incentive scheme on capacity to ENAV, in addition to the risk sharing mechanism foreseen by the EC Reg. n. 691/2010.

For what concerns capacity, Italy in recognition of the link between the high standards of quality of service provided and given the excellent level of operating performance already achieved and expected in the coming years by ENAV, will recognize to ENAV a bonus (at 1% of the determined costs) for each of the years in which the declared capacity target is achieved.

In the same way, if ENAV performances in terms of capacity will go beyond the European capacity target (0,5 minutes average ATFM delay per en-route flight), Italy will apply a penalty of 1% of the determined costs (in nominal terms) for each of the years within RP1.

At the time when the plan is being prepared, ENAC is preparing a specific plan to monitor the correct implementation of the performance plan and the adherence of the evolution of the National and European KPIs to the profile described in the plan.

The ENAC oversight philosophy is based on the principle of the minimum interference with the normal activity of Stakeholders, and therefore the utilization to the maximum extent possible of the reports they prepare for their normal activity.

ENAC is well aware that this is the first implementation of regulation 691/2010, and therefore the oversight policy and practices are to be considered as “first attempt”, and could be changed during the period itself.

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LIST OF ACRONYMS

ACC	Area Control Center
AFIS	Aerodrome Flight Information Services
ANSP	Air Navigation Service Provider
ANSV	Agenzia Nazionale per la Sicurezza del Volo
APP	Approach
ASM	Airspace Management
AST	Annual Summary Template
ATC	Air Traffic Control
ATFM	Air Traffic Flow Management
ATM	Air Traffic Management
ATS	Air Traffic Services
BOT	Buoni Ordinari del Tesoro (State Bond)
CAA	Civil Aviation Authority
CANSO	Civil Aviation Services Organisation
CFMU	Central Flow Management Unit
COM	Communication
CNS	Communications, Navigation, Surveillance
CTOT	Calculated Take-Off Time
DNM	Directorate Network Management
DPR	Decreto del Presidente della Repubblica
DUR	Determined Unit Rate
EAM/GUI	ESARR Advisory Material / Guidance Material
EC	European Commission
ECAC	European Civil Aviation Conference
ECB	European Central Bank
e-EMOR	Electronic ENAC Mandatory Occurrence Reporting
EIU	Economist Intelligent Unit
ENAC	Ente Nazionale Aviazione Civile
ENAV	Italian Company for Air Navigation Services
EOBT	Estimated Off-Block Time
ESARR	EUROCONTROL Safety Regulatory Requirement
EU	European Union
EUROCONTROL	European Organisation for the Safety of Air Navigation
FEP	Flight Efficiency Plan
FIR	Flight Information Region
FN	Fuori Norma (Out-of-the-Book Separation)
GAT	General Air Traffic
GDP	Gross Domestic Product
IATA	International Air Transport Association
IFR	Instrument Flight Rules
IMF	International Monetary Fund
IPP	Italian Performance Plan
ITAF	Italian Air Force
KPA	Key Performance Area
KPI	Key Performance Indicator
LSSIP	Local Single Sky ImPlementation
MET	Meteorological Services
MTF	Medium Term Forecast
NAV	Navigation Services
NPP	National Performance Plan
NSA	National Supervisory Authority
OAT	Operational Air Traffic
RAT	Risk Analysis Tool
ROE	Return on Equity
RP	Reference Period
SES	Single European Sky

SESAR	Single European Sky ATM Research
SMS	Safety Management System
STATFOR	Air Traffic Statistics and Forecasts
SU	Service Unit
SUR	Surveillance
TLS	Target Level of Safety
UN	United Nations

1. INTRODUCTION

1.1. The situation

The Italian Performance Plan covers the first Reference Period (RP1: 2012-2014) with focus on en-route Air Navigations Services and it is developed at National level, in compliance with the provisions of the Commission Regulation n. 691 of 29 July 2010. The Plan follows the template reported in Annex II of the EC Reg. n.619/2010.

ENAC, the Italian Civil Aviation Authority, has been designated as National Supervisory Authority and it is responsible for the preparation of the Plan.

The plan is agreed by the Ministero dei Trasporti e delle Infrastrutture.

The accountable entities for the achievement of the declared targets are:

- ENAC, the Italian CAA;
- ENAV, the Company for Air Navigation Services;
- ITAF, the Italian Air Force.

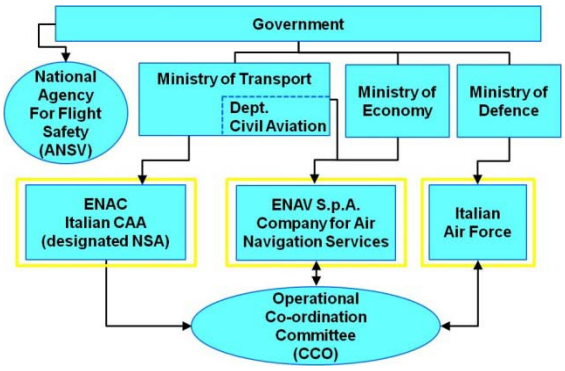


Figure 1- *Representation of the Italian accountable entities hierarchical structure*

The Plan encompasses the three Italian FIRs, with the exception of the airspace South of Sicily where Malta provides Air Traffic Services.

In addition Italy has agreement with bordering countries for the rectification of borders for operational reasons. The extent of those cross-border agreements does not have relevant impact on the average traffic.

The en-route service is provided by four ACCs, namely Brindisi, Milano, Padova, Roma.

Italy confirms its decision of deferring to the next Reference Period (RP2) the terminal from the application of the Performance Scheme.

1.2. Overall assumptions for Reference Period 1

The global Airline Industry recorded, until 2008 a period of high growth interrupted only by few significant shocks such as 9/11 attacks to World Trade Center and the "dot com" stock market bubble.

In 2008/2009, an economical crisis strongly affected the world. This crisis together with the strong increase in oil price (that registered a peak of 147 $ per barrel in 2008 , had a direct impact on the Airline Industry that globally lost, as a consequence, 25,9 billion dollars in revenues in the period 2008/2009. This performance has been even worse than the one registered in 2001/2002 after 9/11 attacks. In that period, the Airlines Industry globally lost 24,3 billion dollars in revenues.

Almost all main economic KPIs indicate a two-speed recovery after the 2009 crisis. In advanced economies the growth rate is lower than the emerging countries:

- According to IMF Gross Domestic Product increased vs. previous year of 5,0% worldwide and 1,7% in EU.
- Industrial production had an improvement vs. 2009 of 7,8% and 6,9% for OECD and EU countries[1].
- Unemployment in EU is still high.
- Investment has increased from 21,7% in percentage of GDP in 2009 to 22,9% in 2010[2].
- Oil prices (in average) raised from 62$ per barrel in 2009 to 79$ in 2010. Currently it jumped up to 111$ per barrel.

In 2010, the economy registered a first recovery from the crisis and this was reflected in the Air Traffic Industry. As the matter of fact, both passengers and freight volumes have shown a growth, although the positive trend was negatively impacted by volcanic ash cloud crisis. In particular, passengers grew, in 2010, by 7% and freight volumes by 18%.

Air transport industry, as from IATA, ended 2010 "with improved profitability but low margins":

- Industry net profits estimated in 16US$ billion, both influenced by the passenger (7,1%) and cargo (18,1%) demand.
- The weakest recovery has been registered in Europe (1,4US$ billion vs. 7,6US$ billion in Asia-Pacific and 4,7US$ billion in North America regions).

Overall European flight (ECAC area) growth in 2010 was 0,9%, close to the 2006 volume traffic level, with significant differences between the various market segments[3]. In particular:

- Traditional scheduled: -1,1%.
- Low cost carriers: +6,9%.
- Charter: -3,1%.
- Business aviation: +5,6%.
- All cargo: +2,7%.

In 2010 Italian airports have shown recovery[4]:

[1] *Source: OECD – Organisation for Economic Co-operation and Development*
[2] *Source: IMF – International Monetary Fund*
[3] *Source: EUROCONTROL - STATFOR Interactive Dashboard*

- Both in movements (+1,3%) and passengers (+7,0%, equal to +9,1 million).
- Cargo volumes raised up to +18%.

With regards to the main Italian airports:

- Most of 6 main Italian airports[5] confirm recovery from 2009, in terms of movements and passengers.
- Malpensa up to +3,3% (mvmts) and +8,0% (pax).
- Roma Fiumicino main airport had +1,5% in terms of movements and +7,5% increase in terms of passengers (+2,5 million more than 2009).

For what concerns Service Units (SU), the year 2010 saw a general recovery for almost all the European ANSPs but values have not returned to pre-crisis one.

After the end of the volcanic ash problem, the Service Unit volumes have returned to positive growth (+3.3% 2010 vs. 2009).

However, it should be noted that in 2010, SU trends are not homogeneous in the five largest European providers[6]: while Italy has recorded the best performance with a +5.9%, there were decreases of -4.4% for Great Britain and -0.9% for France, an increase of +3.4% for Spain and +3.2% for Germany. Among emerging EUROCONTROL countries, Turkey recorded a +10.4%.

For what concerns the Italian economic situation, it reflects the actual European context and confirms a slight recovery from 2009 crisis[7]:

- Estimated data of 1,3% GDP percentage change (vs. 2009) provides evidence of a slow growth.
- Italian industrial production increased by 2,3 % compared to the same period in 2009.
- IV quarter 2010 unemployed rate was 8,7% from 8,6% IV quarter 2009.

This Performance Plan includes a view of slow economical recovery in Europe during the RP1 (2012-2014). In particular, the expectation for GDP growth in Italy and the other main European countries are :

[4] *Source: Assaeroporti*

[5] The six main airports are Catania Fontanarossa, Milano Linate, Milano Malpensa, Napoli Capodichino, Roma Fiumicino and Venezia Tessera.

[6] Source: EUROCONTROL.

[7] Source: ISTAT – National Institute of Statistics in Italy. Industrial production data are corrected with calendar.

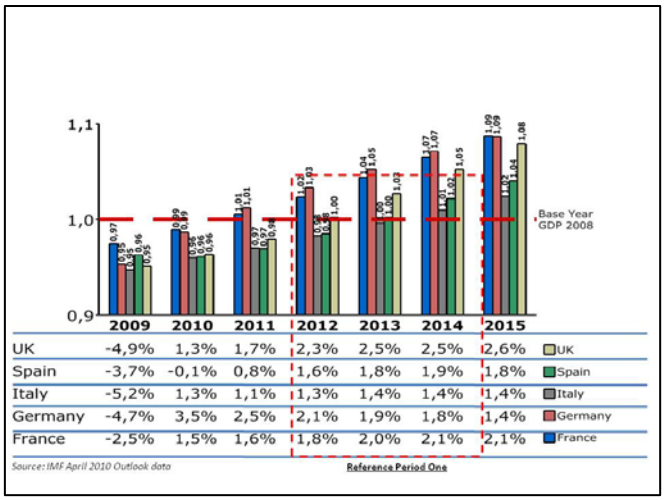


Figure 2 *- Real GDP trend in RP1*

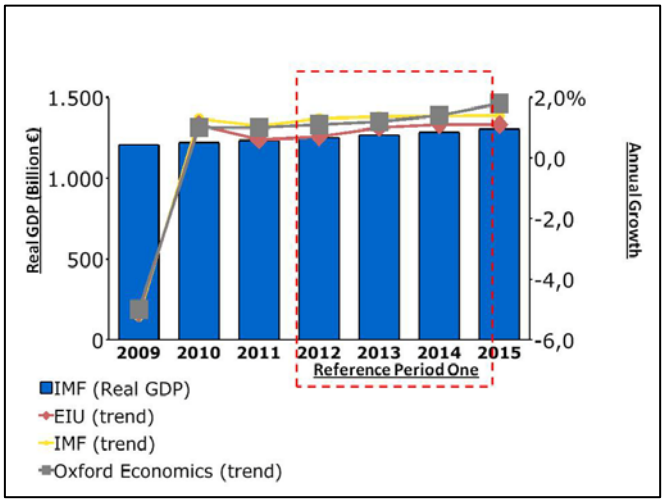


Figure 3 *– Italy Real GDP trend in RP1 (IMF – EIU – Oxford Economics forecasts)*

On one hand, the positive GDP trend expected by analysts such as International Monetary Fund, Economist Intelligence Unit and Oxford Economics and shown in the above table is supposed to drive growth in ANS service during Reference Period One (2012-2014).

On the other hand, the profitability of the industry is expected to reduce because of the uncertainty resulting from the crisis and the growing oil and jet kerosene prices.

Another relevant factor to be considered is the socio-political crisis taking place in the North Africa Region. In particular, this Area represents an important market for Italy (10% of flight movements and 18% of Service Units).

In March 2011, overall traffic to Egypt stabilized at 25% below 2010 volumes and overall traffic to Tunisia at 30% below 2010. Moreover on 17 March was imposed a “No-fly zone” over the territory of Libya that is still in force.

For what concerns the air transport industry forecasts, IATA cuts its estimate for airline industry profits (net post-tax) in 2011 from US$ 9.1 billion to US$ 8.6 billion, a 46% reduction from the US$ 16 billion of profit estimated last year.

This downgrade is due to the recent increase in oil and jet kerosene prices. In line with market forecasts, IATA assumes an average crude oil price of US$ 96 a barrel this year, significantly higher than IATA previous forecast of US$ 84 a barrel.

Regional differences will remain during 2011 with a particular contrast between weak European home markets and still strong traffic originating from the so-called 'emerging' markets. Asia-Pacific airlines are expected to continue to be the most profitable.

Due to the robust demand for air transport and the strengthening of business confidence, IATA forecasts growth in passenger markets of 5.6% in 2011, and growth of 6.1% in air cargo. Overall this generates an expansion of 5.7% in tonne kilometers flown, not far from the expected 6% expansion in capacity.

Finally, for what concerns inflation rate forecast for Italy, in the Reference Period One (2012-2014), it is expected to be fairly stable around 2% according to the IMF April 2011 Outlook.

Status of Italy Aviation Safety

Italy is updating the State Safety Program (SSP) in accordance with the standards contained in ICAO Annexes 6, 11 and 14. The updated version of SSP will be published within 2011.

As far as ATM is concerned, Italy is aligned to the European SES regulation. All Civil ANSP are certified and no derogation to the requirement of the Safety Management System has been granted.

The safety statistics are supported by a robust reporting.

Investigation of accidents and serious incidents are performed by the Agenzia Nazionale Sicurezza Volo.

According to the Common Requirements each service provider performs an internal investigation for each incident which happens within the airspace volume where it is designated, or to the systems used for the service provision.

The severity of ATM related incidents is assessed using the TOKAI tool by ENAV S.p.A. Data are collected to contribute to the Annual Summary template. Since the certification of ENAV S.p.A (June 2007) no adverse trend in incidents have been observed.

ITAF runs its own reporting system and has developed an investigation and assessment function which reaches equivalent levels of compliance to the EU requirements. Events regarding civil aviation are regularly transmitted to ENAC.

ENAC performs a state-of-the-art safety oversight of Air Navigation Service Provision, in accordance with the requirements of EC Regulation n. 1315/2007.

Other general aspects

ENAV S.p.A is the Company designated by the Italian State for Air Navigation Service Provision to General Air Traffic (GAT) in Italy.

Every 3 years ENAV signs a programme and service contract with the Ministry of Finance and Economy, Ministry of Transportation and Infrastructure and the Ministry of Defense. This contract regulates the main operational and economical relations between the Company and the State.

In accordance with the European Community Regulation 550/2004, article 7, paragraph 5, the Italian Air Force is authorized to provide ATS, CNS and MET Services to General Air Traffic (GAT) without certification.

Air Traffic Services (ATS) are provided by ITAF or ENAV S.p.A. within the Air Space respectively assigned by National Law (DPR 484/81). ENAV provides MET services to those airports where it provides ATS.

At the moment, no change is expected in this scenario during the first Reference Period.

Entities / Performance areas	Safety	Environment	Capacity	Cost-Efficiency
ENAC	Yes	N.A.	N.A.	Yes[8]
ENAV S.p.A	Yes	Yes	Yes	Yes
ITAF	N.A[9].	N.A.	N.A.	Yes[10]

Table 1 – *Accountable entities for the Performance Plan*

ITAF, the Italian Air Force, is the ANSP authorised by Italian State to provide services without certification pursuant article 7, comma 5, of SPR. In particular, for en route it provides MET and APP Services for GAT. The role of ITAF for terminal is going to be reduced alongside the number of military airports.

According to EC Reg. 1794/2006 (as amended by Reg. 1191/2010) ITAF is subject to cost risk but not to traffic risk. ITAF has a mainly rigid structure of costs, because: the cost of military staff is determined by the State as for all other military personnel by a specific law, its assets are also used for military purposes and operational configurations are driven by defence needs.

At the same time the opening and or closure of new Air Traffic Service units manned by ITAF is always done through Ministerial decrees or other legislative acts.

[8] Not subject to traffic risk.
[9] ITAF contributes to the monitoring of safety performance through regular reporting to ENAC of ATM related events.
[10] Not subject to traffic risk.

1.3. Stakeholder consultation

Italy has had three consultation meetings: one with the User representatives and two with the Trade Unions representatives.

For all the details and consultation material, please refer to the Annex D.

2. NATIONAL PERFORMANCE TARGETS AND ALERT THRESHOLDS

This section presents, for each KPA, the KPIs and associated targets adopted at national level; in this part are also illustrated the KPIs subject only to monitoring activities under the NSA control.

2.1 Performance targets and alert thresholds for RP1

For the first reference period, Italy will adopt targets which refer only to the KPIs of en route capacity and cost-efficiency.

For the KPAs of Safety it is foreseen the monitoring of the three leading indicators and the three lagging indicators, as per EC regulation n.691/2010.

For the Environment KPA, Italy does not foresee target for RP1, in line with EC regulation n.691/2010.

For the Capacity KPA, Italy does not foresee Airport and Terminal Area Capacity Target: for RP1, in line with EC regulation n.691/2010, it is foreseen the monitoring of the three KPIs (ATFM Arrival Delay, Taxi-out additional time and Adherence to ATFM slot) as per mentioned EC Performance Scheme Regulation.

The targets for capacity and cost-efficiency are set for the entire reference period and annual values are provided.

For the KPA of cost-efficiency, Italy has defined the following national thresholds:

- For what concerns economic aspects, the threshold takes into consideration all those events which cannot be controlled by the State but that might have a relevant impact on the target (in terms of costs and/or revenues). The proposed additional threshold aims at taking into account the local specificities of Italy.
- For what concerns traffic, the exceptional situation that is interesting the Mediterranean area is demonstrating that an alert threshold of 10% on traffic is too high for Italy because its effects could be devastating for the financial stability of the providers that would lead to significant and dangerous detrimental effects on the level of safety and quality of the service offered. Therefore, as local alert threshold on traffic, Italy will activate the process for a possible target revision for any variation higher than 4,5% on the forecasted level of traffic (flights or SU).

For the capacity KPA, Italy deems appropriate the alarm threshold being triggered by the fluctuation reported in the STATFOR MTF for each year, or its variation over 1% tolerance (+/- 1%)

with reference to the HIGH and LOW traffic growth as assumed from the baseline proposed by STATFOR, whichever smaller.

Table 2 below presents the national targets and thresholds for RP1.

KPA	KPI	National targets			National thresholds
		2012	2013	2014	
(a) Safety	1. Effectiveness of safety management	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	2. Application of severity classification				
	2.1 Separation Minima Infringement	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	2.2 Runway Incursions	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	2.3 ATM special technical events (ATM Specific Occurrence in ESARR 2)	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
	3. Implementation of Just Culture	*Monitoring*	*Monitoring*	*Monitoring*	n.a.
(b) Capacity	En-route ATFM delay (minutes per flight)	**0.14**	**0.14**	**0.12**	Italy deems appropriate the alarm threshold being triggered by the fluctuation reported in the STATFOR MTF for each year, or its variation over 1% tolerance (+/- 1%) with reference to the HIGH and LOW traffic growth as assumed from the baseline proposed by STATFOR, whichever smaller.
(c) Environment	FEP Implementation	Monitoring	Monitoring	Monitoring	n.a.
(d) Cost-efficiency	Determined en-route unit rate (2009 prices in national currency)	**€ 70,31**	**€ 68,21**	**€ 65,96**	1) For what concerns economic aspects, the threshold takes into consideration all those events which cannot be controlled by the State but that might have a relevant impact on the target (in terms of costs and/or revenues). The proposed additional threshold aims at taking into account the local specifities of Italy. 2) For what concerns traffic, the exceptional situation that is interesting the Mediterranean area is demonstrating that an alert threshold of 10% on traffic is too high for Italy because its effects could be devastating for the financial stability of the providers that would lead to significant and dangerous detrimental effects on the level of safety and quality of the service offered. Therefore, as local alert threshold on traffic, Italy will activate the process for a possible target revision for any variation higher than 4,5% on the forecasted level of traffic (flights or SU).

Table 2 - *Italy's national targets and thresholds for RP1*

For the scope of the IPP, all issues related to airport and terminal area are subject to NSA monitoring (during RP1 not national target are defined in these domain).

For each KPA, details are provided in the following sections.

(a) Safety targets and thresholds

The Performance Regulation of the Single European Sky requires all EU Member States to develop National Performance Plans, setting out their performance targets for the near future.

For what concerns safety performance within the Italian airspace as a contribution to the Italian National Performance Plan, currently Italy does not set quantitative Target Level of Safety (TLS) for ANSPs and has not set any national performance targets or thresholds for safety in RP1; there is no EU requirement to do so.

The EU is establishing 3 safety KPI that can be characterized as "leading" indicators and 3 KPI as "lagging" indicators to harmonize reporting and classification of Safety Events.

SAFETY

During RP1 States to monitor and publish the following safety KPIs.

1. *Effectiveness of safety management*
2. *Application of severity classification*
   - *2.1 Separation Minima Infringement*
   - *2.2 Runway Incursions*
   - *2.3 ATM special technical events (ATM Specific Occurrence in ESARR 2)*
3. *Implementation of Just Culture*

Table 3 - *EU safety indicators for monitoring in RP1*

Having Italy not proposed to adopt any optional targets for the safety KPIs that have been defined for RP1, Italian ANSPs will provide to ENAC for monitoring and publishing performance data against these indicators as required.

(b) Capacity target and threshold

The (EC) Regulation No 691/10 lays down a performance scheme for air navigation services and network functions. In accordance with it the following issues have to be taken into account:

- the establishment and implementation of key performance indicators and of the performance targets requires the appropriate consistency with the safety objectives and standards laid down in Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC, and its implementing rules together with the measures taken by the European Union to achieve and maintain these objectives;
- the implementation of binding performance targets supported by incentives that can be of financial nature requires appropriate links with Commission Regulation (EC) No 1794/2006, of 6 December 2006 laying down a common charging scheme for air navigation services;
- pursuant to Article 11 of Regulation (EC) No 549/2004, Regulation (EC) No 691/2010 should apply to the air traffic management network functions referred to in Article 6 of Regulation (EC) No 551/2004 of the European Parliament and of the Council through an appropriate amendment of this Regulation;
- for the purpose of target setting, to each key performance area shall correspond[11] one or a limited number of key performance indicators. The performance of air navigation services shall be assessed by means of binding targets for each key performance indicator;
- the key performance indicators[12] should be selected for being specific and measurable and allowing the allocation of responsibility for achieving the performance targets;
- the associated targets should be achievable, realistic, and timely and aim at effectively steering the sustainable performance of air navigation services;

[11] The key performance indicators shall not be changed in the course of a reference period.

[12] 'Key performance indicators' are the performance indicators used to identify performance targets. 'Performance indicators' are the indicators used to monitor performance, identify benchmarks and reviewing.

- during the reference[13] periods an effective performance monitoring process should be put in place to ensure that the evolution of performance allows meeting the targets and if necessary introducing appropriate measures;
- for the first reference period (RP1) the mandatory Key Performance Indicator of Capacity (Capacity KPI), shall be the en route ATFM delay (for all reasons) per flight[14], calculated as the difference between the take-off time requested by the aircraft operator in the last submitted flight plan and the calculated take-off time allocated by the central unit of ATFM;
- at the end of the RP1 (2014), the established EU-wide Capacity Performance Target is 0.5 minute for en route flight[15];
- until the end of 2011 the Provisional Council has determined the EU-wide target for the ANSPs which is referred to the summer season (May-October) and is limited to the en route air traffic. Specifically the average en route delay per flight equals to a 1 minute of delay per assisted flight;
- the Capacity Performance Indicator at a national level, includes all IFR flights and covers en route ATFM delay causes within Italian Airspace where the ATM (ATC, ASM and ATFCM services) is provided by ENAV through their ACC[16];

this chapter specifies the en route capacity target that Italy is committed to achieve during the first period of the Performance Scheme (RP1 2012/2014), being consistent with the general objectives arising from the Single Sky legislation.

Figure 4- *Representation of the Italian airspace*

[13] The first reference period (RP1) for the performance scheme covers the calendar years 2012-2014. The same reference period shall apply to the European Union wide performance targets and the national or functional airspace blocks performance plans and targets. The indicator, both at European or National level, is calculated for the whole calendar year. The second reference period (RP2) for the performance scheme covers the calendar years 2015-2020.
4 The indicator, at a European level, includes all IFR flights within the European airspace and covers the ATFM delay causes.
[15] European Commission Decision EC/121/11 – 21 February 2011 which identifies the European Union-wide performance targets and critical thresholds for the provision of air navigation services for the years 2012-2014
[16] For the purpose of target setting, this Regulation shall apply to the air navigation services provided by air traffic service providers designated in accordance with Article 8 of Regulation (EC) No 550/2004 of the European Parliament and of the Council and by providers of meteorological services, if designated in accordance with Article 9 of that Regulation; in Italy, according to art. 691bis of the Navigation Act ENAV S.p.A. is the ANS Provider designated.

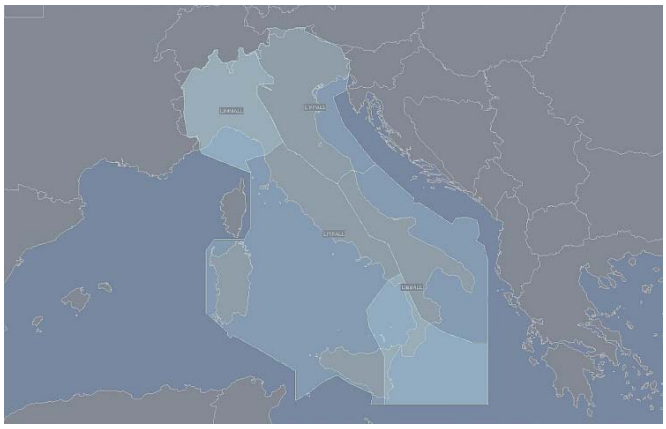


Figure 5- *Representation of the ACC Area of responsibility for ATS provision*

Italy accepts the requested level of contribution to the achievement of adopted European Union Wide capacity targets and agrees on the performance targets suggested by EUROCONTROL and reported in the Italian Local Single Sky Implementation Plan (LSSIP) 2011-2015.
The national performance targets of en route delay "all ATFM reasons" are 0.14, 0.14 and 0.12 per en route controlled flights for years 2012, 2013, 2014 respectively.

Capacity KPI	2012 Intermediate Value	2012 Intermediate Value	2014 Target
Minutes of en-route ATFM delay per flight	0.14	0.14	**0.12**

Table 4 - *Italy's en route capacity target for RP1*

The values reported in Table 3 are the same as those evaluated by the "EUROCONTROL - Directorate of Network Management" being the potential reference values deemed necessary to achieve the European Capacity target. These targets are defined to provide the proper balance between the needs of both the airspace users and the air navigation service provider designated by the Italian State, taking into account the overriding and paramount safety objectives. Details are provided below (see table 5).

	2009A	2010A	2011F	2012F	2013F	2014T
En-route ATFM delay prior to RP1 (en-route ATFM delay minutes per flight)	0,02*	0,01**	0,18			
Reference value from the capacity planning process of EUROCONTROL (en-route ATFM delay minutes per flight)				0,14	0,14	0,12
% n/n-1				-22%	0%	-14%
National capacity target (en-route ATFM delay in minutes per flight)				0,14	0,14	0,12
% n/n-1				-22%	0%	-14%
Difference between the target and the reference value				0,00	0,00	0,00

**Source Eurcontrol/CFMU – Processed by ENAV/AOP "Annual Report 2010 ". Data regarding the Summer Season.*
***Source Eurcontrol/CFMU – Processed by ENAV/AOP "Annual Report 2010 ". Data regarding the Summer Season.*

Table 5 - *En route capacity target – details at national level*

For what concerns the alert threshold, associated with the EU-wide targets at a European level is represented by the deviation in a calendar year by, at least, 10% of the actual traffic recorded by the PRB with respect to the traffic forecasts in ECAC Area.

Taking into account:

- the overriding and paramount safety objectives;
- the effort sustained by ENAV S.p.A to ensure the high level of quality in air navigation services provided in their area of responsibility;
- the inevitability and incompressibility of specific costs which ENAV S.p.A. is subject to (the first of them is aimed to ensure the highest level of safety, and then to wages, to train the operational staff, to maintain their appropriate competence, to operate - at least - the minimum configurations for each Control Center, to maintain the ATM and CSN infrastructure, to develop and modernize the new systems, to operate the airport and terminal areas of competence, etc);
- the expected grown in traffic in 2011 (+4.5%) in 2012 (+3.1%) in 2013 (+2.4%) and 2014 (+2.8%); and
- the variation in EUROCONTROL/STATFOR traffic forecast (a spread around the baseline value in the expected air traffic grown is also foreseen. It ranges from -1.3% [Low traffic] to +2.4% [High traffic], as peak levels during the RP1);

the alarm threshold deviation set at a European level by (EC) Regulation CE 691/2010[17] - which also considers the tradeoff between operations and plans of the neighboring States - is not being used nor considered appropriate at a national level.

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	AAGR 2017/ 2010
Italy	H	.	.	.	.	.	5.6%	4.0%	4.4%	4.2%	4.1%	4.2%	3.7%	4.3%
	B	4.0%	8.4%	-2.4%	-5.1%	3.9%	4.5%	3.1%	2.4%	2.8%	2.9%	2.8%	2.3%	3.0%
	L	.	.	.	.	.	3.5%	2.4%	1.1%	1.8%	1.9%	2.0%	1.4%	2.0%

Source: STATFOR (MEDIUM TERM FORECAST ed. Feb. 2011)

Figure 6- *Movements forecast in Italy.*

Given that:

- it is mandatory to respect the paramount safety objectives established for the capacity performance area;
- the traffic forecasts, consistent with the requirements listed in the Implementing Rule of the Performance Scheme used by EUROCONTROL - Directorate of Network Manager - to predict the "reference values for ACC delay SES II, are based on a medium-long term (STATFOR Medium Traffic Forecast - MTF);
- such traffic forecasts may be partially overcome (e.g. due to special events or phenomena that may affect the performance of air traffic and which were not envisaged at the time of publication of the MTF) or would require a revision (as proposed by both the STATFOR Traffic Forecast Short - STF and Monitoring and Forecast – FM documents);
- the airport capacity is a potential bottleneck of the whole ATM system, in fact EUROCONTROL notes that the reliability of STATFOR forecasts depends on the airports' capacity values (that

[17] Art. 18.3. "*Member States, at national or functional airspace block level, may decide to adopt alert thresholds different from the ones referred to in Article 9(3), in order to take account of local circumstances and specificities*".

are not subject to performance targets for the RP1 and are not, by and large, under the responsibility of the ANSP who are, vice versa, subjected to the en route capacity target);
- the assumption of the most pessimistic scenario (the worst credible case) delivers a very narrow variation of air traffic in the Italian air space;
- the results coming out from the comparison between the actual and the forecasted air traffic movements (high and low forecast values included) in the years 2008-2010 showed that the actual values were always very close to the extreme edges of the uncertainty window (either high or low, according to the period - see table below 6). This scenario is likely to happen again during the RP1 timeframe;
- the most significant digit of the capacity performance target requested to the Italian State (expressed by minutes of all Reasons ATFM delay per en route flight) is the hundredth of minute that's to give evidence of the outstanding performance level achieved and hardly comparable with the majority of European States;
- the ATM technology investments are either directly or indirectly functional to the achievement of targets related to safety and capacity performance levels;

Italy deems appropriate the alarm threshold being triggered by the fluctuation reported in the STATFOR MTF for each year, or its variation over 1% tolerance (+/- 1%) with reference to the HIGH and LOW traffic growth as assumed from the baseline proposed by STATFOR, whichever smaller.

Italy – Air Traffic Variation Actual vs Forecast	Actual	Growth	
		Low	High
Dec08-Jan09 vs. Dec07-Jan08	**-14.3%**	-15.9%	-1.8
Forecast yr. 2010 issued in 2009	**-3.7%**	-4.9%	12.3%
Forecast yr. 2009 issued in May 2009	**-6.1%**	-9.6%	-1.3%
May-Aug 2009 vs. May-Aug 2008	**-4.9%**	-12.0%	-2.3%
Feb-Apr 2010 vs Feb-Apr 2009	**0.0%**	0.2%	4.8%
Aug-Nov 2010 vs. Aug-Nov 2009	**6.0%**	2.8%	7.5%

Source: Eurocontrol STATFOR Short-term Forecast (2008-2010 documents). Processed by ENAV/AOP.

***Table 6 -** Actual and forecast air traffic movements in Italy.*

If the air traffic variation exceeds such threshold values, established with reference to each yearly value, the effects generated both in terms of en route ATFM delays and costs supported by ENAV S.p.A. will follow a similar process to the ones already established for the same scope at a European level.
Whenever the variation of the air traffic exceeds the defined threshold values, the appropriate tradeoff between the objectives set out in the capacity and costs performance areas and the airspace users' needs will be evaluated, with compliance to the paramount and overriding objectives about safety.

Capacity - Terminal and Airports

For the first reference period (2012-2014 RP1), the Performance Scheme (EC Regulation 691/10), differently from the en route phase of flight, does not set any capacity targets for the airport and terminal area, nor any obligations for the terminal phase of flight are defined at national and/or FAB level.

Taking into account that the quality of statistical data is not yet sufficiently consolidated, shared among all stakeholders and verified, for the first period of the European Performance Scheme, Italy decides not to determine any target for the terminal phase of flight and for the airports.
Given the need to carry out an overview of the potential indicators useful to identify a performance target for airports and terminal areas in the Reference Period 2, the Italian NSA intends to monitor:

1. **ATFM Arrival Delay**[18]: this indicator is calculated for the inbound flow at a destination airport. For all flights arriving at the airport, it takes that portion of the pre-departure delay which is caused by landing restrictions at the destination airport. The indicator is the average generated ATFM delay per inbound flight and equals to the sum of all arrival ATFM delays divided by the sum of all inbound flights. The indicator is calculated for the airports hitting more than 150.000 commercial movements[19].

Σ [CTOT – (EOBT + Taxi Time)]*
KPI ATFM Arrival Delays = ----------
Total IFR arrival flights
* *This is the total amount of ATFM arrival delay for all ATFM delayed arrival flights, caused by landing restrictions at the destination airport expressed in minutes.*

Table 7 – *KPI ATFM Arrival Delays*

2. **Taxi-out additional time**[20]**:** This indicator provides an approximate measure of the average departure runway queuing time on the outbound traffic flow, during times that the airport is congested. This indicator is calculated on the basis of data availability for actual off block time (AOBT) and actual take-off time (ATOT). The taxi-out additional time per group of similar flights is the difference between the average impeded taxi-out time and the median unimpeded taxi out time. Taking the weighted average of the values for all groups produces the taxi-out additional time for the airport. ENAV is authorized to use the Airport Data Monitoring (ADM) tool already available in the airports counting more than 150.000 yearly commercial movements[21].
3. **Adherence to ATFM slot**[22]**:** this indicator is the percentage of flights adhering to their assigned ATFM slot. It is the sum of all flights with a difference between (CTOT) and (ATOT) inside the slot tolerance window [-5 and +10 minutes] divided by the total number of flights with an ATFM slot.

(c) Environment target and threshold

According with the SES' regulatory framework and in compliance with the Performance Scheme Regulation n. 691/2010, the European Commission set the first European-wide environmental target as follow:

[18] Ref. (EC) Reg. 691/2010
[19] Ref. (EC) Reg. 691/2010. Art.2 "*Commercial air transport movements" means the sum of take-offs and landings involving the transport of passengers, cargo or mail, for remuneration or hire, calculated as an average over the three years preceding the adoption of the performance plan, regardless of the maximum take-off mass and the number of passenger seats used*".
[20] Ref. Reg (CE) 691/2010
[21] After a suitable experimental period, if validated according to SES regulations, and not before the entry in force of RP2 (2015-2020), ADM might be a very powerful tool to monitor and collect gate-to-gate data to be shared among airport stakeholders operating within Italian context.
[22] Ref. (EC) Reg. 255/2010

- to improve, between 1st of January 2012 and 31st December 2014, by 0,75% the average horizontal en route flight efficiency[23] respect the same value recorded in 2009 (EC Decision 2011/121/UE).

The practical pursue of this target is placed on the shoulders of the Network Manager, who will ensure through the re-design of the European Route System at network level the needed modifications.
While waiting for the beginning of the activity of the Network manger, Italy dedicates great attention to environmental protection policies and - at the same time - is sensitive to the international air transport industry efforts in reducing the costs and in lowering the fuel burn, but - according to the Performance Scheme Regulation and EC Decision provisions, national environmental target coherent with European ones will be defined from the second reference period (2015).
To pursue this aim, the implementation of ENAV Flight Efficiency Plan (FEP) is one of the major operational and environmental objectives. In this perspective the FEP process shall contribute to consolidate methodology and metrics to measure the ATM related horizontal flight efficiency in en route phase of flight and other issue for the airport and terminal domain.
The present edition of the ENAV FEP includes 2011 and 2012 improvement of Airspace. Given the condition of high efficiency of the Italian Route System, the improvements are highly dependent on the routes that airspace users intend to fly, and therefore the annual monitoring report is based also on direct consultation and negotiations with the users through the Customer Satisfaction unit.
Each year a new FEP report will be published and the percentage of actions included in the FEP used as environmental KPI.
For this first period no incentive or penalty is placed on the Environmental KPA.

(d) Cost-efficiency target and threshold

This section sets out the national target for the mandatory cost-efficiency KPI in RP1, which is represented by the National Determined Unit Rate (DUR) for en route air navigation services, calculated as requested by the Performance Scheme:

1. the indicator is the result of the ratio between the determined costs and the forecast traffic expressed in total service units contained in the performance plans in accordance with Article 10(3) (a) and (b) of the Performance Scheme Regulation;
2. the indicator is expressed in national currency and in real terms;
3. the indicator is provided for each year of the reference period.

The Italian target for the mandatory cost-efficiency KPI for RP1 is set out in table 8.

Cost-efficiency KPI	2012 Target	2013 Target	2014 Target
Italy real en-route determined unit rate (in national currency at 2009 prices)	**€ 70,31**	**€ 68,21**	**€ 65,96**

Table 8 - *Italy's en route cost-efficiency target for RP1*

[23] Reference with this scope the average horizontal en route flight efficiency is defined in Regulation n. 691/10, Annex I.

The entities accountable for the achievement of the national cost-efficiency performance target are:

- ENAV S.p.A.
- ITAF.
- ENAC.

EUROCONTROL costs are included in the national cost base. They are classified as uncontrollable costs.

In application of the provisions of art.18 of the EC Regulation n.691/2010, in order to take into account its peculiar geographical location within the Mediterranean area frequently characterized by socio-political turmoil that might have significant effects on the provision of air traffic services and on the financial stability of the ANSPs, Italy, as said before in para. 2.1, proposes an additional alert mechanism which foresees that in case of variations of costs (or revenues) which are originated by socio-political or financial factors that cannot be foreseen in advance by the State and that could have a severe impact on safety or on the level of service offered by the provider, Italy will consider the possibility to propose to the European Commission revised targets.

For what concerns traffic, the exceptional situation that is interesting the Mediterranean area is demonstrating that an alert threshold of 10% on traffic is too high for Italy because its effects could be devastating for the financial stability of the provider that would lead to significant and dangerous detrimental effects on the level of safety and quality of the service offered. Therefore, as local alert threshold on traffic, Italy will activate the process for a possible target revision for any variation higher than 4,5% on the forecasted level of traffic (flights or SU).

2.2 Consistency with EU-wide targets

This section sets out the justifications for Italy's targets and their consistency with the EU-wide targets.

(a) Safety

As reported in par.2.1(a), the EU is establishing 3 safety KPI that can be characterized as "leading" indicators and 3 KPI as "lagging" indicators to harmonize reporting and classification of Safety Events.
ENAV, fully compliant with the EC indications, will provide to ENAC for monitoring and publishing performance data against these indicators as required.
ITAF will provide data on occurrences, the severity of which will be assessed using RAT.
As far as effectiveness of safety management and just culture are concerned, ITAF will examine the final version of the metrics and will decide in liaison with ENAC their applicability to a military service provider.

(b) Capacity

EN ROUTE

Given that:

- the objectives are identified with reference to the entire year and to any "en route ATFM delay reasons" through the involvement of all the concerned stakeholders and, possibly, with the same operation lay-outs and scenarios in force during the previous years;
- ENAV's S.p.A. operational lay-outs are defined taking into consideration the tradeoffs with other performance areas (safety and cost) and must be evaluated in relation to a possible company reorganization (it has to be emphasized that in RP1 the stakeholders involved in airports are not subject to any targets and incentive schemes);

when assessing the consistency of the National Performance Plan, the following pre-conditions have been taken into consideration:

- same or lesser amount of reserved and/or engaged airspace for the purposes of national defense and/or for military purposes;
- similar or better weather conditions with reference to what historical data have showed (in accordance with the national climatology indications);
- absence of special events like volcanic eruption/ash, natural phenomena, political conflicts, etc.

Data contained in table 9 give a clear description of Italian en route AFTM delay breakdown. The European Commission expects Italy to have an ambitious but sustainable contribution to the achievement of European wide performance targets but this objective may be achieved only if the adequate balancing between the operational performance of the capacity area and cost-effectiveness is made with a proper and careful view to the paramount safety objectives.

The Key Performance Areas within this National Plan shall be considered as a whole given that the results stemming from one area are able to affect the other. It is important to underline that, focusing only on capacity and cost-efficiency performance, with already established targets, may lead to forget or underestimate the investment in terms of costs and of human resources needed to support the forecast capacity without changing the current safety level.

Total en-route ATFM delay (mins.)				
	2009	breakdown	2010	breakdown
	17.076	100,00%	10.084	100,00%
Total ANSP	12.846	75,20%	8.347	82,80%
ATC Capacity	7.308	42,80%	3.966	39,30%
ATC Routeing	0	0,00%	0	0,00%
ATC Equipment	2.450	14,30%	0	0,00%
ATC Staffing	0	0,00%	0	0,00%
ATC Industrial Action	3.088	18,10%	4.381	43,40%
Total Other Reasons	4203	24.8%	1737	17,20%
Weather	4230	24,80%	924	9.2%
Other	0	0,00%	803	8,00%
Military Activity	0	0,00%	0	0,00%
Special Event	0	0,00%	10	1,00%

Table 9 - *Total en route ATFM delay breakdown/reference value*

TERMINAL

In the Reference Period 1, the Italian NSA intends only to monitor: ATFM Arrival Delay, Taxi-out additional time and Adherence to ATFM slot.

(c) Environment

The implementation of ENAV Flight Efficiency Plan (FEP) is one of the major operational and environmental objectives. In this perspective the FEP process shall contribute to consolidate methodology and metrics to measure the ATM related horizontal flight efficiency in en route phase of flight and other issue for the airport and terminal domain.

(d) Cost-efficiency

This section sets out how the cost-efficiency target defined at national level is consistent with and contributes to the achievement of the EU-wide cost-efficiency target established for RP1.

1) En route SU Forecast

The traffic forecast used by Italy for the National Performance Plan are in line and consistent with EUROCONTROL “STATFOR Short-Medium Term Forecast” in the Baseline scenario, published in May 2011. For what concerns 2009 and 2010, values are actual (as reported in ENAV’s Balance sheet).

	2009 A	2010 A	2011 F	2012 F	2013 F	2014 F
En-route total service units prior to RP1	8,155	8,629	8,554			
Forecast total service units used for the determined unit rate				8,651	8,886	9,173
Source:						
% n/n-1		5,81%	-0,87%	1,14%	2,72%	3,23%
STATFOR service units forecast (Baseline scenario)	8,145	8,621	8,546	8,643	8,878	9,165
Date of STATFOR SU forecast:	**May 2011**					
% n/n-1		5,84%	-0,87%	1,14%	2,72%	3,23%

Table 10 - *En route service units forecast used for the calculation of the Italian en route cost-efficiency target*

As it is possible to observe in the table above, forecasts for 2011 have a negative variation compared to the previous year and significantly below the forecasts provided by STATFOR at the end of February 2011.
In fact, comparing the two forecasts it is possible to notice that the drop in forecasted SU for 2011 is of about - 4,5% and of -1,7% for 2012.

				RP 1		
YEARS	**2009A**	**2010A**	**2011F**	**2012F**	**2013F**	**2014F**
TOTAL SU	8,145	8,621	8,920	9,174	9,423	9,729
variation %		***5,8%***	***3,5%***	***2,8%***	***2,7%***	***3,2%***

Source: EUROCONTROL, SUF - FEBRUARY 2011

				RP 1		
YEARS	**2009A**	**2010A**	**2011F**	**2012F**	**2013F**	**2014F**
TOTAL SU	8,145	8,621	8,546	8,643	8,878	9,165
variation %		***5,8%***	***-0,9%***	***1,1%***	***2,7%***	***3,2%***

Source: EUROCONTROL, SUF - MAY 2011

Table 11 - *En route service units forecast provided by STATFOR in February and May 2011*

This variation is originated by the crisis situation of unrests in North Africa with significant impacts on the revenues of the Italian service providers. The situation became even more dramatic for the SU trend after the adoption on the 17th of March 2011 of the Resolution 1973 (2011) with which the Security Council of United Nations "*Decides to establish a ban on all flights in the airspace of the Libyan Arab Jamahiriya in order to help protect civilians* (*art.6)*" and "*Decides that all States shall deny permission to any aircraft registered in the Libyan Arab Jamahiriya or owned or operated by Libyan nationals or companies to take off from, land in or overfly their territory unless the particular flight has been approved in advance by the Committee, or in the case of an emergency landing (art. 17)".*

Considering the flight trends from and to the main African Countries (through Italy), the period January – May 2011 (compared with the same period of the previous year) has shown negative variations of the SU:

- Egypt: -41,6%;
- Tunisia: -29,8%
- Libya: -34,8%
- South Africa: -36,8%.

All the above mentioned variations are providing an overall result in the period January-May 2011 of +0,4% SU and +3,5% flights.
From internal studies, excluding from the above figures the effect of what is happening in Africa, the overall en route traffic for Italy would stand at a +8,1% in terms of Service Unit and +6,4% in terms of flights, in line with the actual increase recorded by the main European countries in the same period.

The traffic variation shown by STATFOR latest forecast has, *de facto*, introduced a critical element in the National Performance Plan because of the unpredictability of the situation and of the foreseen impermanence of the event that has originated it. In fact, it is not yet clear for how long the North African crisis (i.e., Libya, Egypt, Tunisia, etc.) will release its effects.
It will be necessary to wait until the end of the Summer season in order to be able to provide more accurate forecasts on traffic volumes for 2011 and 2012 and to assess the overall impact of the North-African crisis.
In the meantime, it is important to underline that given the geographical position of Italy and the importance that those routes have in its traffic pattern, it seems clear that the effects on SU of such uncontrollable events cannot, in any way, be borne by the Italian State nor by the Italian providers. In fact, Italy has no leverages to intervene on a political situation that is subject to a United Nations resolution and on internal turmoil of some North African countries which have important impacts on the Italian traffic trends that are not anymore dependent on a “normal” demand dynamics.

It is important to highlight that the Italian cost-efficiency performance and the related cost planning, which shows a substantial invariance of costs in real terms throughout the entire RP1 (as shown in the following chapters), was based on STATFOR SU forecasts published in February 2011 when the effects of the North African crisis were not yet visible. Under those assumptions, in the period 2009-2014, the Italian DUR would have had an average efficiency of the 3,5% per year while in the period 2011-2014, an average efficiency of the 3,2% per year. These results would have been perfectly in line with the EU wide cost-efficiency target trend.
In fact, when preparing the first version of the Performance Plan (April-May) to be discussed with the users, Italy has used the latest version of the STATFOR SU forecasts available at that date (February 2011) which did not incorporate the effects of the crisis since they were not yet evident.
Moreover, the actual traffic values of the very first months of 2011 did not show yet relevant signals of major decrease, also because the actual traffic in April was quite positive (+4,8% in terms of SU) compared to the same period of 2010, when the volcano ashes crisis produced its negative consequences (actual SU for Italy Jan - Apr 2011, about +2%).

Instead, using the last STATFOR SU forecast released in May that takes into account the North Africa crisis impacts on the Italian traffic, the decrease in average of the Italian Determined Unit Rate, for the period 2009-2014 is of 2,2% per annum while for the period 2011-2014, the decrease is in average of the 2,5% per year (details will be provided in the following paragraphs).

It is important to underline that, despite the overall reduction of the SU forecasts - mainly due to the reduction in the number of over-flights and in the distance covered - the number of flights is still increasing in the first fifth months of the year (+3,5%). In fact, analyzing the Italian over-flight actual data, it emerges that against a heavy drop in flights on the “north-south” axes as effect of the North African crisis, there is an increase in the number of flight on the “east-west” axes. This “substitution effect” is reducing the average distance covered by a flight within the Italian airspace, hence justifying the negative trend of the SU compared to flights. Therefore, in order to continue in

ensuring the highest safety levels and to achieve the capacity targets, providers' staff should be maintained at the same level as planned before the North African crisis.
The local nature of the crisis is confirmed by the general European SU trend which shows a generalized increase (+7,4% considering ESRA02 countries – end of May) against, as said before, a +0,4% for Italy.

Said that, the exceptional situation that is interesting the Mediterranean area is demonstrating that an alert threshold of 10% on traffic is too high for Italy because its effects could be devastating for the financial stability of the providers that would lead to significant and dangerous detrimental effects on the level of safety and quality of the service offered. Therefore, as local alert threshold on traffic, Italy will activate the process for a possible target revision for any variation higher than 4,5% on the forecasted level of traffic (flights or SU).
Considering the impact that SU variation has on the calculation of the cost-efficiency targets for the first Reference Period, Italy asks to the European Commission the possibility to revise the traffic forecast after the end of the summer season. Consequently, in case of potential improvements of the North African crisis and therefore of 2011 traffic forecast, that revision would positively affect the RP1 traffic levels.
The benefit of such provision is twofold: on one side the national cost efficiency performance could get closer to the levels initially presented and, on the other side, Italy would "render" to the users part of RP1 traffic improvements (potentially gained after the summer season) until the maximum upper limit given by the STATFOR forecasts of February 2011 (initial forecast used for cost planning).

2) Determined en route ANS costs in nominal terms

This section summarises the Italian determined en route ANS costs in nominal terms. The components of the national costs are as follows:

- ENAV costs;
- ITAF costs;
- NSA costs;
- EUROCONTROL costs.

For what concerns 2009 and 2010, values are actual. It is important to highlight that the cost components of ENAV are aggregated, in 2009, 2010 and 2011, with the costs of the Italian Air Force (ITAF) in accordance with the CRCO reporting table (1st of June 2011).

ANS en-route cost per entity	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
ENAV + ITAF	EUR	552,026	557,139	583,241	*N.A*	*N.A*	*N.A*
% n/n-1			*0,93%*	*4,69%*	*N.A*	*N.A.*	*N.A.*
ENAV	EUR	*N.A*	*N.A*	*N.A*	531,937	541,683	550,803
% n/n-1			*N.A*	*N.A.*	*N.A.*	*1,83%*	*1,68%*
ITAF	EUR	*N.A*	*N.A*	*N.A*	60,361	60,862	62,465
% n/n-1			*N.A*	*N.A.*	*N.A.*	*0,83%*	*2,63%*
MET	EUR	0,00	0,00	0,00	0,00	0,00	0,00
% n/n-1			*N.A*	*N.A.*	*N.A*	*N.A.*	*N.A.*
NSA+EUROCONTROL*	EUR	50,535	51,887	47,888	51,478	51,819	52,950
% n/n-1			*2,68%*	*-7,71%*	*7,50%*	*0,66%*	*2,18%*
Total determined costs in nominal terms	**EUR**	**602,561**	**609,025**	**631,129**	**643,777**	**654,365**	**666,218**
% n/n-1			*1,07%*	*3,63%*	*2,00%*	*1,64%*	*1,81%*

** for 2009 and 2010, values refer only to EUROCONTROL costs*

***Table 12 -** National determined en route costs – breakdown per entity (in nominal terms in national currency)*

For what concerns **ENAV,** are reported the proposed planned costs with which the provider has calculated its own cost-efficiency performance. Details are provided in Section 3.

ITAF costs, for RP1, are reported as communicated by ITAF in May 2011. Details are provided in Section 3.

With reference to the Italian **NSA** (ENAC) costs, those are as reported in the scope of the calculation of the unit rate presented to CRCO in November 2010. Details are provided in Section 3.

For what concerns **EUROCONTROL** costs they are reported as communicated by EUROCONTROL in May 2011.

With reference to methodology adopted to define costs for the concerning period, it is important to highlight that:

- the years 2009, 2010 and 2011 are based on the methodology applied until November 2010 to CRCO Reporting Table; for this reason ENAV and ITAF costs are aggregated for such years (as per the Table 1 ANSP ENAV worksheet);
- for 2009 and 2010 values are actual and as per 2011 the full cost recovery applies;
- from 2012 until 2014, according to EC Reg. 1794/2006 (as amended by Reg. 1191/2010) and EC Reg. 691/2010, the determined cost method is applied. In this case, ENAV costs and ITAF costs are shown separately.

ANS en-route cost per nature	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
Staff	EUR	316,471	321,765	332,112	341,460	348,056	354,640
% n/n-1			*1,67%*	*3,22%*	*2,81%*	*1,93%*	*1,89%*
Other operating costs *	EUR	162,266	162,830	158,485	160,275	160,743	164,694
% n/n-1			*0,35%*	*-2,67%*	*1,13%*	*0,29%*	*2,46%*
Depreciation	EUR	93,163	101,326	114,442	113,952	115,475	116,793
% n/n-1			*8,76%*	*12,94%*	*-0,43%*	*1,34%*	*1,14%*
Cost of capital	EUR	28,900	21,580	26,090	28,090	30,090	30,090
% n/n-1			*-25,33%*	*20,90%*	*7,67%*	*7,12%*	*0,00%*
Exceptional items	EUR	1,761	1,524	0,000	0,000	0,000	0,000
% n/n-1			*-13,47%*	*N.A.*	*N.A.*	*N.A.*	*N.A.*
Total determined costs in nominal terms	EUR	**602,561**	**609,025**	**631,129**	**643,777**	**654,365**	**666,218**
% n/n-1			*1,07%*	*3,63%*	*2,00%*	*1,64%*	*1,81%*

**Also for 2009, the value includes EUROCONTROL costs in order to align it with the new Reporting Tables.*

***Table 13 -** National determined en route costs – Breakdown by nature (in nominal terms in national currency)*

As a general comment, the plan for the 2011-2014 period highlights a substantial invariance of costs in real terms. For 2013 and 2014 the determined cost increase is even lower than the IMF forecasted inflation rates for Italy.

3) Determined en route ANS costs in real terms

This paragraph summarises the different elements of the conversion of the Italian determined en route costs from nominal terms into real 2009 terms.

Italy has adopted a transparent approach in order to reconcile the calculation of the Unit rate with the cost efficiency performance indicator:

- Determined costs for 2009 are actual and correspond to the sum of the Total National Costs and of the EUROCONTROL costs as reported in Table 2 of the Reporting Tables presented in November 2010 to the Enlarged Committee in its 91st session.
- Determined costs for the years 2010-2014 are correspondent to the total costs as reported in Table 1, line 1.6 of the new Reporting Tables presented in June 2011 to the Enlarged Committee in its 93rd session.
- The inflation rates adopted for the calculation of the costs in EUR 2009 are those published by the International Monetary Fund in its April 2011 Outlook for Italy[24].

			RP 1		
Years	2010 A	2011	2012	2013	2014
IMF Inflation rates	***1,64%***	***1,95%***	***2,13%***	***2,00%***	***2,00%***

***Table 14 –** IMF Inflation rates for Italy*

[24] Values can be found at:
http://www.imf.org/external/pubs/ft/weo/2011/01/weodata/weorept.aspx?sy=2009&ey=2014&scsm=1&ssd=1&sort=country&ds=.&br=1&c=136&s=PCPIPCH&grp=0&a=&pr1.x=57&pr1.y=9

- 2009 is the year-base.

	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
Total determined costs in nominal terms		602,561	609,025	631,129	643,777	654,365	666,218
Inflation %			1,64%	1,95%	2,13%	2,00%	2,00%
Inflation index (100 in 2009)		100,0	101,64	103,63	105,83	107,95	110,11
Total determined costs in real 2009 terms		602,561	599,204	609,050	608,299	606,180	605,060
% n/n-1			-0,56%	1,64%	-0,12%	-0,35%	-0,18%

Table 15 - *National determined en route costs – total in real 2009 terms*

National costs expressed in EUR 2009 show a decrease during RP1.

4) Real en route determined unit rate

The real en route determined unit rate for the Italian State resulting from the parameters described above is presented in Table 14 below, together with the EU-wide target.

	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D	Average per annum	
								2009-2014	2011-2014
Determined costs in real terms (in national currency at 2009 prices)	2009EUR	602,561	599,204	609,050	608,299	606,180	605,060	0,1%	-0,2%
Total en-route SUs		8,155	8,629	8,554	8,651	8,886	9,173		
Real en-route determined unit rate in national currency (at 2009 prices)	2009EUR	**73,89**	**69,44**	**71,20**	**70,31**	**68,21**	**65,96**	-2,2%	-2,5%
% n/n-1			-6,02%	2,54%	-1,25%	-2,99%	-3,31%		
2009 Exchange rate (1 EUR=)									
Real en-route determined unit rates (in 2009 EUR at 2009 exchange rate)	2009EUR	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
% n/n-1			n.a.	n.a.	n.a.	n.a.	n.a.		
EU-wide target: average determined en-route unit rate (in 2009 EUR)	2009 EUR				57,88	55,87	53,92	-3,20%	-3,50%

Table 16 - *National real en route determined unit rate (in EUR2009)*

As required by the Performance Scheme, the Determined Unit Rate for Italy shows a decreasing trend. In particular, the decrease is in average, for the period 2009-2014 of 2,2% per annum while for the period 2011-2014, the decrease is in average of the 2,5% per year.
The level of decrease is negatively affected by the level of traffic which has been discussed in section 1).
If the request of revising the traffic level after the summer season will be accepted by the Commission, Italian cost-efficiency performance could be higher, considering the level of costs which is constantly decreasing in real terms (for further details, see section 1).

Given the particular situation of the level of traffic for Italy and considering that despite the contingent situation, Italy is able in any case to guarantee an average decrease of the Italian DUR higher than 2% per annum.
Therefore, the contribution can still be considered at a good level referring to the EU wide targets as the Italian DUR decreases in the period 2009-2014 of the 10,74% while in the period 2011-2014 the decrease is of about 7,4%.

NATIONAL DUR (€2009)						
ENTITIES/YEARS	2009 A	2010A	2011F	2012F	2013F	2014F
ENAV	€ 60,99	€ 56,42	€ 58,90	€ 58,10	€ 56,47	€ 54,53
EUROCONTROL	€ 6,20	€ 5,92	€ 5,05	€ 5,28	€ 5,07	€ 4,92
NSA	€ 0,00	€ 0,00	€ 0,35	€ 0,34	€ 0,33	€ 0,32
ITAF	€ 6,71	€ 7,11	€ 6,90	€ 6,59	€ 6,34	€ 6,18
NATIONAL DUR	€ 73,89	€ 69,44	€ 71,20	€ 70,31	€ 68,21	€ 65,96

Table 17 - *The composition of the National DUR*

Looking at the composition of the national DUR, the different entities contributing to the achievement of the target are all showing a decrease in their "determined unit rates" in the first Reference Period.

5) Terminal ANS costs

Considering that Italy has deferred terminal to the second Reference Period, all the information reported are provided for monitoring purposes, as required by the EC regulations.

For what concerns terminal costs, it is important to underline that in Italy it exists a single charging zone which includes 47 airports, 39 of which are managed by ENAV and 8 by ITAF. As foreseen in the Law n. 248 of December 2005, costs for smaller airports and part of the costs for major airports are funded by the State and displayed in the unit rate reporting tables under the definition of "Income from other sources".

Moreover, once again in accordance with the Law n. 248 of December 2005, the 50% of the costs related to the flights to national and EU destinations (50% of the unit rate) are borne by the State.

For what concerns the scheme of costs afferent to terminal, they are referred to ENAV, ITAF and to the CAA/NSA.
With reference to the cost scheme, it is also important to underline that, from 2010, to national costs are added not only ENAV but also ITAF costs related to civil airport traffic. From 2011, to what above mentioned are added as well CAA/NSA costs.

ANS terminal cost per entity	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
ENAV	EUR	180,118	187,615	197,987	200,991	208,821	212,415
% n/n-1			*4,2%*	*5,5%*	*1,5%*	*3,9%*	*1,7%*
ITAF	EUR	0,000	24,495	25,643	22,692	22,932	23,694
% n/n-1				*4,7%*	*-11,5%*	*1,1%*	*3,3%*
CAA/NSA	EUR	0	0	1,093	1,110	1,126	1,143
% n/n-1					*1,5%*	*1,5%*	*1,5%*
Total terminal costs in nominal	EUR	180,118	212,110	224,723	224,793	232,879	237,252
% n/n-1			*17,8%*	*5,9%*	*0,0%*	*3,6%*	*1,9%*

** Data for 2009 and 2010 is actual. Data referred to 2011-2014 is forecast.*

Table 18 - *National costs for terminal ANS – Breakdown per entity (in nominal terms in national currency)*

The cost planning for the period 2012-2014 reported above highlights a substantial invariance of costs in real terms.

For what concerns ENAV, the analytical accounting system gathers costs and revenues by nature and by cost centers and sales orders and allocates them to the institutional En route and Terminal Services and to the other businesses.
Overhead in General & Administrative and Coordination & Support are allocated to the operational sites (airports and area control centers) and to the other businesses according with specific drivers for allocation.
Every year an external auditing company certifies that the accounting separation amongst En route, Terminal and Other Businesses is done in accordance with the defined model.
The allocation for air navigation services (i.e. ATM, COM, NAV, SUR, AIS, MET) has been done in a statistical way.

(e) Interdependencies between targets

In setting the targets, Italy has been driven by two main rationales:

- Safety is a paramount. The actual levels of safety offered shall not in any case be compromised.
- The excellent quality of service offered to users shall not be compromised.

Italy is paying particular attention to the continuity of service, with a minimum level of delays and an adequate provision of capacity, at a correct level of costs.

In this regard it should be noted that, for example, the ANSP's cost structure is characterized by a certain rigidity in its main components. In fact, items as personnel costs and maintenance of plants do not have the "flexibility" to regularly follow the variability of demand being recorded at this time, but are strongly related to medium-term planning.

2.3 Carry-overs from the years before RP1

For what concerns carry-overs from the years before RP1, in table 19 are reported data starting from the balance of the year 2004 up to 2010, as reported in ENAV balance sheet.

Carry over of under / over recoveries (in '000 euro)		2008 A	2009 A	2010 A	2011 P	2012 P	2013 P	2014 P	2015 P
Balance Year 2004	-14.888	0	0	0	0	0	0	0	0
Balance Year 2005	-1.113	-1.113	0	0	0	0	0	0	0
Balance Year 2006	2.599	0	2.599	0	0	0	0	0	0
Balance Year 2007	5.326	0	0	5.326	0	0	0	0	0
Balance Year 2008	1.796	0	0	0	1.796	0	0	0	0
Balance Year 2009	-52.327	0	0	0	0	-15.164	-12.388	-12.388	-12.388
Balance Year 2010	-15.614	0	0	0	0	0	-15.614	0	0
Amounts carried over to year (i)	0	-1.113	2.599	5.326	1.796	-15.164	-28.002	-12.388	-12.388

Table 19 - *Carry-overs from the years before RP1 - under (-) and over (+) –recoveries (in nominal terms in national currency)*

Please note that the values reported in table 20 - as per the new Reporting Table 2 - En route (line 4.5) - for the years 2010 and 2011 are different from the values reported above since they have been modified by CRCO for the effect of the different principles applied for the calculation of the Unit Rate (from full cost recovery to determined cost method).

	2010	2011	2012	2013	2014
4.5 Over(-) or under(+) recoveries (1) : amounts carried over to year n	-1,6	15,8	28,0	12,4	12,4

Values in mln Euro

Table 20 - *Carry-overs from the years before RP1 as modified by CRCO and shown in the new reporting tables*

The recovery of the balance resulting from over or under recovery of previous years is included in the cost base for the calculation of the unit rate.

2.4 Parameters for risk sharing and incentives

This Section 2.4 presents the incentives schemes defined at National level, in accordance with Article 11 of the Performance Scheme Regulation.

Incentive schemes for ANSPs

This section describes the incentives schemes on the achievement of the targets by the ANSPs.

(a) Safety

In accordance with the principle that Safety is a paramount, no incentive schemes are foreseen for what concerns safety.

(b) Capacity

For what concerns capacity Italy (through ENAC), in recognition of the link between the high standards of quality of service provided and given the excellent level of operating performance already achieved and expected in the coming years by ENAV, will recognize to ENAV a bonus (at 1% of ENAV determined costs in nominal terms) for each of the years within RP1 in which the declared en route capacity target is achieved.

In the same way, if ENAV performances in terms of capacity will go beyond the European capacity target (0,5 minutes average ATFM delay per en route flight), Italy (through the Civil Aviation Authority) will apply a penalty of 1% of the determined costs (in nominal terms) for each of the years within RP1.

Average delay per flight (min.)	BONUS	PENALTY
Less than: 2012 = 0,14 2013 = 0,14 2014 = 0,12	Italy will recognize to ENAV a bonus (at 1% of ENAV determined costs in nominal terms) for each of the years within RP1 in which the declared capacity target is achieved.	
More than: 2012 = 0,5 2013 = 0,5 2014 = 0,5		Italy will apply to ENAV a penalty of 1% of the determined costs (in nominal terms) for each of the years within RP1 if ENAV performances in terms of capacity will go beyond the European capacity target.

Table 21 – *Capacity bonus and penalty*

(c) Environment

No incentive schemes on Environment are foreseen for the first Reference Period.

(d) Cost-efficiency

For what concerns the traffic risk sharing mechanism, it will apply to the Italian Air Navigation Service Provider ENAV S.p.A in accordance with the following parameters (EC Reg. 1191/2010, art. 11a):

- The percentage of additional revenue to be returned to the airspace users is equal to 70% when the actual service units exceed the forecast by more than 2%, as defined in Article 11a (4) of the Common Charging Scheme Regulation.
- The percentage of loss of revenue to be borne by airspace users is equal to 70% when the actual service units is lower than the forecast by more than 2%, as defined in Article 11a (4) of the Common Charging Scheme Regulation.
- Where, over a given year n, the actual service units are lower than 90% of the forecast established at the beginning of the reference period, the full amount of the loss in revenue incurred by the air navigation service provider(s) concerned in excess of the 10% of the difference between the actual service units and the forecast in respect of determined costs shall be borne by the airspace users in principle no later than in year n+2. However, Italy may decide to spread the carry-over of such loss in revenue over several years with the view to preserving the stability of unit rate.
- Where, over a given year n, the actual service units exceed 110% of the forecast established at the beginning of the reference period, the full amount of the additional revenue obtained by the air navigation service provider(s) concerned in excess of the 10% of the difference between the actual service units and the forecast in respect of determined costs shall be returned to airspace users in year n+2.

With reference to traffic risk and in consideration of the North African crisis, if the European Commission will allow Italy to review (within the scope of the cost-efficiency target) the Italian traffic forecasts after the 2011 summer season, please take into consideration what is described in section 1 “En route service unit forecast”.

As far as the cost risk sharing is concerned, Italy excludes from cost risk-sharing all the costs that fall within the list of uncontrollable cost factors, as provided in Article 11a (8c) of the Common Charging Scheme Regulation:

i. unforeseen changes in national pension regulations and pension accounting regulations;
ii. unforeseen changes in to national taxation law;
iii. unforeseen and new cost items not covered in the national performance plan but required by law;
iv. unforeseen changes in costs or revenues stemming from international agreements;
v. significant changes in interest rates on loans.

For costs that fall within the uncontrollable costs the following provisions will apply:

- Where, over the whole reference period, actual costs are lower than the determined costs established at the beginning of the reference period, the resulting difference will be returned to airspace users through a carry-over to the following reference period.
- Where, over the whole reference period, actual costs exceed the determined costs established at the beginning of the reference period, the resulting difference will be passed on to airspace users through a carry-over to the following period.

The following principles will apply to cost risk sharing:

- Where, over the whole reference period, actual costs fall below the determined costs established at the beginning of the reference period, the resulting difference will be retained by the air navigation service providers and/or Member State or qualified entity concerned.
- Where, over the whole reference period, actual costs exceed the determined costs established at the beginning of the reference period, the resulting difference will be borne by the air navigation service providers and/or Member State or qualified entity concerned without prejudice to the activation of an alert mechanism in accordance with Article 18 of Regulation (EU) No 691/2010.

Incentive schemes in respect of airspace users

Italy will not adopt incentive schemes in respect of the airspace users for the first Reference Period.

3. CONTRIBUTION OF EACH ACCOUNTABLE ENTITY

This section reports the contribution of each accountable entity to the achievement of the national performance targets.

3.1 ENAV share in the national targets and individual binding performance targets

(a) Safety

As reported in paragraph 2.1(a), for what concerns Safety, having Italy not proposed to adopt any optional targets for the safety KPIs that have been defined for RP1, ENAV will provide to ENAC for monitoring and publishing performance data against these indicators as required.

(a.1.) ***Safety performance monitoring***

Safety performance monitoring is an essential element in the delivery of safe ANS, both providing assurance that safety objectives are being met and, by identifying areas where safety can be enhanced, facilitating continuous improvement.

ENAV safety performance is measured through a comprehensive incident reporting and investigation process. All safety incidents arising from ATM operations are reported through the Mandatory Occurrence Reporting (e-EMOR - electronic ENAC MOR) scheme operated by the CAA, and investigated and assessed by both ENAV and the CAA. Where a pilot or an ATCO believes that the safety of an aircraft was (or may have been) compromised, incidents are reported as Airprox (i.e. Separation Minima Infringement, Inadequate Separation, Runway Incursion, etc.) and assessed by the independent ANSV, which publishes the relevant results and, in most serious cases, may also choose to undertake an investigation. All this will continue.

The annual number of risk bearing Airprox events where ENAV activities are evaluated to be contributory factors is relatively low, therefore performance is subject to considerable statistical variation from one year to the next. It is therefore very difficult to identify trends or undertake analysis of causal factors from such a small data set. For this reason, ENAV has introduced an additional internal measure for an immediate preliminary assessment of the risk severity of airborne incidents, without waiting for classification upon investigation conclusion, called “Fuori Norma (Out-of-the-Book Separation)”. FN are all air traffic incidents in which error caused an actual loss of applicable separation between aircraft (see Appendix). This also will continue.

(a.2.) ***Qualitative current performance***

It is recognised that the absence of safety incidents is not a true measure of the inherent safety risk within a system. It is important to view safety performance information in the context of the health of the Safety Management System (SMS) Indicators are needed to measure the output of important elements of the SMS, to clarify that an excellent safety performance is attributable to a safe system, rather than to a lack of safety incidents.
ENAV wants to keep pace with the modernization of Safety Management Systems and be fully aligned with CANSO/Eurocontrol SMS Standard of Excellence.

The SMS Standard of Excellence consists of a "system enabler" called Safety Culture, its 4 components (Policy, Achievement, Assurance and Promotion) together constitute a mature situation for a systematic safety framework.

Here following ENAV Safety Culture Footprint as positive result of an independent survey involving 2000 people done by Eurocontrol in 2010.

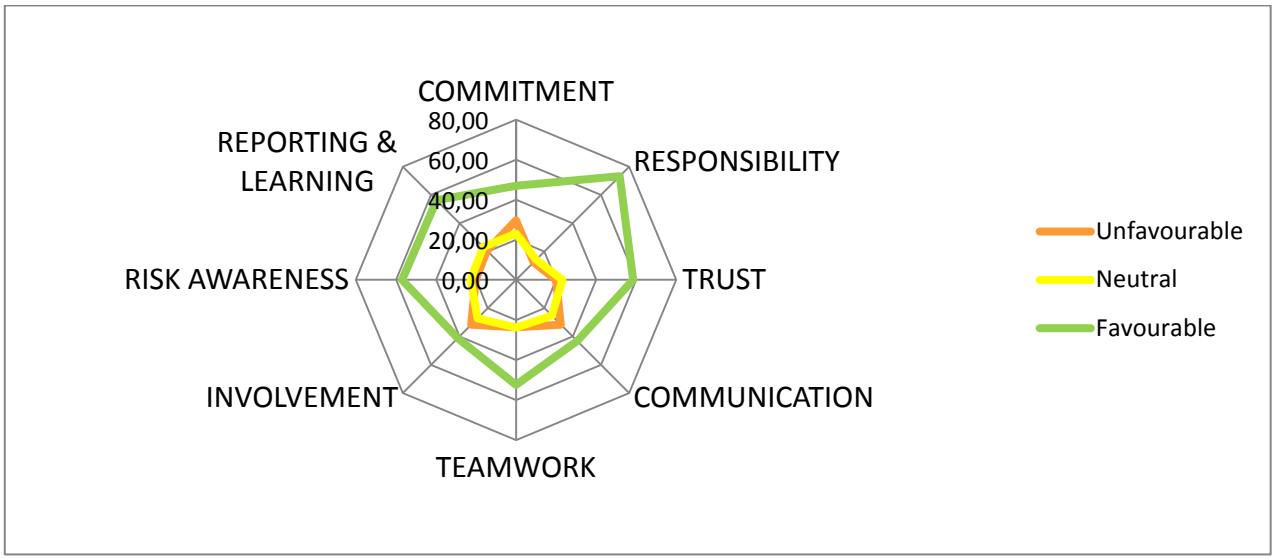


Figure 7- *ENAV Safety Culture Footprint*

The following table indicates ENAV's Maturity Score based on the replies given to the 2010 ANSP Safety Framework Maturity Survey questionnaire and in the interview done by ESR Technology, consultant on behalf of Eurocontrol.

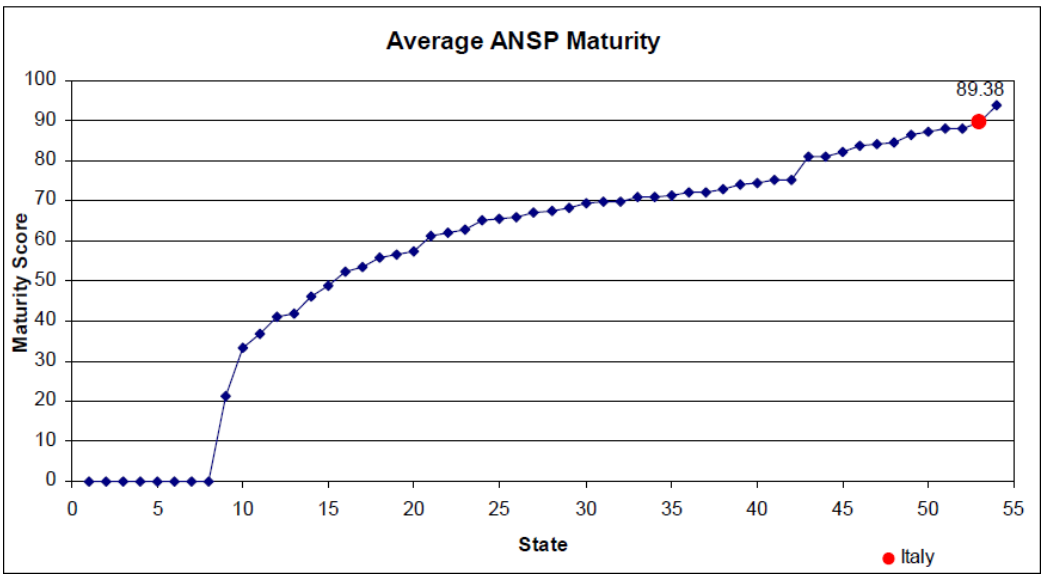


Figure 8 *- ENAV's Maturity Score*

As far as SMS Maturity is concerned, ENAV is striving to push its organization beyond the level of Implementing, to go past the level of Managing and Measuring and even to achieve the level of Continuous Improvement.

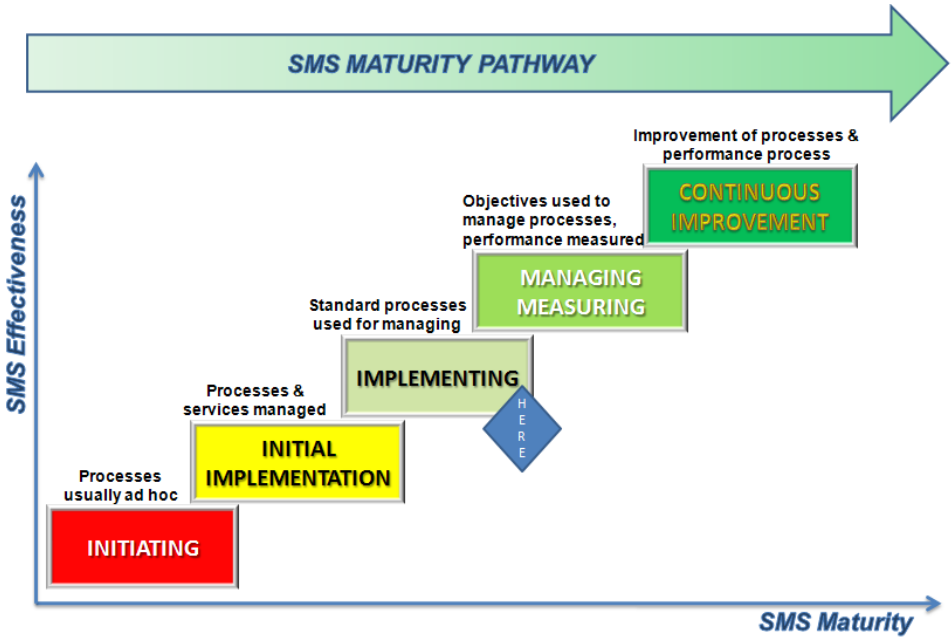


Figure 9 *- SMS Maturity*

(a.3.) ***Strategy for defining Safety Indicators***

ENAV has supported European-wide initiatives on safety data reporting, including EUROCONTROL's AST (Annual Summary Template) process, for a number of years.
Therefore, a number of quantitative safety indicators with historical data are available. It is recognised that, over time, the selection of indicators is likely to evolve.
The initial strategy employed involves selecting a small number of indicators of critical value to ENAV for both "safety measurement" and "safety performance measurement".

(a.4.) ***Strategy for defining Safety targets***

For defined safety indicators, it is necessary to develop associated safety targets in order to provide quantifiable measures for the maintenance and/or improvement of the level of safety in ATS service provision. In defining the identified safety targets, consideration has been given to:

- the level of safety risk that applies;
- the safety risk tolerance;
- the cost/benefits of improvements to the aviation system;
- public expectations that the Italian civil aviation system will continue to provide safe air traffic services to the high standards awaited in a western European state.

Note: The reason used is consistent with the overall safety objective contained in the Eurocontrol ATM Strategy for the years 2000+.

(a.5.) ***ENAV rationale for selection of indicators "of severity class C and above"***

EAM 2 GUI 1 defines two severity classification schemes for safety occurrences in ATM. One allows classification of occurrences according to the severity of their effect on the safe operations of aircraft. The second scheme allows the classification of occurrences according to the severity of their effect on the ability to provide safe air traffic management services.
In defining suitable safety indicators, a balance was required between prioritizing the focus on higher risk bearing scenarios whilst, at the same time, ensuring sufficient statistical data to support trend analysis. Higher severity events occur relatively infrequently, leading to the issue of performing analysis on 'low number statistics'.
Based on historical data, it was considered that setting the threshold at "severity class C and above" provides an appropriate level for the safety indicators employed in the context of ATS service provision.

(a.6.) ***Safety Indicators for the provision of Air Traffic Services***

INDICATOR	DESCRIPTION
Maximum tolerable probability of ATM directly contributing to an aircraft accident.	Number accidents per Flight Hour.
Separation Minima Infringements (as defined in ESARR2 Edition 3 Appendix C)	Number of severity class C and above occurrences per 100,000 aircraft flights
Runway Incursions (as defined in ESARR2 Edition 3 Appendix C)	Number of severity class C and above occurrences per 100,000 airport movements
ATM Specific Occurrences (as defined in ESARR2 Edition 3 Appendix C)	Number of severity class C and above occurrences per 100,000 aircraft flights.

Table 22 – *Safety indicators for the provision of Air Traffic Services*

(a.7.) ***Safety Targets for the provision of Air Traffic Services***

TARGET	DESCRIPTION
T-1	Maximum tolerable probability of ATM directly contributing to an accident of an aircraft as reported in ESARR 4 (ECAC ATM Safety Minima for 2015 of 1.55 x 10^{-8} accidents per Flight Hour).
T-2	Separation Minima Infringements: Tending to 0 by not exceeding 0.55 severity class C and above occurrences per 100,000 aircraft flights.
T-3	Runway Incursions: Tending to 0 by not exceeding 0.15 severity class C and above occurrences per 100,000 airport movements.
T-4	ATM Specific Occurrences: Tending to 0 by not exceeding 0.33 of severity class C and above occurrences per 100,000 aircraft flights.

Table 23 – *Safety targets for the provision of Air Traffic Services*

(a.8.) ***Quantitative current performance***

The following tables show ENAV recent performance for Airprox and FN50. To take account of increasing traffic and seasonal peaks and troughs in aircraft movements, and to give a normalized picture of trends where events are relatively infrequent, Airprox performance is expressed as the average number of incidents per 100,000 flights/airport movements viewed over a three year rolling period.

AIR (Separation Minima Iinfringement)					
	Flights	SMI No ATM	SMI ATM > FN50	FN50	TOT SMI
2008	1.891.842	24	110	25	159
2009	1.787.350	33	79	15	127
2010	1.813.524	34	64	4	102
		SMI x 100.000 flights	SMI ATM x 100.000 flights	FN50 x 100.000 flights	
2008		8,40	7,14	1,32	
2009		7,11	5,26	0,84	
2010		5,62	3,75	0,22	

Table 24 – *AIR Separation Minima Infringment*

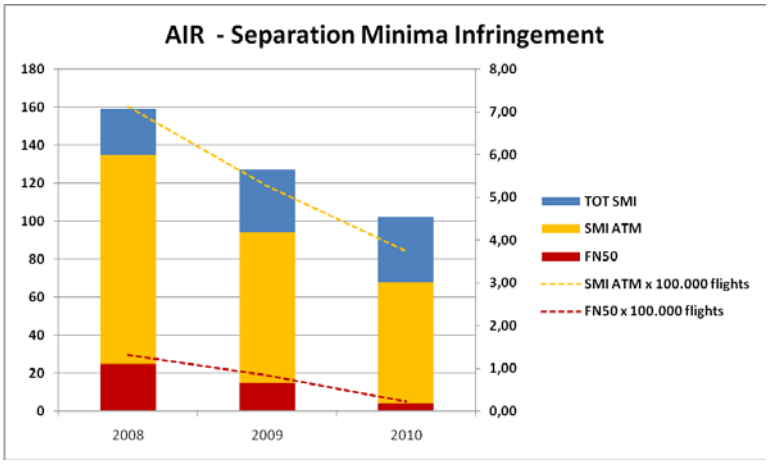


Figure 10- *AIR Separation Minima Infringment*

GROUND (Runway Incursion)					
	Total APT mov	Runway Incursions NO ATM	RWY Inc ATM no "A"	RWY Inc ATM "A"	TOT RWY Inc
2008	2.141.912	67	4	0	71
2009	2.024.553	116	2	1	119
2010	2.000.792	99	2	0	101
			RWY Inc ATM x 100.000 APT mov		RWY Inc x 100.000 APT mov
2008			0,19		3,1
2009			0,15		5,7
2010			0,10		4,9

Table 25 – *Ground (Runway Incursion)*

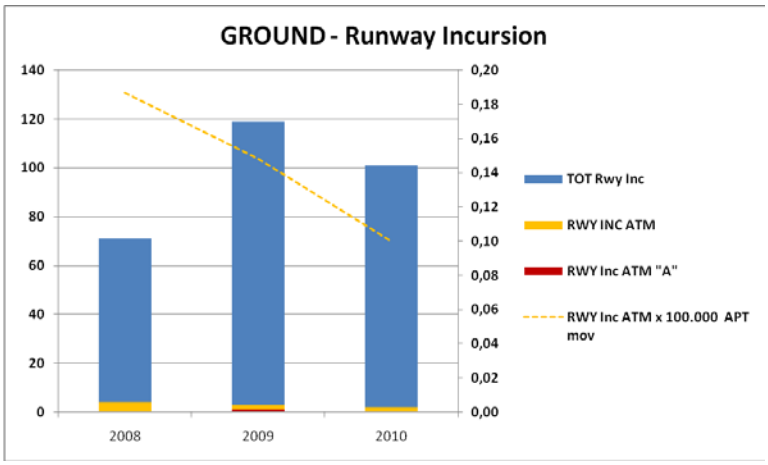


Figure 11 - *Ground (Runway Incursion)*

	Flights	**ASP** (ATM Specific Occurence)	Inability to provide safe ATM	Communication Failures	Navigation Failures	Surveillance Failures	Data Processing Failures
2008	1.891.842	4	3	0	1	0	0
2009	1.787.350	3	0	0	1	2	0
2010	1.813.524	8	0	1	2	4	1

ASP x 100.000 flights
0,21
0,17
0,44

Table 26 – *ATM Specific Occurrences*

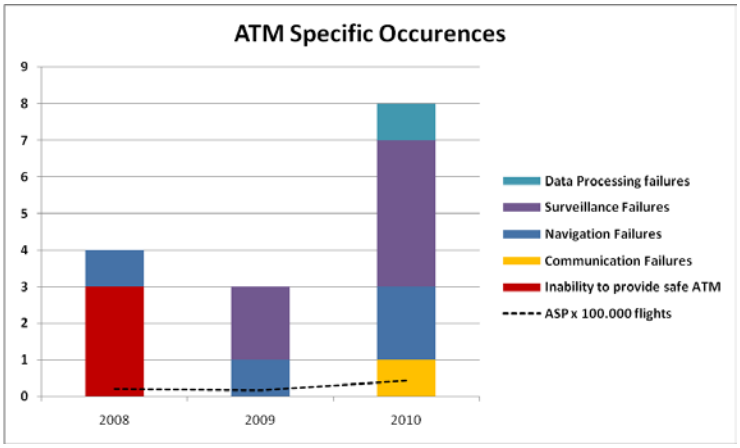


Figure 12- *ATM Specific Occurrences*

(a.9.) ***Metrics for safety performance indicators for RP1***

ENAV is providing services with very high safety standards, due to the dedication of people who manage the Italian Airspace, resulting in an excellent safety record.
Nevertheless, maintaining and improving our safety performance calls for greater vigilance and enforcement, due to the growing levels of airspace complexity.
The level of airspace utilisation and complexity is likely to increase over RP1, as traffic returns to previous peak levels after the recent global economic downturn. The provision of additional capacity in preparation for growth after RP1 is planned to result from the implementation of new ATS operational procedures, enabled by greater use of technology. The combination of these factors provides the main driver to ensure safety performance is maintained, and where possible, improved over RP1.
It is ENAV policy that safety will not be compromised at any stage as changes are implemented to drive performance improvements in areas of capacity, cost-efficiency and the environment. All changes must be justified on the grounds that safety will be improved or, at the very least, will suffer no deterioration in the current level.
ENAV ensures airspace and associated ANS safety through a combination of compliance-based and risk-based regulation. The compliance standards comprise prescriptive requirements contained in a range of documents and legislation, including ICAO Standards and Recommendations, Single European Sky (SES), National legislation and ENAC Regulations.
The performance of ENAV and its obligations are set out in the Programmatic Agreement (Contratto di Programma) issued by the Italian Government, with performance, outcome and compliance overseen by the CAA, focused on curbing the number of high-risk events, i.e. events of

ESARR 2 classes A and B. Relevant values will be coherently expanded by ENAV to cover the entire RP1 time horizon.

The EU is establishing 3 safety KPIs, S1 to S3, in accordance with the Performance Scheme. These are currently being defined and can be characterised as “leading” indicators. In addition, ENAV will continue to track the 3 traditional safety KPIs for RP1, as an aid to enhance ATM safety levels.

These KPIs (S4 to S6) have been drawn from the Common Requirements Regulation 2096/2005 and e-EMOR scheme. The Scheme applies, by law, to operators of Italy-registered aircraft, maintenance organisations, aerodrome and air traffic service providers in Italy. S4 to S6 reflect the frequency of events and can be characterised as “lagging” indicators of safety.

The following table summarizes the full suite of safety KPIs that will be monitored during RP1.

TRK	ID	Description	Source
Leading	S1	Effectiveness of Safety Management	KPI set out in the Performance Scheme IR
	S2	Application of the Severity Classification of the Risk Analysis Tool (RAT)	
	S3	Just Culture	
Lagging	S4	Separation Minima Infringement	ENAV Specific KPI drawn from 2096/2005 + Mandatory Reporting
	S5	Runway Incursions	
	S6	ATM Specific Occurrences	

Table 27 - *Synopsis of the full suite of Safety KPI*

The tables below describe the six KPIs and provide with a synopsis of the details in terms of accountable parties, measurement verification and verification mechanism.

Definition	KPI based on ATM Safety Framework Maturity Survey
Accountable Parties	Independent Body and ENAV
Measurement Verification	New Survey within the RP1
Verification Mechanism	NSA will monitor the KPI and publish performance on annual basis

Table 28 - *KPI S1 Effectiveness of Safety Management (EoSM)*

Definition	KPI based on the frequency with which the severity classification of the RAT is applied to Separation Minima Infringement, Runway Incursions and ATM Specific Occurences
Accountable Parties	All ENAV air traffic services units
Measurement Verification	Eurocontrol AST
Verification Mechanism	NSA will monitor the KPI and publish performance on annual basis

Table 29 - *KPI S2 Application of the Severity Classification of the Risk Analysis Tool*

Definition	KPI based on no blame culture reporting system
Accountable Parties	ENAV for its personnel
Measurement Verification	No sanctions for operational staff safety event reports
Verification Mechanism	NSA will monitor the KPI and publish performance on annual basis

Table 30 - *KPI S3 Just Culture*

Definition	A SMI between airborne aircraft occurs whenever specified separation minima in controlled airspace are breached. The separation minima vary depending on the type of airspace and may be vertical, lateral or longitudinal The KPI will capture the total number of SMI and the rate per 100.000 flights The application of the severity classification of RAT for SMI is a component of KPI S2 as defined in the Performance Scheme IR SMI data will be gathered by automated equipment (ASMT)
Accountable Parties	All ENAV operational units
Measurement Verification	Threshold value respect
Verification Mechanism	NSA will monitor the KPI and publish performance on annual basis

Table 31 - *KPI S4 Separation Minima Infringement*

Definition	Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft The KPI will capture the total number of Runway Incursions per year graded by severity with RAT and the rate of Runway Incursions per 100.000 airport movements The application of the severity classification of RAT for Runway Incursions is also a component of KPI S2 as defined in the Performance Scheme IR
Accountable Parties	All ENAV operational units
Measurement Verification	Threshold value respect
Verification Mechanism	NSA will monitor the KPI and publish performance on annual basis

Table 32 - *KPI S5 Runway Incursions*

Definition	The failure or malfunction of an ATM system affecting the safe operation of aircraft, graded using RAT. The KPI will capture the total number of failures or malfunctions of an ATM system affecting the safe operation of aircraft per year graded by severity with RAT and the rate of failure or malfunction of an ATM system affecting the safe operation of aircraft per 100.000 flights The application of the severity classification of RAT for failure or malfunction of an ATM system affecting the safe operation of aircraft is also a component of KPI S2 as defined in the Performance Scheme.
Accountable Parties	All ENAV operational units
Measurement Verification	Threshold value respect
Verification Mechanism	NSA will monitor the KPI and publish performance on annual basis

Table 33 - *KPI S6 ATM Specific Occurrences*

(a.10.) ***Scenario hypothesis of safety targets and thresholds for RP1***

	GOVERNMENT TARGET SET FOR HIGH RISK EVENTS EXTENDED FROM 2012 ON											
	2010		2011 (Feb)		2012		2013		2014		2015	
	Target	Measured Value	Target	Measured Value	Target	Measured Value	Target	Measured Value	Target	Measured Value	Target	Measured Value
"A"	0,50	0,00	0,49	0,00	0,48	0,00	0,47	0,00	0,46	0,00	0,45	0,00
"B"	1,50	1,60	1,45	1,27	1,40	0,00	1,35	0,00	1,30	0,00	1,25	0,00

GOV RP1

Table 34 – *Government targets set for high risk events extended from 2012 on*

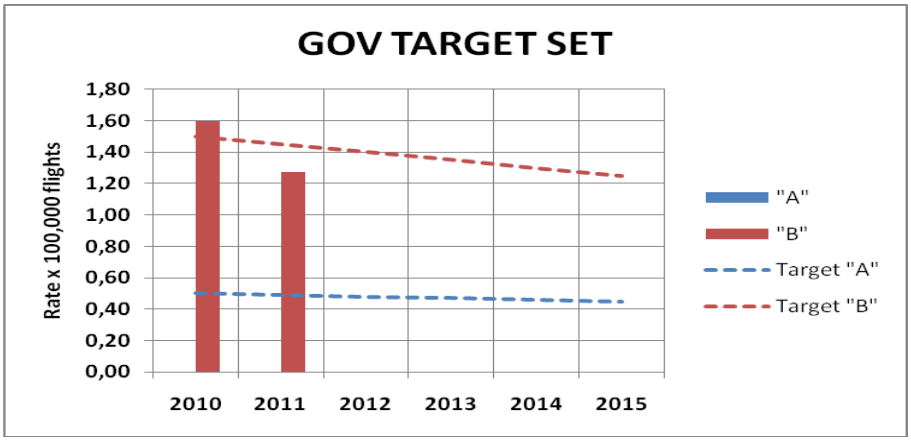


Figure 13- *Government targets set for high risk events extended from 2012 on*

As it is possible to observe, target tends to zero, by not exceeding threshold value.

	ENAV RISK BEARING EVENTS SCHEME											
	2010		2011 (Feb)		2012		2013		2014		2015	
	Treshold	Measured Value	Treshold	Measured Value	Treshold	Measured Value	Treshold	Measured Value	Treshold	Measured Value	Treshold	Measured Value
FN50 ("A"-"B")	0,50	0,22	0,49	0,42	0,48		0,47		0,46		0,45	
FN75 ("B"-"C")	1,50	1,82	1,45	1,27	1,40		1,35		1,30		1,25	
FN ("C"-"D")	2,50	1,43	2,40	0,42	2,30		2,20		2,10		2,00	
Rwy Inc "C"	0,110	0,06	0,106	0,00	0,101		0,097		0,093		0,090	
ASP "C"	0,800	0,44	0,768	0,85	0,737		0,708		0,679		0,652	

Table 35 – *ENAV risk bearing events scheme*

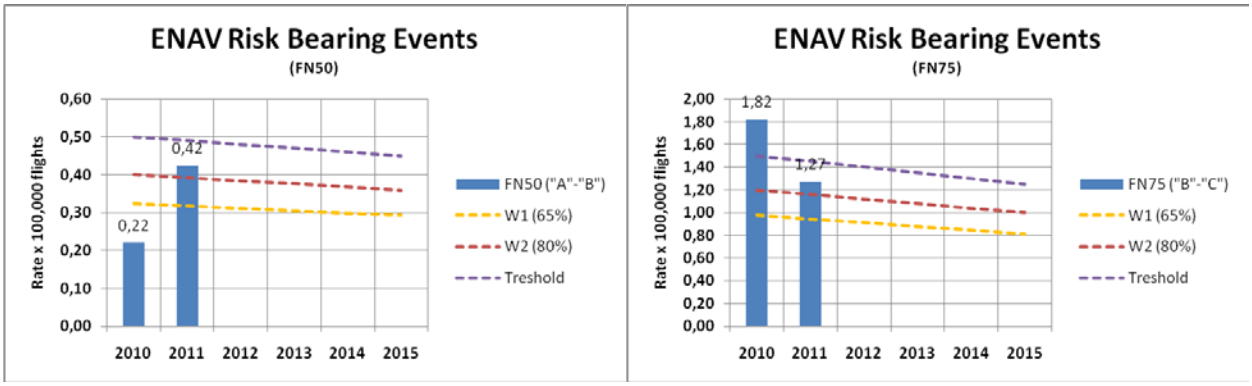
Warning values (W1 – W2): at W1 preventive action; at W2 corrective action.

		FN50			FN75			FN		
	Flights	W1 (65%)	W2 (80%)	Treshold	W1 (65%)	W2 (80%)	Treshold	W1 (65%)	W2 (80%)	Treshold
2010	1.813.524	0,325	0,4	0,50	0,975	1,2	1,50	1,625	2	2,50
2011	236.166	0,3185	0,392	0,49	0,9425	1,16	1,45	1,56	1,92	2,40
2012		0,312	0,384	0,48	0,91	1,12	1,40	1,495	1,84	2,30
2013		0,3055	0,376	0,47	0,8775	1,08	1,35	1,43	1,76	2,20
2014		0,299	0,368	0,46	0,845	1,04	1,30	1,365	1,68	2,10
2015		0,2925	0,36	0,45	0,8125	1	1,25	1,3	1,6	2,00

Table 36 – *Warning values (W1-W2) for FN*

Rwy Inc "C"			ASP		
W1 (65%)	W2 (80%)	Th	W1 (65%)	W2 (80%)	Th
0,072	0,088	0,110	0,520	0,640	0,800
0,069	0,084	0,106	0,499	0,614	0,768
0,066	0,081	0,101	0,479	0,590	0,737
0,063	0,078	0,097	0,460	0,566	0,708
0,061	0,075	0,093	0,442	0,544	0,679
0,058	0,072	0,090	0,424	0,522	0,652

Table 37 – *Warning values (W1-W2) for Runway Incursions "C" and ASP*



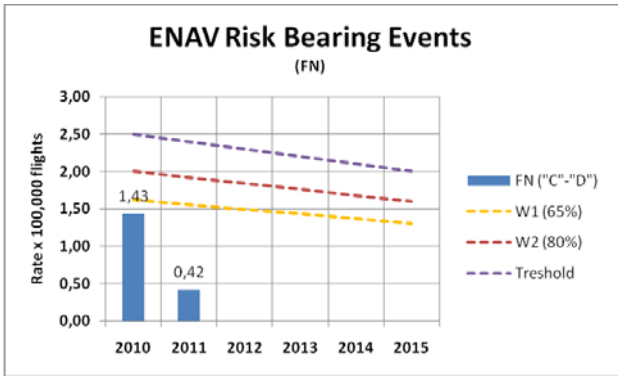


Figure 14*- ENAV Risk bearing event for FN*

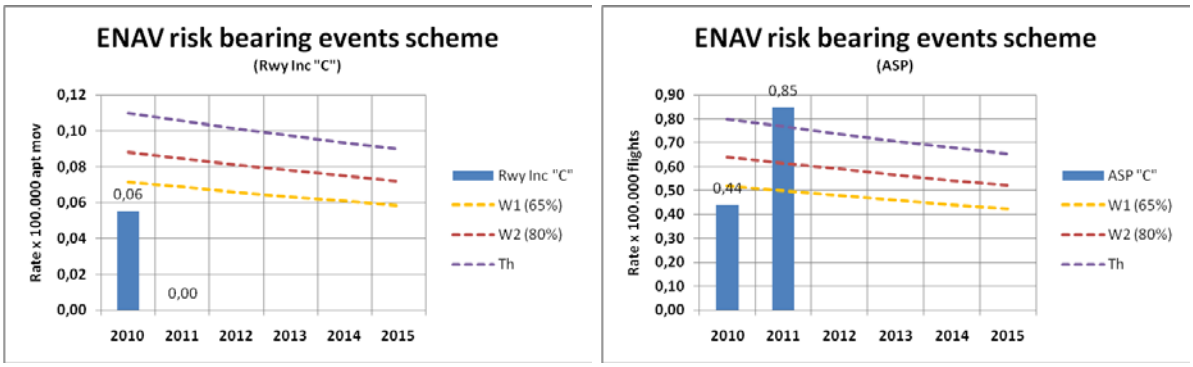


Figure 15- *ENAV Risk bearing event scheme for Runway Incursions "C" and ASP*

(a.11.) ***Strategic dimension for RP1 quantitative target setting***

Although no EU-wide targets for Safety are established in RP1, ENAV will monitor safety during the period using specified safety key performance indicators reported in Reg. 691/2010 such as:

Leading Indicators:

- Effectiveness of safety management (maturity);
- Application of severity classification RAT;
- Application of just culture;

Lagging Indicators (severity graded by RAT):

- Separation Minima Infringement;
- Runway Incursions;
- ATM Specific Occurrences.

These could be the elements that shape the **strategic dimension for RP1:**

- to achieve:
  - Maximum tolerable probability of ATM direct contribution to an aircraft Accident as per ESARR 4, and
  - Zero tolerability of Total Inability of providing safe ATM,

- to tend to:
  - Zero ATM induced risk-bearing air traffic incident by not exceeding agreed thresholds,

- to deploy:
  - agreed yearly improvement rates.

Linking strategic dimension to operation dimension will be the key focus. It has to be used as the governing principle to drive performance.

(a.12.) ***Fuori Norma Explanation***

In norma	(By-the-Book Separation) Class “E” event
Fuori Norma	(Slightly out-of-the-Book Separation) Presumibly class “E” event, but change into a more severe class is possible
Fuori Norma 75	(Separation effectively assured less than the book but more than 75% of the applicable) Class “B” event that may turn into class “C” severity
Fuori Norma 50	(Separation effectively assured is 50% or less than the applicable) Conservatively class “A”

Table 38 – *Fuori norma explanation*

All FN values coming out of Eurocontrol Risk Classification module to assess rate of closure together with distance between aircraft.

			RATE OF CLOSURE			
			≤60 kt ≤1000 ft/min	>60kt&≤250kt >1000ft/min&≤ 2000ft/min	>250kt&≤600kt >2000ft/min&≤ 4000ft/min	>600kt >4000ft/min
			1	3	4	5
SEPARATION	>75%	1	2	4	5	6
	>50% ≤75%	3	4	6	7	8
	>25% ≤50%	7	8	10	11	12
	≤25%	10	11	13	14	15

LEGENDA :	A: Serious		B: Major		E: No Safety effect

Table 39 – *Rate of closure*

(b) Capacity

This section describes:

1. the actual evolution of the en route capacity performance indicator (the average delay per assisted flight);
2. the en route capacity performance indicator forecasted for the year 2011;
3. the intermediate objectives assigned by the DNM until 2014 (as reference values).

Performance for years 2009 - 2010

Despite these years of economic downturn, Italy (through ENAV S.p.A.) has achieved excellent results (publicly acknowledged by the International Air Transport Association), hardly comparable with the ones achieved at an ECAC level.

In the last 5 (five) years, ENAV S.p.A. was able to improve its performance also as far as the ANS provision to the air traffic operating in the en route phase of flight. These results generated an outstanding en route capacity performance indicator (average en route delay per flight) as reported in the public report published by EUROCONTROL (e.g. Performance Review Report and/or ATM Cost-effectiveness benchmark reports) and it was also consolidated in 2010 especially with respect to the ENAV safety objectives[25]. The actual results in operations, recorded in the final balance for the years 2009 and 2010, were obtained through the activities that ENAV S.p.A. has put in place in order to minimize ANS related ATFM delays for the airspace users. Such results were fully compliant with safety constraints.

Italy wants to maintain the optimum level of operational performance and therefore, within the scope of this National Performance Plan, the national ANSP is undertaking - among others - the following activities:

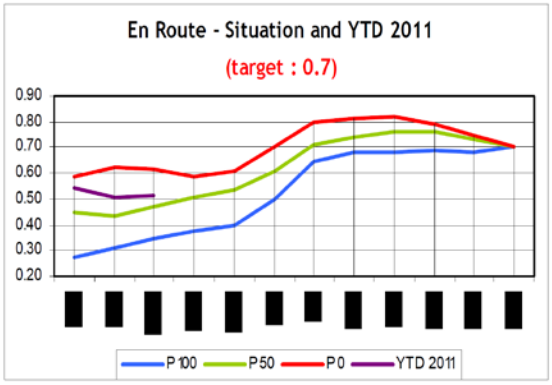
- the optimization of the ATS scenario, with particular reference to the airways' network that is under ENAV's S.p.A. responsibility (Flight Efficiency Plan);
- the rationalization of operational scenarios and the proactive management of the ACCs' sectors lay-out;
- the continuous modernization of the ATM technology;
- the implementation and the optimization of the overall services provided in the Terminal Areas, in the Approach Zones and in the airports operated by ENAV S.p.A;

[25] Separation Infringement Minima, Risk Analysis Tool (RAT) and Just Culture implementation.

- the continuous improvement of the recruitment and training techniques, dealing with operational people, which are particularly effective to let them understand the airspace users' needs and deliver a sustainable development of aviation in general.

Forecast for the year 2011

As far as the 2011 is concerned, the EUROCONTROL/STATFOR forecast states its difficulty in estimating the future level of en route ATFM delays, both at European and national level, and assumes that the average ATFM en route delay per flight in the ECAC area will be 1.7[26] minutes per flight during the summer season (the value is much greater than that required by the Provisional Council, 1 minute per flight, and far higher than the target set by the European Commission for 2014, 0.5 minutes per en route flight in the whole year).
The indications coming out from the available analysis at a European level suggest to consider that, although the aviation market is gradually emerging from the global crisis, it is not easy to achieve an improvement in the capacity performance area[27] (see following graph).



Average en-route ATFM delay since the beginning of the year is **0.51** minutes per flight. The probability of achieving the 0.7 minutes en-route delay at the end of the year is low (close to the red line).

***Figure 16**- En Route – Situation and YTD 2011*

The forecast provided by EUROCONTROL/STATFOR for the summer season 2011 and more specifically about Italy reports that **the average en route ATFM delay is going to be approximately 0.1 minutes per flight for all-reasons** (the KPI scored 0.01 minutes in 2010); if the Italian forecast provided by EUROCONTROL/STATFOR with reference to year 2011 is correct, the value of the capacity performance indicator would then be lesser than the average one estimated in the ECAC area. This result is likely to confirm the level of excellence achieved by ENAV S.p.A. in the previous years and will reinforce the expectations for the next ones.
Having all this in mind, in addition with the external factors that may affect the ATM level of performance (such as the current social troubles in the Mediterranean area and/or the military escalation scenario, today impacting already on the optimal use of airspace under the responsibility of ENAV S.p.A.), Italy considers appropriate to maintain a certain level of caution when establishing a virtuous target, although not yet mandatory in 2011. A conservative approach when establishing the future performance targets is necessary as much as when taking into account the requirements related to the reorganization of the way to provide the air navigation

[26] The reference Summer Reason is shorter than that is considered by the Eurocontrol Provisional Council. It includes the months between May and August. *Note: 1 minute of delay during the Provisional Council Summer Season (May to October) equals to 0,7 minutes on a yearly basis*.
[27] The Monthly NOP Report, issued on March 2011, confirms it is unlikely to achieve the European 2012 capacity target (0.7 minutes per flight en route).

services during the transition phase to the performance scheme, in order to get the capacity target achieved from the beginning of 2012.
Therefore, considering:

- the main air traffic flow operating in the Italian FIR/UIR;
- the military constraints and reserved airspaces that interact with that flow;
- the historical impact of weather on operations in addition to the performance levels of every single Italian ACC as estimated by the DNM (see LSSIP ITALY 2011-2015 as well as "ACC reference values for SES II);

and taking into account that:

- the expected[28] +4,5% traffic grown is affected by a tolerance varying from +5,6% (High forecast) to +3,5% (Low forecast);

for the year 2011, the Italian NSA establishes the value of the en route target delay as 0.18 minutes per flight for all "ATFM Reasons".

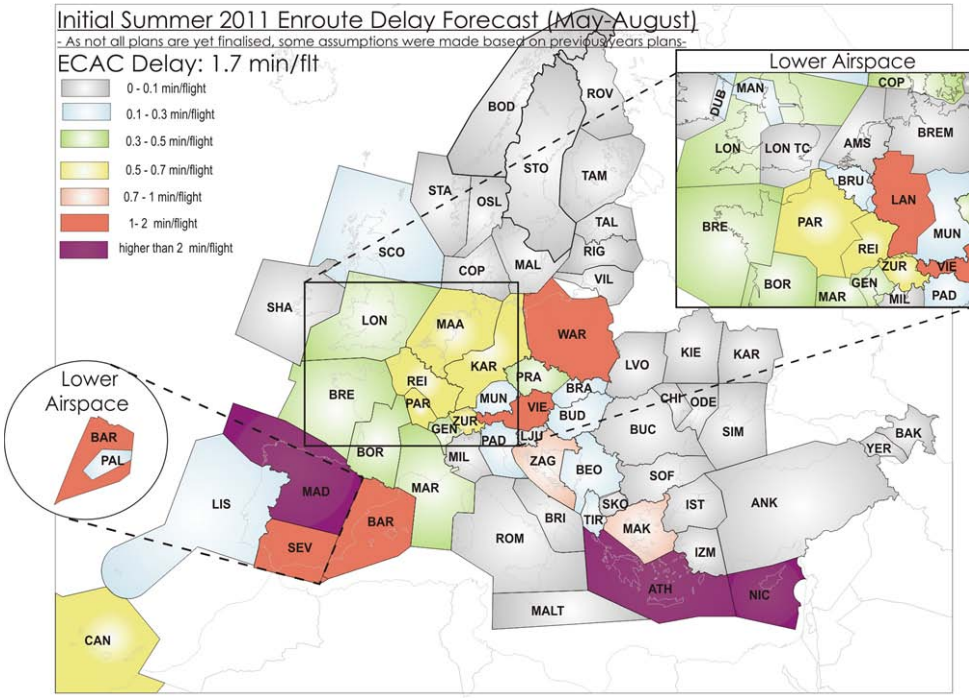


Figure 17- *Initial summer 2011 en route delay forecast: May-August*[29]

En Route Capacity Performance Targets for the years 2012 - 2014

For the years 2012-2014 the Italian Government considers challenging but still acceptable the targets assigned by the European Commission and confirms the performance scores developed by DNM and agreed with ENAV S.p.A. during the Capacity Planning Process and reported in the LSSIP ITALY 2011-2015.

[28] Eurocontrol Medium Term Forecast – ed. Feb. 2011
[29] Source Eurocontrol – Capacity Planning Task Force

	2009A	2010A	2011F	2012F	2013F	2014T
En route ATFM delay prior to RP1 (en route ATFM delay minutes per flight)	0.02[1]	0.01[2]	0.18			
Reference value from the capacity planning process of EUROCONTROL (en route ATFM delay minutes per flight)				0.14	0.14	0.12
% n/n-1				-22%	0.0%	-14%
National capacity target (en route ATFM delay in minutes per flight)				0.14	0.14	0.12
% n/n-1				-22%	0.0%	-14%
Difference between the target and the reference value				0	0	0

Table 40 – *En route capacity target – Breakdown at national level*

The results presented in the following table 40 summarise, as described in the previous chapters, a deeper level of ANS performance achieved by ENAV S.p.A. with a more detailed information over each Italian ACC.

	2009A	2010A	2011F
En route ATFM delay prior to RP1 (en route ATFM delay minutes per flight)	0,02*	0,01**	0,18
Brindisi ACC	0,00	0,00	0,01**
Milano ACC	0,00	0,01	0,04***
Padova ACC	0,04	0,01	0,17***
Roma ACC	0,00	0,00	0,15***

Table 41 – *ATFM en route delay per assisted flight*

** Source CFMU – Processed by ENAV AOP "Annual Report 2010".*

*** Source Eurocontrol DNM "ACC delay reference values for SES II"*

****Source CFMU – DNM Capacity Plan "ACC reference values per SES II" for year 2011*

Table 41 – *ATFM en route delay per assisted flight.*

It should be noted that during 2009 a figure of 24,8% over the en route ATFM delays was caused by weather and was not directly dependent on ENAV S.p.A operations. During 2010 the ATFM delay for the same reason represented about 17,2% over the total en route ATFM delay.
It is right to underline that the delays caused by the ATFM reason "Industrial Action" in 2010 were of about +43,3% of the total en route ATFM delays; possibly in the future this delay reason might be directly influenced by any social troubles arising from the implementation of too challenging performance models.
This National Performance Plan should be considered as a useful tool to prevent such occurrences that, moreover, have already been recorded in other European countries during 2010.

Considering that the Italian Capacity Planning Process has been approved and its results have been validated and used in LSSIP ITALY 2011-2015:

- the contribution required to ENAV S.p.A., at National and ACC level, for the years 2012 - 2014 shall be consistent with the agreement between EUROCONTROL, ENAV S.p.A. and ENAC.

By adopting the goals outlined in this National Performance Plan, Italy is consistent with the performance targets in Europe and fully contributes to their achievement.
The calculation method of the Italian performance target requires:

- the measurement of the overall minutes for the en route ATFM delay, "all Reasons", for all flights within ENAV's S.p.A. area of responsibility (with detailed measurement of delay for each ACC) in the entire calendar year and;
- the total number of IFR flights handled in the same reference period.

The ratio between the two values is the KPI to be compared with the expected performance objectives and is calculated using the following formula:

$$\text{KPI En route ATFM delay} = \frac{\text{Total en–route ATFM delay}}{\text{Total IFR flight within the area of responsibility}}$$

Period of reference = 1 year

Figure 18- *KPI En route ATFM delay*

For the scope of the KPI En route ATFM delay measurement the concerned Italian airspace excludes the Reserved Areas.

BRINDISI ACC	2009A	2010A	2011F	2012F	2013F	2014T
En-route ATFM delay prior to RP1 (en-route ATFM delay minutes per flight) for the ANSP/ACC	0,00	0,00	0,01			
Reference value from the capacity planning process of EUROCONTROL (en-route ATFM delay minutes per flight) for the ANSP/ACC				0,01	0,01	0,03
% n/n-1				0%	0%	200%
En-route ATFM delay per flight (minutes per flight) for the ANSP/ACC				0,01	0,01	0,03
% n/n-1				0%	0%	200%
Difference between the ANSP/ACC contribution and the reference value for the ANSP/ACC				0	0	0

Table 42 – *Brindisi ACC - Contribution to the National capacity target*

MILANO ACC	2009A	2010A	2011F	2012F	2013F	2014T
En-route ATFM delay prior to RP1 (en-route ATFM delay minutes per flight) for the ANSP/ACC	0,002	0,01	0,04			
Reference value from the capacity planning process of EUROCONTROL (en-route ATFM delay minutes per flight) for the ANSP/ACC				0,06	0,09	0,09
% n/n-1				50%	50%	0%
En-route ATFM delay per flight (minutes per flight) for the ANSP/ACC				0,06	0,09	0,09
% n/n-1				50%	50%	0%
Difference between the ANSP/ACC contribution and the reference value for the ANSP/ACC				0	0	0

Table 43 – *Milano ACC - Contribution to the National capacity target*

PADOVA ACC	2009A	2010A	2011F	2012F	2013F	2014T
En-route ATFM delay prior to RP1 (en-route ATFM delay minutes per flight) for the ANSP/ACC	0,02	0,01	0,17			
Reference value from the capacity planning process of EUROCONTROL (en-route ATFM delay minutes per flight) for the ANSP/ACC				0,14	0,10	0,10
% n/n-1				-17,6%	-28,6%	0,0%
En-route ATFM delay per flight (minutes per flight) for the ANSP/ACC				0,14	0,10	0,10
% n/n-1				-18%	-29%	0%
Difference between the ANSP/ACC contribution and the reference value for the ANSP/ACC				0	0	0

Table 44 – *Padova ACC - Contribution to the National capacity target*

ROMA ACC	2009A	2010A	2011F	2012F	2013F	2014T
En-route ATFM delay prior to RP1 (en-route ATFM delay minutes per flight) for the ANSP/ACC	0,00	0,00	0,15			
Reference value from the capacity planning process of EUROCONTROL (en-route ATFM delay minutes per flight) for the ANSP/ACC				0,09	0,09	0,06
% n/n-1				-40,0%	0,0%	-33,3%
En-route ATFM delay per flight (minutes per flight) for the ANSP/ACC				0,09	0,09	0,06
% n/n-1				-40%	0%	-33%
Difference between the ANSP/ACC contribution and the reference value for the ANSP/ACC				0	0	0

Table 45 – *Roma ACC - Contribution to the National capacity target*

(c) Environment

ENAV FEP, as well as important programmes of operational research such as SESAR, are among the parallel and mutually reinforcing initiatives that the Italian Civil ANSP has fielded to cope with climate change and contribute to mitigation of environmental impact – present and future - of aviation.
The FEP is a three-years action plan aimed at identifying and executing ENAV's initiatives, while respecting safety and capacity requirements. More direct routes and enhanced flight profiles are typical examples of initiatives ENAV has been undertaking to improve the route network.

In 2011 the third edition has been published. The Plan includes specific actions, whose outcomes are monitored year by year, in the following domains: airspace design, route network accessibility, airport operations and personnel awareness.

ENAV during RP1 will continue to monitoring its flight efficiency initiatives based on flight plans (except for personnel awareness) including the ones related to the phase of flight covered by Regulation 691/2010 KPA Environment.

(d) Cost-efficiency

This section sets out the contribution of ENAV S.p.A to the national cost efficiency target.

ENAV S.p.A determined en route ANS costs

This section describes the variation in the determined costs for ENAV. In consideration of the substantial invariance of ENAV costs in real terms in the first Reference Period, below are reported only the main justifications for the most relevant variations.

The comparison between total actual costs in real terms for 2009 and 2010 shows a decrease of about 2,1%, mainly attributable to a substantial invariance of operating and staff costs and a decrease of the remuneration of the cost of capital due to at the lower interest rate applied.

Values are shown in the table below.

COSTS / YEARS	2009 A*	2010 A*
STAFF	288,3	289,4
OPERATING	89,91	87,03
DEPRECIATION	88,41	95,25
COST OF CAPITAL	28,90	21,58
EXCEPTIONAL ITEMS	1,76	1,52
TOTAL	**497,31**	**494,79**

***** *Values are in million Euro and in nominal terms.*

Table 46 – *ENAV – comparison between 2009 and 2010 actual determined costs*

For what concerns ENAV, the comparison between 2010 forecast e 2010 actual costs shows that, despite the considerable increase of traffic of about 6%, the continuous research of strategic actions aiming at cost containment has allowed in 2010 to achieve cost savings for 7,8 mln Euro compared to the 2010 forecast figures (as reported in the Additional Information of June 2011).

ENTITY	2010 F	2010 A	Variation actual vs. forecast
ENAV	**502,6**	**494,79**	**-7,8**

***** *Values are in million Euro and in nominal terms.*

Table 47 – *ENAV – comparison between 2010 forecast and 2010 actual costs*

The cost reduction obtained by ENAV for 2010 becomes relevant considering that the 2010 actual costs include also about 4,6 mln Euro of bad debts deriving from the credits depreciation originated by airlines state of insolvency.

It is important to evidence that the cost reduction put in place by ENAV is not highlighted in the charging scheme since the cost components of ENAV are aggregated, in 2010 and 2011, with the costs of the Italian Air Force (see table 48).

ENTITY	2010 F	2010 A	Variation actual vs. forecast
ENAV + ITAF + EUROCONTROL	**614,6**	**609,0**	**-5,6**

***** *Values are in million Euro and in nominal terms.*

Table 48 – *ENAV+ITAF+EUROCONTROL – comparison between 2010 forecast and 2010 actual costs*

For what concerns the comparison between 2010 and 2011 costs (see table 50), note that the increase of about five percentage points is mainly attributable to the planned depreciation – as effect of the entry in operation of the investments activated in the previous years – and to staff

costs – as a combined effect mainly dependent on inflation recovery and, as residual part, to the increase of operational staff in order to manage the traffic forecasted for the unit rate calculation (planned before the North African crisis).
With reference to the cost of capital, after 2010 decrease due to the lower interest rates, the values for 2011 show a realignment to 2009 value correlated to the fluctuation of State Bond rates (for additional information see paragraph "Return on Equity").

The process of planning and control adopted in the last years by ENAV has allowed, against a scenario of traffic increase, to propose a cost planning for the period RP1 which substantially foresees only the recovery of inflation. In fact, as reported in table 49, costs in real terms show a substantial invariance of costs throughout the period. All the detailed costs by nature and by categories are then reported in tables 50 and 51.

ENAV	2011	2012	2013	2014
Total	522,1	531,9	541,7	550,8
Variation %		***1,9%***	***1,8%***	***1,7%***
Inflation (IMF April 2011 Outlook)		**2,1%**	**2,0%**	**2,0%**

***** *Values are in million Euro and in nominal terms.*

Table 49 – *ENAV – forecasted costs for 2011-2014*

ENAV	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
Staff	EUR	288,326	289,397	297,536	304,723	310,769	316,793
Other operating costs	EUR	89,912	87,033	89,683	90,140	89,989	92,525
Depreciation	EUR	88,412	95,254	108,773	108,984	110,836	111,395
Cost of capital	EUR	28,900	21,580	26,090	28,090	30,090	30,090
Exceptional items	EUR	1,761	1,524	0,000	0,000	0,000	0,000
Total en-route costs	EUR	497,310	494,788	522,082	531,937	541,683	550,803

Table 50 – *ENAV - Determined en route ANS costs by nature (in nominal terms in national currency)*

ENAV	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
Air Traffic Management	EUR	233,619	342,739	361,646	368,472	375,224	381,541
Communication	EUR	72,205	51,519	54,361	55,387	56,402	57,352
Navigation	EUR	43,088	26,186	27,631	28,152	28,668	29,151
Surveillance	EUR	110,764	41,053	43,318	44,136	44,944	45,701
Search and rescue	EUR	0,000	0,000	0,000	0,000	0,000	0,000
Aeronautical Information	EUR	16,226	21,305	22,480	22,905	23,324	23,717
Meteorological services	EUR	21,407	11,985	12,646	12,885	13,121	13,342
Supervision costs	EUR	0,000	0,000	0,000	0,000	0,000	0,000
Other State costs	EUR	0,000	0,000	0,000	0,000	0,000	0,000
Total costs	EUR	497,310	494,788	522,082	531,937	541,683	550,803

Table 51 – *ENAV - Determined en route ANS costs by service (in nominal terms in national currency)*

The allocation for air navigation services (i.e. ATM, COM, NAV, SUR, AIS, MET) has been done in a statistical way. During 2010, after an internal analysis, allocation criteria used in the CRCO reporting tables have been updated within the framework of en route and terminal services' costs

among ATM, COM, NAV, SUR, AIS, MET, resulting in a different allocation from "old" forecast to determined and actual costs.

As further specification of what shown above, it is interesting to note that, compared to the cost planning sent to CRCO in November 2010, the presented cost trend for the period 2010-2014 shows a decrease in absolute terms of about 47,3 mln Euro (see table 52).

	2010		2011		2012		2013		2014	
COSTS	BDG	ACT	BDG	FOR	BDG	FOR	BDG	FOR	BDG	FOR
STAFF	296,05	289,40	303,01	297,54	310,29	304,72	320,83	310,77	332,06	316,79
OPERATING	92,57	87,03	96,07	89,68	100,94	90,14	107,60	89,99	112,74	92,52
DEPRECIATION	92,91	95,25	102,61	108,77	103,74	108,98	105,59	110,84	106,08	111,40
CAPITAL	21,09	21,58	21,09	26,09	21,09	28,09	21,09	30,09	21,09	30,09
EXCEP. ITEMS	0,00	1,52								
TOTAL	502,62	494,79	522,78	522,08	536,05	531,94	555,12	541,68	571,98	550,80
Var. ACTUAL VS FORECAST	-7,83		-0,70		-4,11		-13,43		-21,17	
TOTAL VARIATION	-47,3									

Data in mln €
Budget: update november 2010
Actual 2010 and forecast 2011/2014: update june 2011

***Table 52 –** ENAV – Comparison forecasted cost reduction compared with budget costs*

Finally, with reference to the Cost of Capital, this is calculated as the product of:

- the sum of the average net book value of fixed assets used by the air navigation service provider in operation or under construction without considering the financed assets and the net current assets;
- the return on equity (details on ROE are provided in the dedicated section).

ENAV	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
Net book value fixed assets	EUR	838,588	898,700	894,993	965,710	981,255	981,255
Adjustments to total assets	EUR	0,000	0,000	0,000	0,000	0,000	0,000
Net current assets	EUR	66,122	71,448	71,307	74,663	74,537	74,537
Total asset base	EUR	904,710	970,148	966,299	1040,373	1055,792	1055,792
Cost of capital pre tax rate %		3,2%	2,2%	2,7%	2,7%	2,9%	2,9%
Return on equity %		3,6%	2,6%	2,7%	2,7%	2,9%	2,9%
Average interest on debts %		2,2%	0,7%	0,0%	0,0%	0,0%	0,0%

***Table 53 –** ENAV - Complementary information on the cost of capital en route (in nominal terms in national currency)*

ENAV terminal ANS costs

In Italy it exists a single charging zone which includes 47 airports, 39 of which are managed by ENAV. For what concerns ENAV terminal costs, as already specified also in the national cost-efficiency comments, as effect of the application of the provisions of Law n. 248/05 the following costs are funded by the State:

- Costs related to smaller airports.
- Part of the costs related to major airports.

- The 50% of the costs borne by the Company for the air traffic management of domestic and EU flights (50% of the unit rate).

ENAV	Currency	2009 A	2010 A	2011 F	2012 D	2013 D	2014 D
Staff	EUR	101,509	102,538	105,463	108,011	110,153	112,288
Other operating costs	EUR	41,376	37,441	39,712	40,083	45,007	46,236
Depreciation	EUR	36,582	39,227	44,795	44,881	45,644	45,875
Cost of capital	EUR	0,000	7,483	8,016	8,016	8,016	8,016
Exceptional items	EUR	0,651	0,925	0,000	0,000	0,000	0,000
Total terminal costs	EUR	180,118	187,615	197,987	200,991	208,821	212,415

Table 54 – *ENAV - Terminal ANS costs in national currency*

Costs reported in the above table are ENAV total terminal costs. Therefore, they do not include the above mentioned funding, which are instead deducted from the cost base – and therefore not charged to the users - when calculating the terminal unit rate. The table below shows the terminal chargeable cost.

ENAV	2009	2010	2011	2012	2013	2014
Terminal Chargeable costs	82,566	87,659	92,873	109,403	97,955	99,641

Table 55 – *ENAV - Terminal ANS chargeable costs in national currency*

With reference to the comparison between 2009 and 2010 terminal costs (table 54), 2010 actual values show an increase of about 7,5 mln Euro, essentially referable to the attribution of the cost of capital on the 2010 cost base. The cost of capital, that was not present on the 2009 actual values, is included in 2010 in the terminal ANS costs in accordance with the provisions of the EC Regulation n. 1794/2006.
Excluding from the actual 2010 the additional costs related with the cost of capital (that means analyzing terminal costs within the same perimeter of 2009), the result achieved in 2010 shows a decrease in real terms of 1,64%.

For what concern a comparison between 2010 actual and 2010 forecast terminal costs, the cost level recorded at the end of 2010 shows that careful planning in the allocation of human and material resources has allowed to obtain in 2010 a reduction of about 7 mln Euro (see table 56).

Costs	2010 F	2010 A	Variation actual vs. forecast
ENAV	194,81	187,61	-7,2

Table 56 – *ENAV– Comparison between 2010 actual and 2010 forecast terminal costs*

The above mentioned reduction is even more relevant when considering that in the cost perimeter of the 2010 actual values are charged 0,9 mln Euro of extra costs related to bad debts generated by the insolvency of some airlines.

Return on equity

For what concerns the Return on Equity for en route, it has been calculated taking into consideration the average of the State Bond (BOT) interests rates, issued by the Ministry of Economy and Finance on the first semester of the concerning period. In particular:

- For the years 2011 and 2012, it has been considered the average of the BOT interest rates for the years 2002-2010.
- For the years 2013 and 2014, it has been considered the average of the BOT interest rates for the years 2007-2010.

Compared to the long term State bond rate, June 2010 issue for Italy equal to 4,1%[30], the average State Bond (BOT) interests rates used for the calculation of the Cost of Capital is equal to 2,7% for the years 2011 and 2012 and to 2,85% for the years 2013 and 2014.

For what concerns the terminal, taking into consideration the lower level of risk due to the inclusion in the cost base of the provisions of the Italian law n. 248/05, the average rates applied for the calculation of ROE are lower than the ones used for en route.

Investments

The SESAR programme has the aim to develop a new generation ATM system. The system should be interoperable by all European members and able to meet future demand and evolutions. Italy supports SESAR programme having an active role in the development of its concepts in order to obtain the main targets set by the programme itself. In this scenario, the main active role is played by the Italian ATM service provider ENAV (member of SESAR Joint Undertaking).

ENAV represents a fundamental element in the delivery of the ATM service both at Italian and at European level. This role requires long term planning and investment decisions making in order to meet customer and business requirements. ENAV vision for ATM operation has been incorporated in its investment plan and it is aligned with SESAR concept.

To support SESAR programme and to enhance ATM service level Enav has developed an investment plan that includes, with regard to Reference Period 1 (2012-2014), 384M€ of investments in three years.

In addition, it is important to consider that to foster SESAR objectives ENAV has massively invested in the last 3 years period. Main investments in period 2009-2011 with reference to European ATM Master Plan (OI1) have been “Enhanced ATM System” (42M€), “Datalink” (28M€), “ADS-B” (13,8M€), “Satcas” (10M€), “Airplus” (6,6M€), “Modo-S surveillance System” (6M€), “Airnas” (2,8M€), “AMHS” (2,8M€), “E-NET” (2,5M€), “PENS” (1M€) and “Totem briefing” (0,6M€).

In Reference Period 1 (2012-2014) ENAV has planned to run 97 investments in order to pursue its strategic and operational objectives. These investments are grouped in 21 programmes. Part of these investments (68) derives from the previous period, whereas others (29) represent new projects to be started in RP1. New projects require 139M€ (36%) of investment, oId projects absorb remaining 245 M€ (64%).

Investments are divided in three main groups with respect to the service type they support. The main group in terms of budget is composed by investments for “en route services”. This group absorbs 60% (232M€) of total expenses. The second one consists in investments for “airport services” and it represents 29% (109M€) of total amount. Finally, the group that includes investments in general-support activities weighs 11% (43M€) of total.

[30] European Central Bank estimates for long term State Bond for Italy can be found at http://www.ecb.int/stats/money/long/html/index.en.html

ENAV investments are related to 5 main **strategic lines**: Improvement and Maintenance, Technological Innovation, Security, Corporate Information Technology and Job Security.

a. "Improvement and Maintenance" includes the renewal of systems already in operation in terms of safety, capacity and economic efficiency. This area is the main one in terms of investment budget (55% equal to 212M€). "I&M" expenses are equally split between "en route services" (54% on total "I&M") and "airport services" (46% on total "I&M").
b. "Technological Innovation" represents investment to sustain service evolution and to foster the introduction of new technologies. This area represents 33,6% (129M€) of total investments in RP1. Investments in "Technological Innovation" for "airport services" absorb 10% (12,6M€) of "TI" budget whereas those for "en route services" represent 90% (116M€) of total "TI" expenditure.
c. "Security" includes all investments necessary for the service provider to respect and to meet European directives and norms such as EC 114/08 or the recent EC 73/10 that resumes the main goals of SESAR programme. In Reference Period 1 (2012-2014) ENAV plans to invest 15M€ in "Security" (4% on total investments).
d. "Corporate Information Technology" incorporates all investments set to reinforce or to introduce new information systems in order to support the management of the company. In Reference Period 1 (2012-2014) ENAV expects to invest in this area 20M€ (5%).
e. "Job Security" represents investments necessary to suit and to respect requirements in terms of employee safety. ENAV plans to invest 7M€ in this area in the Reference Period 1 (2012-2014).

Investments planned for the RP1 refer to different **categories**. ATM ("Air Traffic Management") absorbs 29% of total investments (113M€) whereas 21% of total is devoted to investments in "Civil Infrastructures" (INF). Investments in "Communication" (COM) represent 10% (37M€) of overall expenses and in "Navigation" (NAV) 7% (28M€). Other technological categories "Surveillance" (SOR) and "Meteorology" (MET) weigh for 4% on total investments.

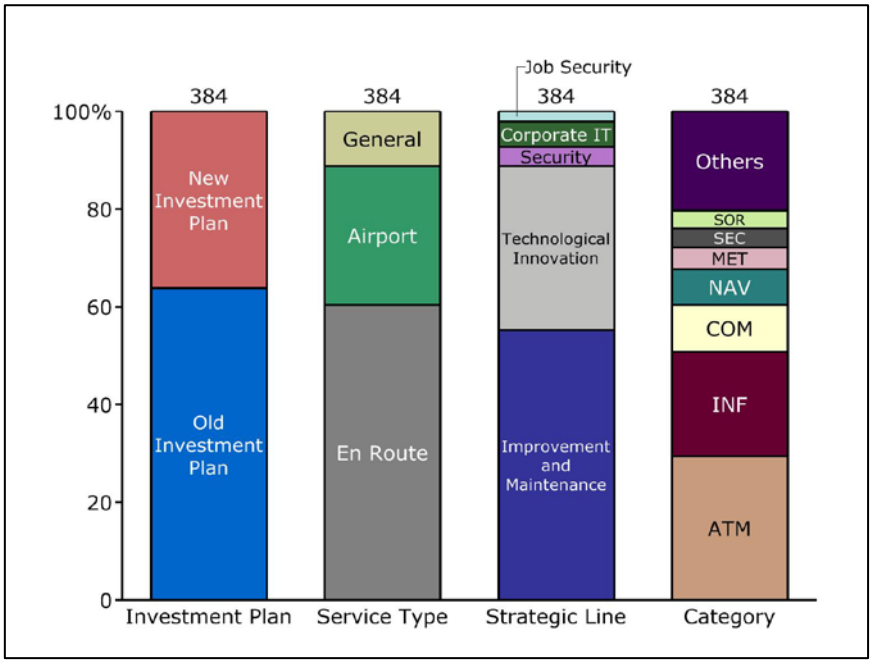


Figure 19 *– ENAV Investments in Reference Period One (2012-2014)*

Top 6 programmes (28% of total number of programmes) represent more than 64% (245,8M€) of total investments in Reference Period 1 (2012-2014).

A graphical representation is given in figure 20.

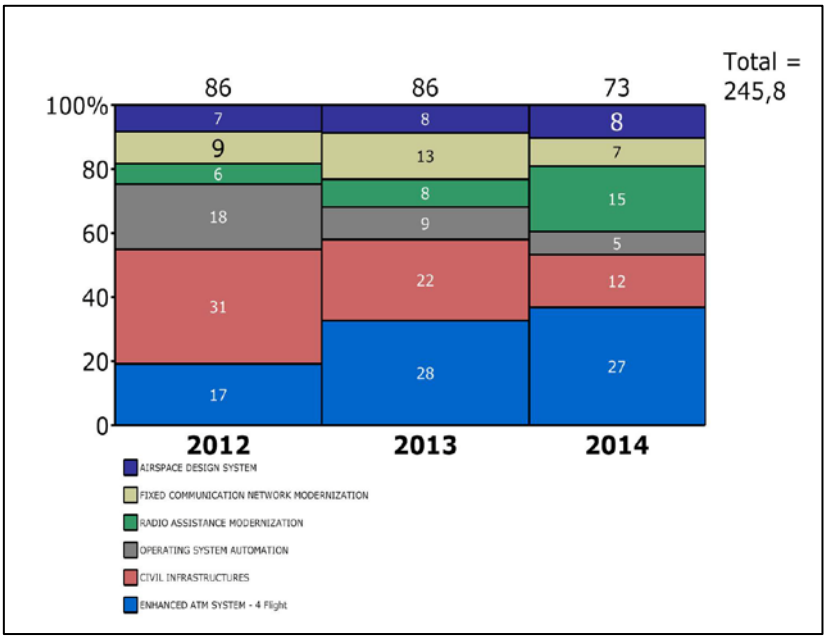


Figure 20 *– ENAV Top 6 Investment Programme in Reference Period One (2012-2014)*

Details of annual impact during Reference Period 1 for those projects are given in table 57.

Contracts (national currency)	Currency	2009A	2010A	2011F	2012F	2013F	2014F	2015F
ENHANCED ATM SYSTEM - 4 Flight	EUR	18.373	2.003	21.300	16.500	28.200	27.000	43.000
CIVIL INFRASTRUCTURES	EUR	21.290	24.202	25.070	30.900	21.800	12.000	11.500
OPERATING SYSTEM AUTOMATION	EUR	4.714	13.657	13.800	17.500	8.800	5.300	300
RADIO ASSISTANCE MODERNIZATION	EUR	3.630	10.744	8.800	5.500	7.500	15.000	13.500
FIXED COMMUNICATION NETWORK MODERNIZATION	EUR	4.493	2.336	10.700	8.600	12.500	6.500	3.000
AIRSPACE DESIGN SYSTEM	EUR	3.491	8.853	9.900	7.200	7.500	7.500	7.500
Sub-total main Contracts above	**EUR**	**55.991**	**61.795**	**89.570**	**86.200**	**86.300**	**73.300**	**78.800**
Sub-total others contracts	EUR	202.680	127.907	47.430	50.800	44.700	42.700	41.200
Total Contracts	**EUR**	**258.671**	**189.702**	**137.000**	**137.000**	**131.000**	**116.000**	**120.000**

Table 57 – *ENAV - Annual investments (contract) in nominal terms in national currency for en route and terminal ANS*

Part of Top 6 programmes (81M€) has a direct relation with European ATM Master Plan. In particular, "Enhanced ATM System – 4-Flight" is 100% linked to Master Plan and it is expected to absorb 71,7M€ during the Reference Period 1 (2012-2014).

A graphical representation is given in figure 21.

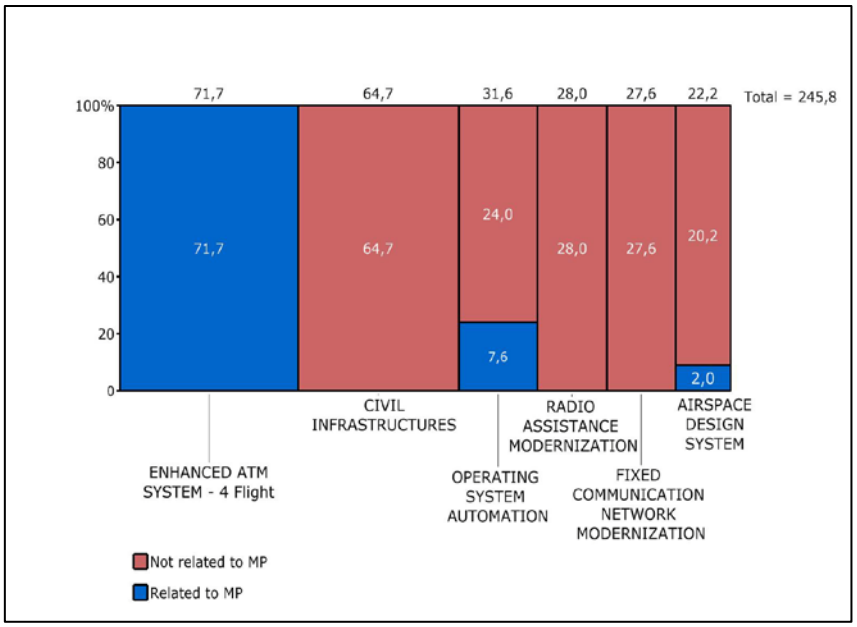


Figure 21 *– ENAV Top 6 Investment Programme in Reference Period One (2012-2014)- relation with the European Master Plan*

ENHANCED ATM SYSTEM - 4 Flight*.* The programme has the aim to foster the evolution of ATM system to a European technological platform. This involves the development and the integration in a common standard architecture of a series of new components characterized by a high level of modularity, scalability and maintainability. In order to reduce risk exposure and to better exploit potential synergies, ENAV and the French ANSP (DSNA) have decided to establish a long term programme, called "4-Flight**"**, with the intention to further extend the successful technical cooperation set up during "Coflight" project. The programme has the clear intent to develop a new generation ATM system based on innovative technology that has to follow the operational directive of SESAR. In particular, it should guarantee the possibility to operate in a Single European System that will involve other actors and stakeholders such as Carriers and Airports.

Project ID	Domain (ex. ATM Systems, C, N, S,..)	Allocation en-route / terminal ANS	Assessed impact on Performance Targets	(Planned) Start date of investment project	(Planned) Commissioning date of investment	Lifecycle	Planned total capex	European ATM Master Plan (OIs reference)	Related SES IR / Community Specifications
ENHANCED ATM SYSTEM - 4 Flight	ATM	100% En Route	RP2	2012	2015*	20	100%	CM-0801; TS-0102; CM-0202	n.a.
CIVIL INFRASTRUCTURES	INF	60% En Route / 40% Airport	It contributes to the achievement of the Capacity target	continuous investment	continuous investment	> 20	100%	n.a.	n.a.
OPERATING SYSTEM AUTOMATION	ATM	100% En Route	It contributes to the achievement of the Capacity target + RP2	various project with different start date	2015	20	100%	CM-0801; CM-0201	See Note[1]
RADIO ASSISTANCE MODERNIZATION	NAV	45% En Route / 55% Airport	It contributes to the achievement of the Capacity target	2005	2016	20	100%	AOM-0602	n.a.
FIXED COMMUNICATION NETWORK MODERNIZATION	COM	55% En Route / 45% Airport	It contributes to the achievement of the Capacity target	2005	2016	20	100%	AOM-0201; AOM-0205; AOM-0303; AOM-0601; AOM-0202; DCB-0203; AOM-0401; IS-0204	See Note[2]
AIRSPACE DESIGN SYSTEM	PSA	45% En Route / 100% Airport	It contributes to the achievement of the Capacity target + RP2	continuous investment	continuous investment	20	100%	AOM-0602	n.a.

Table 58 – *ENAV - Description of the main investments impacting RP1 (in nominal terms in national currency)*

Referring to the table above, it is important to underline that the investment plan of ENAV has been developed with the objective of:

- maintaining the level of efficiency of the operational equipments in order to guarantee the continuity and the actual level of service allowing the achievement of the operational challenging targets as reported in the Performance Plan;
- concentrating the major part of the economic resources to the investments related to the development of SESAR related projects;
- containing the investment expenditures after a period of extensive investments aiming to increasing the level of safety and quality of service.

Other investments with respect to Top 6 programmes represent 36% (Sub-total Others Capex in table 22 equal to 138,2M€) of total expenses in Reference Period 1 (2012-2104). In this category, main programmes in RP1 are “Power Stations and Electrical Systems” (17M€), “Enhanced Weather Systems” (17M€), “Unexpected Needs” (16M€), “Corporate IT – Management Information Systems” (15M€), “Operational and Technological Innovation” (11M€), “ADS-B” (9M€), “DataLink” (9M€), “Job Security” (7M€) and “Enhanced Surveillance Systems” (6M€).

Within other investments, the most relevant in terms of coherence with SESAR programme and of global impact on performance targets are Data-Link and ADS-B programme.

Data-Link. Enav, in accordance with Eurocontrol directives, has started **"Data-Link"** programme with the objective to create a network for "ground to air" digital communication. Enav is part of European "Data Link" programme that has the intent to uniform the way data are transferred from "ground to air". This programme has the scope to improve the way electromagnetic band that represent a scarce resource is absorbed by mobile communication. Moreover, the programme is an opportunity to enhance the reliability of the "ground to air" communication that will take place by codified digital messages instead of by voice.

ADS-B. ENAV is running a project for the introduction on national territory of an ADS-B surveillance network. The main scope of the network is to enable the surveillance service in areas not covered by radar (for example those with low traffic density). Moreover, it will represent an important back-up solution in case of temporary out of order of radar system. This new network will be integrated with stations of "Wide Area Multilateration" in order to obtain the highest level of capacity and security performances in line with Operational Improvement defined by EUROCONTROL in terms of surveillance and air traffic control.

Contracts (national currency)	Currency	2009A	2010A	2011F	2012F	2013F	2014F	2015F
ADS-B	EUR	3.686	6.758	650	2.500	6.500	0	0
DATA LINK 2000+	EUR	0	25.358	3.000	3.000	3.000	3.000	2.000
Sub-total main contracts above	**EUR**	**3.686**	**32.115**	**3.650**	**5.500**	**9.500**	**3.000**	**2.000**
Top 6 Programmes	**EUR**	**55.991**	**61.795**	**89.570**	**86.200**	**86.300**	**73.300**	**78.800**
Sub-total others contracts	EUR	198.994	95.792	43.780	45.300	35.200	39.700	39.200
Total contracts	**EUR**	**258.671**	**189.702**	**137.000**	**137.000**	**131.000**	**116.000**	**120.000**

Table 59 – *ENAV - Other investments (contract) in nominal terms in national currency for en route and terminal ANS*

Project ID	Domain (ex. ATM Systems, C, N, S,..)	Allocation en-route / terminal ANS	Assessed impact on Performance Targets	(Planned) Start date of investment project	(Planned) Commissioning date of investment	Lifecycle	Planned total capex	European ATM Master Plan (OIs reference)	Related SES IR / Community Specifications
ADS-B	SOR	100% En Route	Improvements in capacity and safety	2009	2015	20	100%	See note[1]	n.a.
DATA LINK 2000+	COM	100% En Route	Improvements in capacity and safety	2006	2013	20	100%	AUO-0301	See note[2]

Table 60 – *ENAV - Description of other investments impacting RP1 (in nominal terms in national currency)*

ENAV en route cost efficiency target for RP1

ENAV cost efficiency target is based on the same assumptions adopted for the definition of the national target. Therefore, considering ENAV cost planning and what widely described in section1 (En route SU forecast) for what concerns traffic "open" assumption, ENAV cost efficiency targets for RP1 are as follows:

ENAV	2011F	2012F	2013F	2014F
DUR from planned costs	€ 58,90	**€ 58,10**	**€ 56,47**	**€ 54,53**
n/n-1%		***-1,36%***	***-2,81%***	***-3,43%***

Table 61 – *ENAV – Cost efficiency targets for RP1*

ENAV determined Unit Rate shows:

- in the period 2009-2014 an average decrease of - 2,2% per year;
- in the period 2011-2014, an average decrease of - 2,5% per year.

Considering the overall period 2009-2014, ENAV Determined Unit Rate shows a decrease of about -10,6% while in the period 2011-2014 the decrease is of about -7,4%.

It is important to observe that considering the same ENAV cost planning and the service unit forecast just before the North Africa crisis (STATFOR, February 2011), ENAV would have had within the period 2009-2014 an average reduction of its determined unit rate of about the 3,4% per year while within the period 2011-2014, the average reduction would have been of the 3,1% per year. These figures were in line and consistent with the European wide target trend.
That implies that the lower "efficiency" of ENAV determined unit rate is fully attributable to an exogenous factor which is the variation in the traffic patterns. In fact, despite the overall reduction of the SU forecasts - mainly due to the reduction in the number of overflights and in the distance covered - the number of flights is still increasing (about +3,5%, Jan – May 2011). As already mentioned, analyzing the Italian over-flight actual data, it emerges that against a heavy drop in flights on the "north-south" axes as effect of the North African crisis, there is an increase in the number of flights on the "east-west" axes. This "substitution effect" is reducing the average distance covered by a flight within the Italian airspace, hence justifying the negative trend of the SU compared to flights. Therefore, in order to continue in ensuring the highest safety levels and to achieve the capacity targets, ENAV staff should be maintained at the same level as planned before the North African crisis.

It is important to note that ENAV cost efficiency target , even with the contingent situation, can still provide a decrease of -7,42% in the period.

Being ENAV the major Italian ANSP with relevant impact on the national cost-efficiency target, Italy will allow the Company to adopt the revised traffic if the European Commission will permit the revision of traffic forecasts after the summer season (see section 1 - En route SU forecast).

3.2 ITAF contribution to the national targets

This section defines the contribution of ITAF to the national cost efficiency performance target.
ITAF charges are collected from the Ministero dell'Economia e Finanze. Service provision by ITAF is financed by the Ministero dell'Economia e Finanze through the allocation of specific funds in the budget of Defence.

Cost borne by ITAF to ensure support to Civil Aviation at military airports opened to civil traffic and in the airspace of its responsibility, are determined in accordance with the approach described below.

Activities are grouped in four main macro-areas:

- Air Traffic Service.
- Meteorological Service.
- Telecommunication service.
- Logistics support.

Within each of the macro-areas are identified the activities carried out as answer to Civil Aviation needs:

a) Air Traffic Services (ATS):
   1. Air Traffic Control (ATC).
   2. Flight Information Service (FIS).
   3. Aeronautical Information Service (AIS).

b) Meteorological Services
   1. Aeronautical meteorological services at military airports opened to civil traffic.
   2. Meteorological watch.
   3. Elaboration/dissemination of forecasts for aeronautical purposes

c) CNS
   1. Air - Ground communication services.
   2. Ground/Ground (G/G) communication services.
   3. Surveillance services.
   4. Air navigation services.

d) Logistics support

   The logistics support considered for the flight assistance service provided to Civil Aviation includes the whole range of activities developed by ITAF for the general logistics needs. Within the logistics support category are also included the training of the technical/operational staff.

Cost items for ITAF are as follows:

a) Direct costs:
   1. Costs for staff directly employed in flight assistance services for Civil Aviation.
   2. Operating costs for assets directly used for Civil Aviation needs.
   3. Investment costs for assets directly used for Civil Aviation needs.

b) Indirect costs:
   1. Training costs for technical and operational staff.
   2. General costs for entities providing logistics support to the activities in support of Civil Aviation.
   3. Investment costs related with other assets indirectly used.

The cost items are attributed to Civil Aviation both totally for the resources acquired and managed exclusively for Civil Aviation needs and pro-quota for the resources acquired and managed for common needs.
In the table below are reported ITAF costs as per Reporting Tables sent to CRCO for June 2011 submission.

ITAF costs in the period 2009[31]-2014 show the trend as reported in the table below.

ITAF	CURRENCY	2009	2010	2011	2012	2013	2014
Staff	EURO	29,811	32,368	31,746	33,864	34,372	34,888
Operating costs	EURO	19,389	23,910	23,745	21,528	21,851	22,179
Depreciation	EURO	5,516	6,073	5,669	4,969	4,639	5,398
Cost of capital	EURO	0,000	0,000	0,000	0,000	0,000	0,000
Other	EURO	0,000	0,000	0,000	0,000	0,000	0,000
Total costs	**EURO**	**54,716**	**62,351**	**61,159**	**60,361**	**60,862**	**62,465**

Table 62 – *ITAF – en route costs in the period 2009-2014 by nature*

ITAF	CURRENCY	2009	2010	2011	2012	2013	2014
Air Traffic management	EURO	17,478	22,725	21,385	21,033	21,187	21,781
Comunication	EURO	6,721	6,884	6,693	5,582	5,626	5,779
Navigation	EURO	6,348	6,921	10,237	6,909	6,972	7,145
Surveillance	EURO	2,233	2,570	2,424	2,205	2,197	2,299
Search and Rescue	EURO	0,000	0,000	0,000	0,000	0,000	0,000
Aeronautical information	EURO	0,000	0,000	0,000	0,000	0,000	0,000
Meteorological services	EURO	21,936	23,252	20,421	24,632	24,880	25,460
Supervision costs	EURO	0,000	0,000	0,000	0,000	0,000	0,000
Other State costs	EURO	0,000	0,000	0,000	0,000	0,000	0,000
Total costs	**EURO**	**54,716**	**62,351**	**61,159**	**60,361**	**60,862**	**62,465**

Table 63 – *ITAF – en route costs in the period 2009-2014 by services*

For what concerns ITAF terminal costs, they are charged starting from 2010[32] as per EC Reg. n. 1794/2006.

ITAF	Currency	2010	2011	2012	2013	2014
Staff	EUR	13,163	13,713	12,685	12,875	13,069
Operating costs	EUR	9,429	10,036	8,075	8,196	8,319
Depreciation	EUR	1,903	1,894	1,932	1,860	2,306
Cost of capital	EUR	0,000	0,000	0,000	0,000	0,000
Other	EUR	0,000	0,000	0,000	0,000	0,000
Total costs	EUR	24,495	25,643	22,692	22,932	23,694

Table 64 – *ITAF – terminal costs in the period 2010-2014 by nature*

[31] Note that 2009 and 2010 data are as reported in ENAV balance sheet as well as in the reporting tables. As ENAV balance sheet is closed before ITAF closure of accounts, the difference between ITAF budget values (as per ENAV balance sheet) and ITAF actual values is considered in n+1.

[32] See note 31.

3.3 ENAC share in the national targets and individual binding performance targets

ENAC costs to be included in the calculation of the unit rate, have been determined coherently with the trend of accounting data of the previous years and have been included in the same amount in the provisional 2011 Balance Sheets of ENAC.

Costs are attributed both to en route and terminal with the percentage respectively of 24% and 76% (in accordance with ENAV allocation which is the main ANSP on which ENAC exerts its institutional audit activities).

En route costs for the NSA are reported in the table below.

Nominal Costs	2011F	2012F	2013F	2014F
NSA	3,112	3,158	3,206	3,254

***** *Values are in million Euro and in nominal terms.*

Table 65 – *ENAC – En route costs for RP1*

The cost of NSA is mainly due to the cost of personnel. The reduced number of people, the physiological turn-around of staff, and the lengthy procedures needed to replace the staff, can introduce oscillations in those numbers which may affect the cost basis in a significant way.

ENAC employs a percentage of seconded inspectors both from ENAV and Italian Air Force, which are more than half of the total workforce.

The secondment of ITAF inspectors is based on an agreement between the Ministries of Transport and Defence, but the policy of ever-reducing ITAF staff could prevent the enactment of the agreement.

To overcome this situation, ENAC in November 2010 completed the selection procedure for 7 full-time inspectors. Although having the required financial resources, ENAC cannot hire the selected inspectors due to the general public administration ban on new hiring.

Other component of the cost basis are: logistics and travel expenses.

Logistics and travel costs are kept to the minimum through the rationalization of the oversight programs, while the Airspace Regulation Division has been re-located in the ENAC central building for better integration with the other domains of Aviation Regulation and oversight.

3.4 Incentive mechanisms to be applied on ENAV to encourage targets to be met over the reference period

Italy foresees to apply only one incentive scheme on capacity to ENAV, in addition to the risk sharing mechanism foreseen by the EC Reg. n. 691/2010.

As reported above:

For what concerns capacity, Italy in recognition of the link between the high standards of quality of service provided and given the excellent level of operating performance already achieved and expected in the coming years by ENAV, Italy will recognize to ENAV a bonus (at 1% of the determined costs in nominal terms) for each of the years in which the declared capacity target is achieved.

In the same way, if ENAV performances in terms of capacity will go beyond the European capacity target (0,5 minutes average ATFM delay per flight), Italy will apply a penalty of 1% of the determined costs (in nominal terms) for each of the years within RP1.

KPA	METRICS	Incentive schemes applied on ENAV at national level for RP1
(a) Safety	n.a.	
(b) Capacity	Average delay per flight (min.) Less than: 2012 = 0,14 2013 = 0,14 2014 = 0,12	**BONUS** Italy will recognize to ENAV a bonus (at 1% of ENAV determined costs in nominal terms) for each of the years within RP1 in which the declared capacity target is achieved.
	Average delay per flight (min.) More than: 2012 = 0,5 2013 = 0,5 2014 = 0,5	**PENALTY** Italy will apply to ENAV a penalty of 1% of the determined costs (in nominal terms) for each of the years within RP1 if ENAV performances in terms of capacity will go beyond the European capacity target.
(c) Environment	n.a.	
(d) Cost-efficiency	Risk-sharing mechanism as per Article 11a of Common Charging Scheme Regulation	

Table 66 – *Incentive schemes applied on ENAV at national level for RP1*

4. CIVIL-MILITARY DIMENSION OF THE PLAN

1.4. Performance of the FUA application

The Italian FUA is organized in the three levels required by Reg. 2150/2005

The strategic level is managed by a Joint National High Level Body (strategic board) defined as "Operational Coordination Committee" (CCO) composed of senior representatives from the National Supervisory Authority (ENAC), Civil Air Navigation Service Provider (ENAV) and the Italian Air Force

The FUA level 2 is performed by Airspace Management Cell at pre-tactical level and Airspace Coordination Unit for temporary air space use coordination regarding "special activities". Both Units employ civil and military personnel according special agreements signed by respective organisation.

The tactical level of Airspace Management is a dedicated task assigned to the co-located Military ATS Units and to the ENAV Area Control Centers in terms of activation, deactivation and re-allocation of the airspace in real time.

Additionally, in order to manage OAT traffic and to perform coordination activities with civilian service provider, military coordination and control units are co-located within each Italian ACCs. They use the same technology and data. System optimization /modification (i.e. automatic analysis of TSA infringements) was completed in 2004.

5. ANALYSIS OF SENSITIVITY AND COMPARISON WITH THE PREVIOUS PERFORMANCE PLAN

5.1 Sensitivity to external assumptions

The main external assumption that could affect the performances reported in this plan is related to traffic variations. For all the details, refer to section 1 "En route SU forecast".

5.2 Comparison with previous performance plan

This section is not applicable for the first reference period.

6. IMPLEMENTATION OF THE PERFORMANCE PLAN

At the time when the plan is being prepared, ENAC is preparing a specific plan to monitor the correct implementation of the business plan and the adherence of the evolution of the National and European KPIs to the profile described in the plan.

The ENAC oversight philosophy is based on the principle of the minimum interference with the normal activity of Stakeholders, and therefore the utilization to the maximum extent possible of the reports they prepare for their normal activity.

ENAC is well aware that this is the first implementation of regulation 691/2010, and therefore the oversight policy and practices are to be considered as “first attempt”, and could be changed during the period itself.

In general terms the following policies will be applied:

Safety KPIs:

- *For the European KPIs ENAC will adopt metrics and methodologies mandated or proposed by the European Commission and EASA.*
- *For the other safety KPIs, a quarterly review of the trends will take place in order to monitor that trends do not show any undesirable behavior.*

Environment KPI:

- *Periodic meetings on correct and timely implementation of FEP, as well the effectiveness of the measure introduced.*

Capacity KPI

- *Monthly examination of CFMU data on delays, broken down at ACC level.*

Cost Efficiency

- *Annual report where actual data are brought together.*
- *Traffic and Service Unit trends during the year at quarterly reports.*
- *Periodic wrap up of financial/operational data in order to understand the Service Unit Rate trend.*
- *Periodic meetings on the deployment of investments.*

Annexes

The following annexes A to D are provided as part of the national performance plan:

A. Reporting Table 1 (Total costs) and Table 2 (Unit rate calculation) and “additional information” as per Article 8 of the Common Charging Scheme Regulation (Transparency of costs and of the charging mechanism) for each entity and consolidated at national level for en route ANS, consolidated at charging zone level for terminal ANS.Reporting Table are as presented to CRCO in June 2010.

B. All the relevant performance elements of ENAV business plan are included in the Italian Performance Plan. However, ENAV business plan is going through an updating process and will be provided as soon as ready.

C. Extracts from States Safety Programmes.

D. Public consultation material:

1) Consultation material for Italian Trade Unions meeting (by ENAC) – Date: 15/04/2011 – Part 1 and 2
2) Minutes of the meeting to the Trade Unions by ENAC – Date: 15/04/2011
3) Consultation material for the Users representatives consultation meeting – Date: 26/05/2011
4) Minutes of the consultation with Users representatives -– Date: 26/05/2011
5) Feedback of the Users representatives on consultation - letter – Date: 14/06/2011
6) Feedback of the Users representatives on consultation - comments – Date: 14/06/2011
7) ENAC answers to Users representatives feedback - comments
8) Consultation material for Italian Trade Unions meeting (by ENAV) – Date: 16/06/2011
9) Minutes of the Trade Unions Consultation meeting by ENAV – Date: 16/06/2011