

PRB Monitoring Report 2018 Annex IV – CAPEX report

The 2018 monitoring consists of five reports:

- PRB Monitoring Report 2018
- Annex I Union-wide detailed analysis for experts
- Annex II Member States' detailed analysis for experts
- Annex III Safety Report
- Annex IV CAPEX Report



October 2019







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1. Introduction

- The PRB Monitoring Report 2018 provides analysis of the performance achieved by Member States of the Single European Sky (SES), covering the fourth year (2018) of the second Reference Period (RP2), which runs for five years from 2015 to 2019.
- 2 In 2018, the PRB Monitoring Report is supported by four Annexes to provide detailed analysis of performance:
 - PRB Monitoring Report 2018
 - Annex I Union-wide detailed Analysis for Experts
 - Annex II Member States' detailed Analysis for Experts
 - Annex III Safety Report
 - Annex IV CAPEX Report
- This document is the Annex IV Capex report. The main purpose of this report is to provide an in-depth analysis of the capital expenditure (CAPEX) of each air navigation service provider (ANSP) belonging to the Single European Sky (SES) area (EU Member States, Norway and Switzerland) as it is established in Article 3 (i) of the Performance Scheme Regulation (EU 390/2013).
- The investments by the ANSPs aim to continuously improve the Air Traffic Management (ATM) (i.e. air traffic services, airspace management and air traffic flow management) ensuring the safe and efficient movement of the aircraft.
- ANSPs currently use most of their revenues to cover staff costs (i.e. controllers and other support staff), this is expected to change in the coming years. The investments in technology will have to provide additional capacity in a safe, environmentally optimised and cost-efficient way over and above what would be delivered by an increase in air traffic controllers alone.
- The current regulatory framework allows ANSPs to charge users for the cost of capital needed to fund investments necessary for the service provision as well as the related depreciation costs. Since 2015 (start of RP2) to date, ANSPs collectively have charged airlines 4.7B€₂₀₀₉ for the cost of capital and depreciation, representing around 16% of the total costs charged. However, ANSPs have so far not fully spent this amounts collected through the navigation charges. The total unspent Capital Expenditure (CAPEX) in RP1 amounted to approximately 1B€₂₀₀₉, while during RP2 to date the unspent CAPEX equals 285M€₂₀₀₉. Moreover,. 9% of projects (deployment) have been delayed.¹ This indicates that ANSPs have the tendency to charge air space users for investments which do not materialise as per the performance plans. This point is of particular relevance in view of the Reference Period 3: it is not allowed for ANSPs to double charge the airspace user for the amounts already received for the same not delivered investments during RP2.
- Part of the costs supporting the implementation of the European ATM Master Plan has been funded from the European Union budget. Between 2015 and 2018, approximately 357.59M€₂₀₀₉ have been granted to the ANSPs. The amounts received as grants have to be returned to airspace user as a deduction from the charges.²
 - When considering the effectiveness of the investments, ANSPs need to establish a correlation between investments and impact on the key performance areas. The main challenge is to (ex-ante) identify and quantify the benefits of each investment and, ex-post, evaluate the obtained results with a cost benefit analysis (CBA) which National Supervisory Authorities need to verify. This has not always been the case so far. In the absence of these tools, there is no assurance that the benefits are materialising.

¹ RP1 unspent CAPEX source: special report No 18/2017 "Single European Sky: a changed culture but not a single sky" (https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=43538).

² Deduction as "other revenues" defined in art. 2 (10) of Commission Implementing Regulation (EU) 391/2013.



1.1 Background

1.1.1. PRB CAPEX report 2015

- A first report by the PRB on CAPEX (i.e. RP2 Annual Monitoring Report 2015, Volume 3) was published in 2016. The main conclusions of the report were the following:
 - The level of underspent CAPEX is concerning and drives for calls from the industry for returning the unspent capital.
 - There is a major risk of SESAR Deployment working against the objectives of the SES. The complex
 management of CAPEX is driving incorrect behaviours across the EU, which leads to a waste of EU
 funds and missed opportunities for performance improvements.
 - SESAR deployment requires action to include into the EU legislation wordings on returning funds to users.
 - There is disruptive management of the funding system.
 - Investments do not lead to standardisation.
 - The Performance Review Body (PRB) has faced strong resistance to receiving the required information to conduct a meaningful review of SESAR deployment.

1.1.2. 2017 European Court of Auditors special report

- In 2017 the European Court of Auditors published a report on SES: "Single European Sky: a changed culture but not a single sky". The 2017 report evaluated the SES initiative focusing on also SESAR (the technological pillar of the European Union Single European Sky initiative) after four years of deployment. The European Court of Auditors concluded:
 - The SESAR project targeted technological fragmentation, but benefits (e.g. reduced delays and lower costs) were overestimated (as they were based upon overoptimistic long term traffic forecasts that have not materialised) and EU intervention was meant to be temporary.
 - The SESAR Joint Undertaking (SESAR JU) succeeded in setting up a coordinated Research and Development (R&D) effort in European ATM but there are shortcomings concerning its mandate (there is a misalignment between the regulatory lifespan of the SESAR JU and the R&D work).
 - The evolution of selected features of the European ATM Master Plan showed a gradual postponement of the achievement date of the ATM target concept from 2020 to 2035, a reduction in the expected performance benefits (e.g. from 50 % reduction in cost per flight to 30-40%) and an increase in the investments coming from the ANSPs (i.e. 10-15B€₂₀₀₉ or 55% of the total investments).⁴
 - At the end of 2016, some technological solutions have been published but the execution of the Master Plan is still far from being completed.

1.1.3. 2019 European Court of Auditors special report

In 2019 the European Court of Auditors published a report on SESAR deployment: "The EU's regulation for the modernisation of air traffic management has added value – but the funding was largely unnecessary". The report analyses the SESAR sources of investments (i.e. airspace users through charges vs. public funding). The report highlights that, despite the added value of the EU regulation for the modernisation of air traffic management, the funding has been largely unnecessary. More in details:

³ Special report No 18/2017 "Single European Sky: a changed culture but not a single sky" (https://www.eca.europa.eu/en/Pages/Docltem.aspx?did=43538).

⁴ From the version MP 2009 (baseline 2004/2005) to version MP 2015 (baseline 2012).

⁵ Special report no 11/2019 "The EU's regulation for the modernisation of air traffic management has added value – but the funding was largely unnecessary" (https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=50397).



- EU regulation of Air Traffic Management modernisation has added value, despite shortcomings such as the absence of penalties for non-compliance. The EC has no powers to sanction non-compliance and the absence of fully independent and adequately resourced National Supervisory Authorities (NSAs) further aggravates this problem.
- Some of the Pilot Common Project (PCP) functionalities did not meet the criteria for common projects (i.e. they were not all mature and ready for implementation and/or did not all require synchronised deployment for the delivery of the expected performance benefits).⁶
- EU funding was largely unnecessary because the initial rationale for funding was not followed. EU funding was only meant to speed up investments in trans-European networks by enabling projects of common interest and projects with a European added value and significant societal benefits not receiving adequate financing from the market. Moreover, the CBA analysis for the PCP was flawed and the majority of projects would have been financed without EU support.
- Weaknesses in implementation reduce the effectiveness of EU funding due to an absence of specific prioritisation. The EU funding was de facto channelled to large ATM system renewal projects already in the investment pipeline and ready for implementation.
- Improvements in European ATM is still not demonstrated given that deployment is ongoing. The risk of delays is increasing and effective monitoring of deployment faces some challenges. The measurement of the progress of implementation of the PCP is focused on outputs deployed and not on the delivery of ATM performance benefits for operational stakeholders.
- 11 The report concludes with the following recommendation to the European Commission:
 - Need for improved focus on Pilot Common Projects and reinforcement of effectiveness;
 - Review of the EU's financial support for modernising the ATM;
 - Review and formalise the preparation and submission of applications for funding;
 - Ensure appropriate monitoring of performance benefits delivered by ATM modernisation.

1.2 Data and methodology

- This report is based on the data and information provided by ANSPs through their annual Monitoring Reports and cost efficiency reporting tables which are validated through a formal process. In this report the inflation rates and exchange rates are provided by Eurocontrol, while the SESAR Deployment Manager (SDM) provided the actual payments (bank transfers for the payment of grants according to the specific grant agreements with INEA) to the ANSPs for those projects in its scope.
- In the Monitoring Tables submitted by the Member States, each ANSP presents a breakdown of the CAPEX dividing the investment amount in three different categories:
 - Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to the achievement of the performance targets.⁷
 - Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.
 The definition of other CAPEX highly varies between the different ANSPs and sometimes depends on the national accounting rules.

⁶ Pilot Common Project is defined as the first Common Project supporting the implementation of the European ATM Master Plan. The PCP identifies 6 ATM functionalities and was adopted as Commission Implementing Regulation (EC) No 2014/716.

⁷ These investments are also relevant and coherent with the Pilot Common Project defined in Regulation (EU) No 716/2014 on the establishment of supporting the implementation of the European Air Traffic Management Master Plan.



- Unplanned CAPEX: unforeseen investments not originally included in the RP2 performance plan. In this report, this category has been integrated in main CAPEX (in actual terms) keeping the name of the unplanned projects as per in the Monitoring Tables.⁸
- To provide a clear picture of the capital expenditure for en route and terminal, the investments have been detailed in five sections covering different aspects. Chapters 2 and 3 are based on these five sections at Union-wide level and ANSP level, while Chapter 4 provides a detailed CAPEX analysis per ANSP (factsheets). These sections contain:
 - Overall CAPEX invested: the section provides a comparison of actual vs. planned CAPEX (M€₂₀₀₉ values) and main CAPEX vs. other CAPEX for the period 2015-2018 (i.e.RP2 to date)
 - Investments per main project: the section details the actual vs. planned investment per each project reported included in the RP2 performance plan by the specific ANSP.
 - Public funding granted to the investments (CEF/TEN-T): the public funding granted to the main CAPEX
 has been analysed based on the declared awarded funding reported by ANSP in the reporting tables
 and the actual payment data provided by the SDM. The declared awarded funding includes CEF grants
 for SESAR and other EU programs (e.g. Horizon 2020). However, SDM payments only belong to CEF
 grants for SESAR projects.⁹
 - Expected benefit per project: this section provides an overview of the deployment status (i.e. completed, ongoing or delayed) of the reported projects for RP2.¹⁰ Furthermore, the section reports the claimed impact at KPA level (Safety, Environment, Capacity and Cost Efficiency). Projects linked to PCP and linked to the European Network Operation Plan 2015-2019 (NOP) are detailed.
 - Correlation between investment and depreciation and cost of capital: depreciation and cost of capital are the two categories of costs directly related to the investments. According to Article 7 of Charging Scheme Regulation (EU 391/2013), depreciation costs shall include costs related to the total fixed assets in operation for the purpose of providing air navigation services. Cost of capital shall be calculated based on the sum of the average net book value of fixed assets (the net book value, i.e. no adjustments and no net current assets) in operation or under construction for the purpose of providing air navigation services. ANSPs charges airspace users for the determined values of depreciation and cost of capital in RP2 as presented in the performance plan. This section compares the actual depreciation cost and the actual cost of capital for RP2 to date against the determined values for RP2 to date to determine if the charges to the airspace users have materialised in investments.

1.3 Report limitations

The analysis has been carried at Union-wide and ANSP level for en route and terminal capital expenditure. The report describes the CAPEX of the ANSPs subject to the Performance and Charging Regulations, i.e. the ANSPs in charge of en route and terminal air navigation services. CAPEX of Regulatory Authorities (CAA, Ministries), autonomous Meteorological service providers, or local terminal air navigation services are not included. Moreover, the operational expenditure (OPEX) connected to CAPEX investments is not considered and monitored since most of the ANSPs do not provide details.

⁸ Unplanned investments are reported in Cyprus, Greece, Italy, Malta, Romania, Germany, Luxembourg, MUAC, The Netherlands, Finland, Latvia, Norway, Portugal.

⁹ The two sources are not fully aligned and this poses a challenge due to reporting rules and different payment cycle (advance payments, interim payments and final payments for a given project). Moreover, a small portion of SESAR projects are not financed through SDM by directly by INEA to ANSPs.

¹⁰ The deployment or entry into operation (FOC – Full Operational Capability) may differ from the investment expenditure timeline. Completed projects are those that are finished and entered into operation. Ongoing projects are the ones with not declared delay in the entry in operation. Delayed projects are the ones whose date of entry into operation has been postponed from the one originally planned.



- The information provided in the reporting tables are not fully consistent between ANSPs. This creates difficulties in monitoring the expenses. As examples, in some States the CAPEX reported includes part of the operating costs (OPEX) (e.g. as in the case of DSNA) or taxation is included not consistently (e.g. ENAIRE as a consequence of the application of Spanish State regulation).
- 17 There is inconsistency in reporting the investments, with some ANSPs grouping the investments in large projects while others providing more detailed information. The grouping of investments increases the difficulty in tracking, accounting and monitoring the activities since the information are either missing or not reconcilable with other sources.
- In the case of EU-funded projects, the reporting rules to declare the funds should be improved. The declared funds were difficult to trace and reconciliate at Union-wide and ANSP level due to the heterogeneity of the data. No further indications for the fund declaration or references to the grant agreement are provided by ANSPs.
- The ANSP shall report the EU grants received and deduct them from the unit rate as "Other revenues". The PRB has analysed the data reported in the reporting tables. However, the payments from SDM to ANSPs are not on an annual basis and follow a different cycle which involves advance payments, interim payments and final payments for a given project. Therefore, despite this report provides a consolidated evidence of the EU grants as reported, the actual payments done by SDM are not on a year-to-year basis aligned in terms of time. Moreover, due to the fact that CEF grants are allocated following a concept of eligible expenses to be supported, adjustments of grants to be paid may take place over the duration of the project across the different instalments of grants paid for a specific project. Hence, the data reporting resulting from the Performance and Charging scheme and that of SDM/INEA is not fully aligned.
- Possible mismatches in project naming has been identified. The project names are not consistent within the Monitoring Tables of different ANSPs and between the Monitoring Tables and other sources (e.g. Network Operational Plan).
- A one-to-one and year-on-year relation between actual investments, depreciation cost and cost of capital is missing. The depreciation cost is charged only after the depreciation of an asset starts, normally after the Full Operational Capability (FOC) date and accordingly to the asset lifecycle. However, in some cases the assets lifecycle is not reported or only reported as a range. Moreover, the depreciation costs also incorporate assets from previous reference periods. For these reasons, a full reconciliation among investments, depreciation costs and cost of capital is not possible. Therefore, the relations have been made as a total over the period for RP2 to date and not year-on-year. This limitation has been solved for RP3, since ANSPs will report the investments in the performance plan in terms of the determined costs of the investments (i.e. depreciation, cost of capital and cost of leasing).

1.4 Main findings and recommendations

- 22 The findings of the PRB CAPEX report 2015 and both ECA's reports are confirmed by this report:
 - i. The Union-wide CAPEX underinvestment calculated for RP2 to date amounts to 285M€₂₀₀₉ (-7% of the total planned investments).
 - ii. Considering the public funding Union-wide, of the 1,908M€₂₀₀₉ of actual investments made RP2 to date in projects linked to PCP only 233M€₂₀₀₉ correspond to SDM payments. The majority of the projects supporting the implementation of the European ATM Master Plan have been so far financed without EU support.
 - iii. Regarding the weaknesses in the implementation described in 2019 ECA's report, the largest amount of SDM payments (i.e. 141M€₂₀₀₉ or 60% of total payments) has been transferred to three States:



- France (64M \in ₂₀₀₉ or 28%), the United Kingdom (47M \in ₂₀₀₉ or 20%), and Italy (30M \in ₂₀₀₉ or 12%). Moreover, the biggest capital expenditures of ANSPs in ATM systems are still maintaining technological fragmentation on the individual design.
- iv. The expected benefits of the projects cannot be quantified given the information provided by the AN-SPs. ANSPs should apply standardised CBA tools in order to quantify and measure the impact of the investments. In absence of such tools, it is impossible to monitor the effectiveness of CAPEX.
- v. ANSPs have charged to the airspace users $4,661M \in_{2009}$ from 2015 to 2018, whereas the actual costs for depreciation and capital amounted to $4,347M \in_{2009}$. This implies that users have financed investments that have not been materialised in RP2 to date for a total amount of $313M \in_{2009}$.

23 Recommendations:

- i. Transparency in reporting the difference between Union-wide public funding and the projects linked to PCP is needed.
- ii. To develop an end-to-end CBA methodology that ensures that all public investments are evaluated in terms of impact on the KPAs and KPIs for the Performance Scheme.
- iii. To ensure that the CBA tool is applied in future to both all public funding processes/awards and to ANSP internal major investments.
- iv. To develop a methodology based on the RP2 implementation and CBA/RP3 PPs that enables the corresponding investments/projects to be tracked in RP3 during and after their implementation in the yearly PRB monitoring.

¹¹ This value includes depreciation costs from previous reference periods, therefore an exact one-to-one correlation between depreciation cost and cost of capital and investments materialised in RP2 to date cannot be established. Despite this, this approximation provides a fair overview of the costs related to investments.



2. Union-wide analysis

2.1 Overall investments

Table 1 shows the capital expenditures for the period 2015-2018 (i.e. RP2 to date). In 2018, at Union-wide level, the ANSPs spent 1,042M€₂₀₀₉ in CAPEX, 85M€₂₀₀₉ more than the 957M€₂₀₀₉ planned. 2018 is the first year when ANSPs spent more than the plans. In 2015, 2016 and 2017 the total actual investments were below the determined level. The increase registered in 2018 did not level out the investment delay from the previous years. RP2 to date the CAPEX is still lagging with 285M€₂₀₀₉ unspent compared to the plans (i.e. 3,788M€₂₀₀₉ actual vs 4,073M€₂₀₀₉ planned).

Union-wide capital expenditure 2015-2018									
M€ ₂₀₀₉	2015	2016	2017	2018	RP2 to date				
Total determined CAPEX	1,017.93	1,064.42	1,033.11	957.42	4,072.89				
Total actual CAPEX	800.53	920.52	1,024.15	1,042.39	3,787.59				
Actual vs. Determined CAPEX	-217.40	-143.90	-8.96	84.97	-285.29				
Δ% CAPEX	-21%	-14%	-0.9%	9%	-7%				

Table 1 - Union-wide actual vs determined CAPEX

As mentioned in section 1.2, ANSPs report the investments as main CAPEX and other CAPEX. As shown in Figure 1, main CAPEX represents 72% of the total planned CAPEX for RP2 to date and 76% of the total actual CAPEX for RP2 to date. At Union-wide level these results are in line with the performance plans. However, when analysing the situation at a ANSP level, several ANSPs have significantly shifted their actual investments from main CAPEX to other CAPEX compared to the plans.¹²

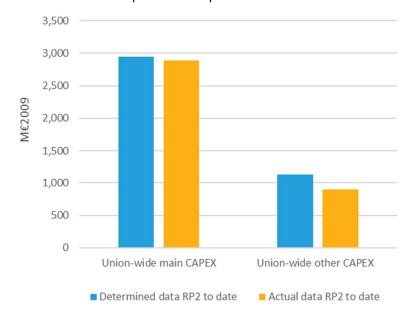


Figure 1 – Union-wide main CAPEX vs. other CAPEX & actuals vs determined RP2 to date

¹² Details at ANSP level are provided in Chapters 3 and 4.



2.2 Investments per main project

Table 2 shows the investments into ATM systems over the period of 2015-2018 as a cumulative value Unionwide. More than 1B€₂₀₀₉ was spent on ATM system development and overhaul at Union-wide level, excluding investments targeting specific tools within an ATM system.

Investment areas	Manufacturer	Planned R	P2 to date	Actual RP2 to date			
Investment group	Manufacturer	(M€ ₂₀₀₉)	(% of total)	(M€ ₂₀₀₉)	(% of total)		
4-Flight	Thales	389.01	37%	313.83	31%		
iTEC	Indra Sistemas S.A.	162.22	15%	285.48	28%		
iCAS	Indra Sistemas S.A.	190.94	18%	116.75	12%		
CoFlight	Thales	65.48	6%	97.29	10%		
COOPANS	Thales	88.59	8%	59.85	6%		
TopSky	Thales	24.35	2%	50.22	5%		
Pegasus ATM	Indra Sistemas S.A.	27.38	3%	33.04	3%		
MATIAS	Thales	19.04	2%	11.00	1%		
PALLAS	Thales	15.34	1%	9.40	1%		
ATM System 2015+	Indra Sistemas S.A.	24.28	24.28 2%		2% 8.75		1%
Other ATM systems N/A		44.82	4%	16.54	2%		
TOTAL		1,051.44	100%	1,002.13	100%		

Table 2 – Union-wide investments in different ATM systems

- There are two major project groups, which account for around 80% of the actual amounts invested: 4-Flight/CoFlight projects and the iTEC/iCas projects. Each group has a share of around 40% of all Union-wide ATM systems related investments. These investments are joint initiatives involving some of the largest Member States in Europe (e.g. France and Italy in 4-Flight/CoFlight, Germany and the Netherlands in iCAS). COOPANS is also a joint initiative between Member States, having almost a 6% share of the actual investments listed in Table 2.
- Besides the joint investments, individual investments by ANSPs into their own ATM systems are frequent. These systems are typically provided by one of the major European manufacturers (e.g. Thales, Indra, Selex now Leonardo) and further developed based on customized needs of the ANSPs. These investments represent almost 13% of the total actual value of investments listed in Table 2.
- 29 Based on the available description of these investments, the aim is to incorporate new tools and concepts outlined in the SESAR programme and the PCP (besides the overhaul of outdated systems). Despite the convergence found in the functionality of these investments, many different approaches and initiatives remain on the implementation level.
- To sum up, the biggest capital expenditures of ANSPs in ATM systems is into maintaining technological fragmentation on the individual design.

2.3 Public funding granted for total CAPEX (CEF/TEN-T)

The EU budget supports coordinated investments in line with the European ATM Master Plan. As mentioned in section 1.2, in order to analyse the public funding granted for main CAPEX, this report has used two sources: the declared awarded funding reported in the Monitoring Tables and the actual payment data from



- SDM. The two sources are not fully aligned and this poses a challenge due to a different payment cycle (e.g. advance payments, interim payments and final payments for a given project).
- Figure 2 shows the funding declared compared to the actual total CAPEX at Union-wide level for each year and RP2 to date. The total funding declared amounts to 358M€₂₀₀₉. The largest portions of funding have been declared in 2016 (36%) and 2017 (35%). The lowest amount of funding was declared in 2015, 41M€₂₀₀₉ (this could be due by the fact that most of the grants decisions still had to be made at that point of time). In 2018, ANSPs declared 62M€₂₀₀₉ of grants.
- The declared funding over RP2 covered 9% of the actual CAPEX for RP2 to date. However, this is an average and it should be stressed that not all ANSPs declared this percentage of funding.

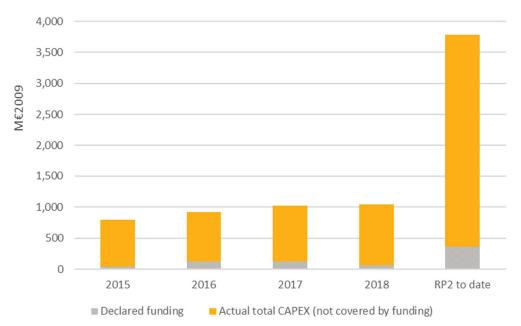


Figure 2 – Union-wide declared funding vs. actual total CAPEX per year

Figure 3 shows the SDM payments compared to the total actual CAPEX at Union-wide level for each year and RP2 to date. The total SDM payments amounts to 233M€₂₀₀₉. The SDM payments over RP2 covered 6% of the actual total CAPEX invested during RP2 to date.



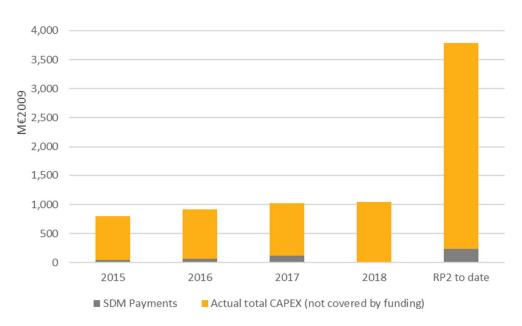


Figure 3 – Union-wide SDM payments vs actual total CAPEX per year

2.4 Expected benefit per project

Figure 4 presents the deployment status of main CAPEX projects at Union-wide level. Only 123 (29%) out of the 428 projects foreseen for the RP2 have been completed to date. 267 (62%) are still ongoing at present time, while 38 (9%) have been reported as delayed. Out of the 9% delayed projects, 4.5% have been re-scheduled to be completed within RP2 (2019) and the remaining 4.5% will be completed during RP3. Considering the ongoing projects, 28% are foreseen to be completed (i.e. to enter into operation) in RP2, 33% are foreseen to be completed in RP3 while 1% are reported to be completed after RP3 (beyond 2024).

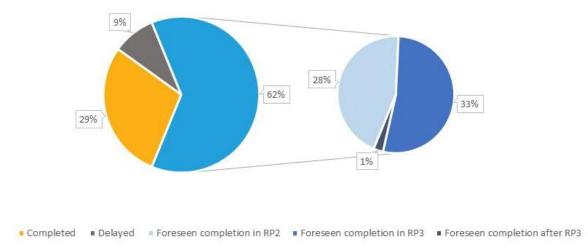


Figure 4 – Union-wide status of the main projects in RP2 to date

¹³ Deployment status and declared benefits at investment levels can only be analysed for the main CAPEX. Other CAPEX is reported by the ANSPs only as aggregated number.



- Several ANSPs reported delays in procurement procedures as a reason for the slow start in projects at the beginning of RP2. Other main reasons are the shift in the priorities of some projects and changes and/or consolidation into new projects since the performance plan adoption.
- Figure 5 presents the timeline of all projects at Union-wide level. When a project is completed, the FOC (Full Operational Capability) date or, in other words, the date of entry into operation is noted. For projects ongoing, the FOC date is planned for the future (2019, RP3 or beyond). Finally, when projects are delayed both the original planned FOC date prior to delays and the rescheduled FOC date due to delays are marked.¹⁴
- Figure 5 shows that the completion (FOC or entry into operation) increased from 18 projects in 2015 to the 40 projects in 2018. The number of ongoing projects to be completed (planned FOC date) in RP2 is less than in RP3 (119 projects are expected to be operational by 2019 and 141 projects in RP3). Furthermore, the majority of the delayed projects (largely in 2015, with 17 projects delayed) were re-scheduled to enter into operation (FOC) mainly in 2019, followed by 2024 (end of RP3) and marginally in 2020 (beginning RP3).

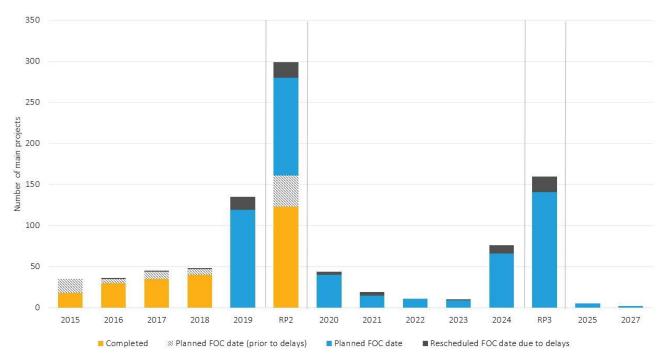


Figure 5 – Union-wide timeline for main projects

When analysing the investments declared benefits, Figure 6 shows that 67% of the investments have an impact on the safety KPA, 35% on environment, 54% on capacity and 57% will improve cost efficiency. Some projects have declared impacts on more than one KPA. The data provided herein only represent the number of investments and do not quantify the expected effects on the KPAs. As already highlighted, ANSPs should apply CBA tools in order to quantify and measure the impact of the investments. In the absence of the tools, it is impossible to monitor the effectiveness of CAPEX investments.

¹⁴ In the computation of the number of main projects, the planned FOC date prior to delays (pattern grey) is not included. This is additional information provided only to show the timeline of delayed projects, analyse the deployment of projects and understand the decisions taken by the ANSPs in terms of CAPEX



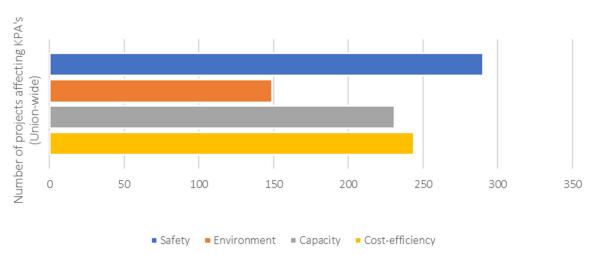


Figure 6 – Union-wide expected benefit per KPA (as number of investments) in RP2 to date

- When analysing the investment connected to the Pilot Common Project for RP2 to date, the actual amount invested equals 1,908M€₂₀₀₉. This amount represents 50% of the actual total CAPEX. This indicates that at least half of the actual investments in RP2 to date supports the implementation of the European ATM Master Plan. The actual investment made during RP2 to date in projects linked to PCP (1,908M€₂₀₀₉) is significantly higher than the funding declared (358M€₂₀₀₉). and the SDM payments (233M€₂₀₀₉).
- The Network Operations Plan provides a short to medium-term outlook of how the ATM Network will operate including expected performance at network and local level. Annex 4 of the Network Operations Plan consists of tables in which ATS system changes, special events and major projects are included per each ANSP. Due to mismatches between the names of the projects provided by the ANSPs in the Monitoring Tables and the names of the projects included in the NOP, a completely accurate picture of CAPEX projects included in the NOP cannot be provided. Using the available data, at Union-wide level, 45 out of 436 projects (10%) have been identified as being included in the NOP.

2.5 Investments versus depreciation and cost of capital

- ANSPs charge to the airspace users the depreciation costs and the cost of capital related to the investments as approved in the performance plans. ¹⁵ Thus, in case of CAPEX under spending or delays in the investments timeline, the charged depreciation and cost of capital are not in line with the actual costs (i.e. airspace users may finance non-existing investments). This point is of particular relevance in view of RP3: ANSPs should not double charge to the airspace user the amounts already received during RP2 (i.e. double charging).
- Table 3 shows the comparison of the costs related to the investments (i.e. depreciation and cost of capital related to the fixed assets) originally planned and the actual amounts for en route (85%) and terminal (15%). Depreciation represents 73% of these two cost categories while the cost of capital related to fixed assets the remaining 27% (both in determined and actual terms).

¹⁵ The cost of capital reported is computed on the fixed assets (i.e. the net book value). Approximately, 80% of the total cost of capital relates to investments.



	Union-wide costs related to investments 2015-2018									
M€ ₂₀₀₉	2015	2016	2017	2018	RP2 to date					
Determined costs	1,139.19	1,162.37	1,188.75	1,170.23	4,660.54					
Actual costs	1,083.55	1,080.90	1,087.71	1,095.13	4,347.29					
Actual vs. Planned	-55.64	-81.47	-101.04	-75.10	-313.25					
Δ% Costs	-5%	-7%	-8%	-6%	-7%					

Table 3 – Union-wide actual vs determined costs related to investments (depreciation and cost of capital)

ANSPs have charged to the airspace users 4,661M€₂₀₀₉ from 2015 to 2018, whereas the actual costs for depreciation and capital amounted 4,347M€₂₀₀₉ in the same period. This implies that users have financed 313M€₂₀₀₉ for investments that have not materialised in the period RP2 to date. This value includes depreciation costs from previous reference periods, therefore an exact one-to-one correlation between depreciation cost and cost of capital and investments materialised in RP2 to date cannot be established. Despite the data constraints, the aforementioned approximation provides a fair overview of the costs related to investments.



3. ANSP analysis

3.1 Overall investments

- Figure 7 provides a graphical overview of CAPEX per ANSP both for 2018 and for RP2 to date. In 2018, 16 ANSPs underspent meaning they invested less than the planned amounts in their performance plan. The ANSPs with the greatest underspent were: Germany (-41M€₂₀₀₉, -32%), Italy (-23M€₂₀₀₉, -19%), and Greece (-21M€₂₀₀₉, -80%). When considering percentages, Greece (-80%), Slovakia (-74%) and Finland (-69%) are the ANSPs with the biggest portion of underspending.
- On the opposite, the ANSPs with the greatest overspending in absolute value for 2018 were: France, that spent 97M€₂₀₀₉ (+57%) more than originally planned, the UK, which spent 39M€₂₀₀₉ (+40%) more, and The Netherlands, which overspent 30M€₂₀₀₉ (+160%). The ANSPs with the greatest overspending in percentage in 2018 were: Lithuania (+2896%), Estonia (+232%) and Portugal (+191%).
- 47 Considering RP2 to date, 22 ANSPs are currently showing CAPEX underspending. Germany (-167 M€₂₀₀₉, -33%), Italy (-156M€₂₀₀₉, -29%), and Greece (-80M€₂₀₀₉, -86%). When considering percentages, Greece (-86%), Slovakia (-67%) and MUAC (-66%) are the ANSPs with the biggest portion of underspending.
- On the opposite, Sweden, Estonia, Lithuania, France, United Kingdom, Portugal, Czech Republic, Switzerland and Hungary overspent from 2015 to 2018. The ANSPs with the greatest overspending in absolute value for RP2 to date are: France, that spent 270M€₂₀₀₉ (+39%) more than originally planned, the UK, which spent 112M€₂₀₀₉ (+24%) more, and Sweden, which overspent 27M€₂₀₀₉ (+66%). The ANSPs with the greatest overspending in percentage for RP2 to date are Sweden (+66%), Estonia (+64%) and Lithuania (+56%).

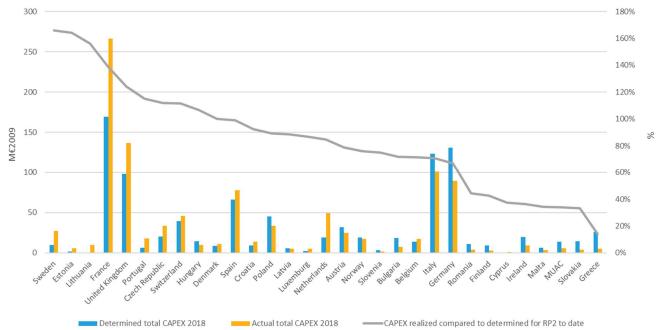


Figure 7 - Actual total CAPEX vs Planned per ANSP in 2018 and RP2 to date

16 In the case of France, to have an accurate vision of the investment costs, DSNA have considered the sum of investments costs as well as some operating costs which are directly associated to their investments (referred to as "T3 Tech"). In order to take into account the "T3 Tech" costs, they have used the "unplanned CAPEX" line to include them in the total CAPEX in the Monitoring Tables. Actual investments made in RP2 to date under these "T3 Tech" costs added up to a value of 283.41M€2009, which is roughly 29% of the total CAPEX and 34% of the main CAPEX. For this reason, the investments for France in sections 1, 2 and 3 include these "T3 Tech" costs, resulting in an total CAPEX overspent of 39% RP2 to date. However, the factsheet of France – DSNA (section 4) strictly analyses investment costs, thus the operating costs directly associated to DSNA investments (i.e. "T3 Tech" costs) are excluded from the scope. This results in a total CAPEX underspent of 2% RP2 to date.



- As presented in section 2.2, at Union-wide level there was no significant shift from main CAPEX to other CAPEX. Differently, at ANSP level it is possible to observe several shifts between the two categories. Figure 8 shows the differences in actual and determined value for other CAPEX for the period RP2 to date and also the share of actual compared to determine other CAPEX. An increase in other CAPEX cannot be detailed since ANSPs report only the total amount and they do not disclose the content/rationale of other CAPEX.
- The biggest shifts during RP2 to date from determined other CAPEX to actual can be observed in Portugal with $9M \in 2009$ (+25p.p, from 1% planned to 26% actual), Czech Republic with $16M \in 2009$ (+14p.p., from 8% planned to 23% actual) and The Netherlands with $16M \in 2009$ (+16p.p., from 8% planned to 24% actual).
- On the contrary, the ANSPs that reported a decrease in value and in share variation of other CAPEX investments were: Romania with -20M€₂₀₀₉ (+1p.p., from 50% planned to 51% actual), MUAC with -3M€₂₀₀₉ (-1p.p., from 6% planned to 7% actual) and Finland with -12M€₂₀₀₉ (-16p.p., from 32% planned to 16% actual).

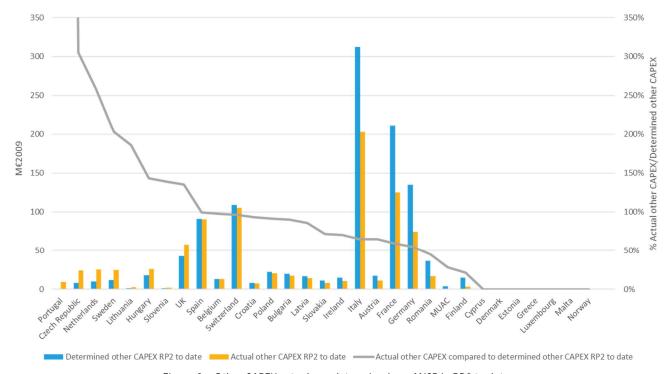


Figure 8 - Other CAPEX actuals vs. determined per ANSP in RP2 to date

3.2 Investments per main project

- In general ANSPs have invested in the main projects planned in their performance plan, although, some exceptions have been found (e.g. the main project for Malta in the performance plan was "New Control Tower", but almost no investments were made in RP2 to date). Nevertheless, additional projects (unplanned CAPEX) arose during the course of RP2 for multiple ANSPs (e.g. Germany has 17 unplanned investments).
- Figure 9 shows the amount of actual CAPEX investments against the number of reported projects (RP2 to date). The amount of projects per ANSPs is, in general, related to the size of the ANSP and it can vary from three projects to almost 60 depending on the ANSPs. The average number of projects Union-wide is 14 projects per ANSP (i.e. Italy, Malta, Germany, Greece, Bulgaria and Belgium have more than the average number of projects).
- However due to different aggregation levels in the reporting, as mentioned in section 1.3 the average value per project can vary significantly. This is the case for the biggest ANSPs (i.e. Cluster 1 of the comparator



groups).¹⁷ The average amount per project in the Cluster 1 equals $15M \in_{2009}$: the United Kingdom ($74M \in_{2009}$), France ($60M \in_{2009}$) and Spain ($16M \in_{2009}$) are above the average, whereas Germany ($6M \in_{2009}$) and Italy ($3M \in_{2009}$) disaggregate the investments in smaller projects.

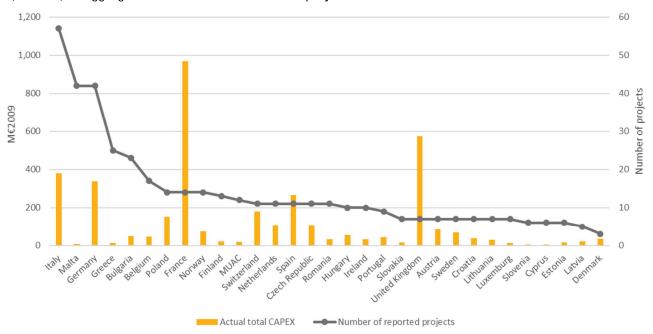


Figure 9 - Actual total CAPEX and number of projects per ANSP in RP2 to date

Table 4 shows the ten largest projects with regards to total investments made across ANSPs in RP2 to date. Seven projects are currently showing under investments, with three of them registering less than half of the amounts planned: Replacement AAA (Netherlands); 4-Flights (Italy); FS 108 New ATM infrastructure (Norway). On the contrary, four projects show investments above the plan: iTEC FDP/NCW (UK), CNS Infrastructure (UK), MCO & Evol NAV/COM/ATM (France), and Project Facilitators (Spain).

10 largest ANSPs planned projects RP2 to date	Planned RP2 to date	Actual RP2 to date	Actual vs Planned RP2 to date
100 2 10 200	(M€ ₂₀₀₉)	(M€ ₂₀₀₉)	(in %)
4-Flight (France)	299.65	274.36	92%
iCAS programme (Germany)	178.79	109.21	61%
Centre Systems Software Development (UK)	160.20	138.67	87%
iTEC FDP/NCW (UK)	128.22	264.48	206%
4-Flight (Italy)	92.05	39.66	43%
CNS Infrastructure (UK)	82.19	84.80	103%
MCO & Evol NAV/COM/ATM (France)	71.56	104.70	146%
Replacement AAA (Netherlands)	68.82	28.45	41%
Project Facilitators (Spain)	65.24	114.41	176%
FS 108 New ATM infrastructure (Norway)	43.08	21.02	49%

Table 4 – Ten largest planned projects at ANSP level RP2 to date

¹⁷ Comparator groups are a mean to assess the cost-efficiency performance targets. They should allow a comparison between similar operational and economic environments for air navigations services (Article 9 (4)(c) of the new Implementing Regulation).



3.3 Public funding granted for total CAPEX (CEF/TEN-T)

Figure 10 shows the funding declared compared to the RP2 to date actual total CAPEX per ANSP. The largest amount of funding has been declared by Germany (74M€₂₀₀₉), France (72M€₂₀₀₉) and the United Kingdom (47M€₂₀₀₉). However, in terms of share of funding compared to actual total CAPEX, MUAC (30%), Poland (29%), and Germany (22%) reported the highest percentage of funding.

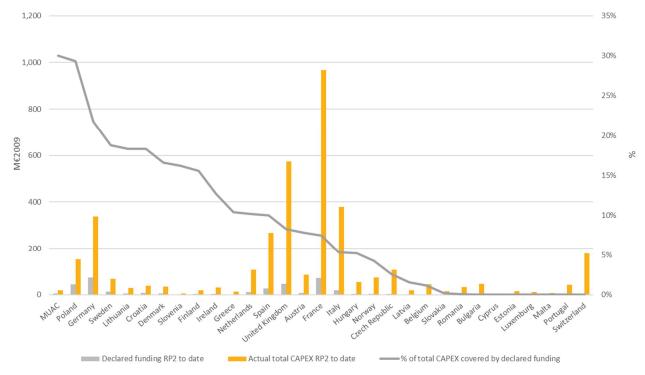


Figure 10 - Actual total CAPEX vs funding declared per ANSP in RP2 to date

Figure 11 shows the SDM payments received by the ANSPs in RP2 to date. France ($64M \in 2009$), United Kingdom ($47M \in 2009$) and Italy ($30M \in 2009$) registered the highest amounts of payments received. In terms of share of SDM payments compared to actual total CAPEX, Greece (26%), Malta (13%) and Denmark (12%) show highest percentage of SDM payments RP2 to date.



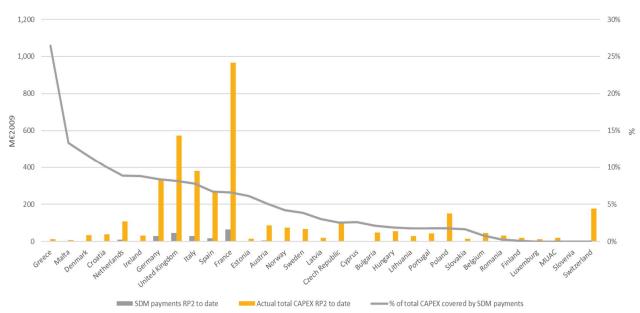


Figure 11 – Actual total CAPEX vs SDM payments per ANSP in RP2 to date

3.4 Expected benefit per project

- As mentioned in section 3.2, the aggregation level of project reporting varies within and between ANSPs. Figure 12 shows the status by project numbers (bar) and by contribution to the Union-wide actual CAPEX (line). The ANSPs presenting a more advanced status in terms of number of projects are Germany with 42 projects in total of which 10 completed (24%) and 32 ongoing (76%), and Norway with 14 projects in total of which 4 completed (28%) and 10 ongoing (72%).
- 59 Some ANSPs have a significant contribution to the Union-wide actual main CAPEX but the completion rate is low to date. France with 12 projects in total (2 completed and 10 ongoing) and UK with 7 projects in total (all of them ongoing) represent the 29% and the 18% of the Union-wide actual main CAPEX, respectively.

¹⁸ Completion status and declared benefits at investment levels can only be analysed for the main CAPEX. Other CAPEX is reported by the ANSPs only as aggregated number.



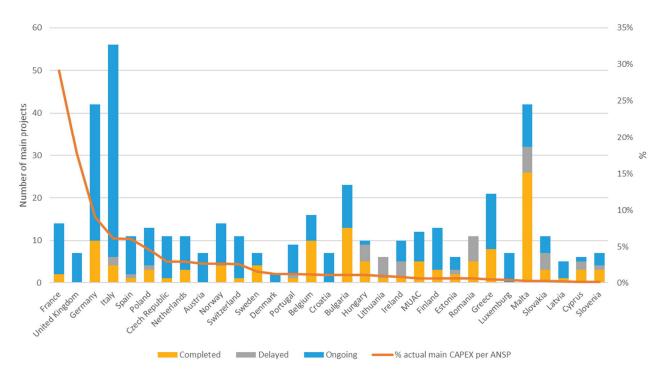


Figure 12 – Project status per ANSP in RP2 to date 19

- Concerning the investments declared benefits per ANSP, a detailed analysis at ANSP level is provided in chapter 4.
- Figure 13 shows the actual investments made during RP2 to date per ANSP in projects linked to the pilot common project in absolute terms and in comparison to the actual total CAPEX. 23 ANSPs invested almost only in PCP projects, while eight ANSPs did not report any investments in PCPs during RP2 to date (Cyprus, Estonia, Greece, Luxembourg, Malta, Slovakia and Sweden). France invested 559M€2009 (58% of its actual total CAPEX), followed by the UK with 514M€2009 (90% of its actual main CAPEX) and Germany with 180M€2009 (51% of its actual total CAPEX).

¹⁹ There are six projects that cannot be categorised as "completed", "delayed" and "ongoing". Two projects have not started yet (one in Belgium and the other in Lithuania), two projects did not contain any information on the status (one in Italy and the other in Poland) and Greece replaced two projects and cancelled one. These six projects are included in the analysis of the factsheets per ANSP in section 4.



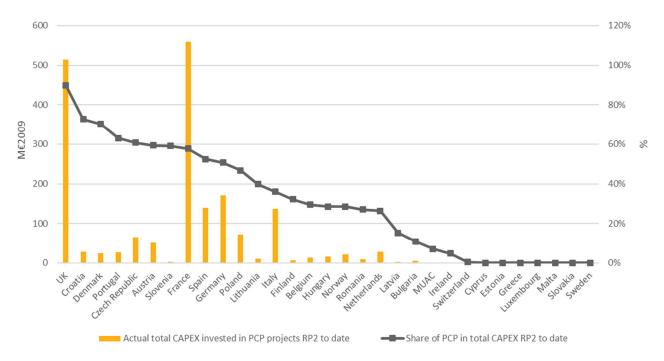


Figure 13 - Actual investments in projects linked to PCP per ANSP in RP2 to date

Concerning the projects listed in the NOP, due to mismatches between the names of the projects provided by the ANSPs in the Monitoring Tables and the names of the projects included in the NOP, a completely accurate picture of CAPEX projects cannot be provided. Using the available data, at ANSP level, Greece is the ANSP with more projects included in the NOP (6 projects). There are 11 ANSPs for which no project could be identified as being included in the NOP.

3.5 Investments versus depreciation and cost of capital

- As explained in Section 2.5, ANSPs charge to the airspace users the determined depreciation costs and the determined cost of capital related to the investments. Figure 14 shows the comparison between the determined depreciation and cost of capital and the actual vales.²⁰ The line shows the total CAPEX execution rate RP2 to date. Figure 14 includes depreciation costs from previous reference periods, therefore an exact one-to-one correlation between depreciation cost and cost of capital and investments materialised in RP2 to date cannot be established. Despite this, this approximation provides a fair overview of the costs related to investments
- When considering the 22 ANSPs underspending in RP2 to date, 20 of them show actual cost of capital and depreciation lower than planned (Spain, Croatia, Poland, Latvia, Luxembourg, the Netherlands, Austria, Norway, Slovenia, Bulgaria, Belgium, Italy, Romania, Finland, Cyprus, Ireland, MUAC, Slovakia, Greece and Malta). For Germany (the remaining ANSPs underspending), the actual depreciation was higher than foreseen for RP2 to date (actual cost of capital was lower that determined) due to higher depreciation of the iCAS Upper Airspace (iCAS programme) and measures regarding the improvement of IT infrastructure (e.g. the backup system of SDDS-NG, the purchase of VAN routers). This means that the difference between actual and determined values has been borne by the ANSP.
- Out of the nine ANSPs overspending (actual CAPEX larger than initially planned), Switzerland reported higher actual depreciation and cost of capital than planned mainly due to higher depreciation costs associated to the increase of investments. The remaining eight ANSPs overspending (Sweden, Estonia, Lithuania, France, United

²⁰ The cost of capital reported is computed on the fixed assets (i.e. the net book value). Approximately, 80% of the total cost of capital relates to investments.



Kingdom, Portugal, Czech Republic and Hungary) reported lower actual costs of depreciation and capital compared to the determined values RP2 to date.

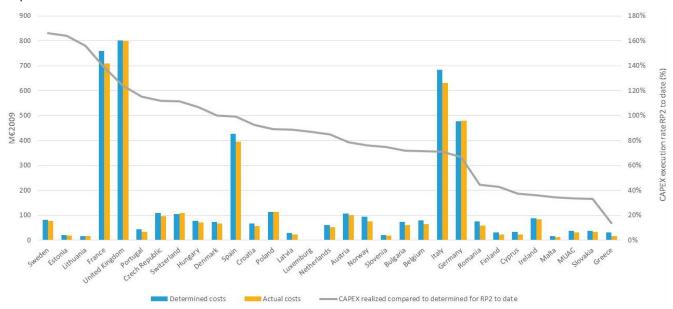


Figure 14 - Actual vs Determined total costs related to investments vs the CAPEX execution rate in RP2 to date

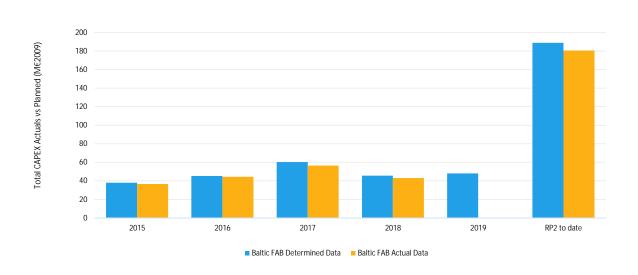


4. FAB and ANSP Factsheets



4.1 Baltic FAB

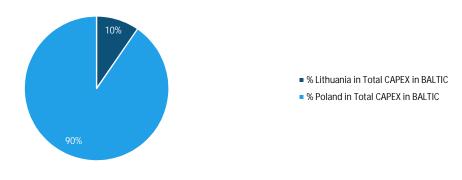
OVERALL INVESTMENTS						
Determined Data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	37.90	45.16	60.22	45.52	47.91	188.80
- Main CAPEX	33.56	37.61	54.11	39.66	46.40	164.94
- % Main into Total CAPEX	89%	83%	90%	87%	97%	87%
- Other CAPEX	4.34	7.55	6.11	5.86	1.51	23.85
- % Other into Total CAPEX	11%	17%	10%	13%	3%	13%
- Lithuania in Total CAPEX in BALTIC	4.27	7.68	5.87	0.32	1.26	18.14
- % Lithuania in Total CAPEX in BALTIC	11%	17%	10%	1%	3%	10%
- Poland in Total CAPEX in BALTIC	33.64	37.48	54.35	45.19	46.65	170.65
- % Poland in Total CAPEX in BALTIC	89%	83%	90%	99%	97%	90%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	36.55	44.40	56.45	43.04	- [180.44
- Main CAPEX	31.86	38.87	49.37	37.15	-	157.25
- % Main into Total CAPEX	87%	88%	87%	86%	-	87%
- Other CAPEX	4.69	5.53	7.07	5.89	-	23.19
- % Other into Total CAPEX	13%	12%	13%	14%		13%
- Lithuania in Total CAPEX in BALTIC	1.40	7.96	9.24	9.72	- [28.31
- % Lithuania in Total CAPEX in BALTIC	4%	18%	16%	23%	-	16%
- Poland in Total CAPEX in BALTIC	35.15	36.43	47.21	33.33	-	152.12
- % Poland in Total CAPEX in BALTIC	96%	82%	84%	77%	-	84%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(1.35)	(0.76)	(3.77)	(2.47)	- 1	(8.36)
- Main CAPEX	(1.70)	1.26	(4.74)	(2.51)	-	(7.69)
- Other CAPEX	0.35	(2.02)	0.97	0.04	-	(0.67)
Total CAPEX (%)	-4%	-2%	-6%	-5%	-	-4%
- Main CAPEX (%)	-5%	3%	-9%	-6%	-	-5%
- Other CAPEX (%)	8%	-27%	16%	1%	-	-3%



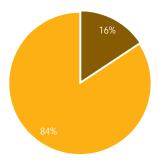


OVERALL INVESTMENTS Baltic FAB

RP2 Performance Plan Total RP2 to date



Actual dataTotal RP2 to date



- % Lithuania in Total CAPEX in BALTIC
- % Poland in Total CAPEX in BALTIC

The total CAPEX to date in the Baltic FAB is 180.44M \in 2009, 4% lower than planned, mainly because of Poland, which underspent more than Lithuania overspent. In 2015, the actual CAPEX was 1.35M \in 2009, 4% lower than planned. For 2016, the actual CAPEX was 0.76M \in 2009, 2% lower than planned. 2017 also saw an actual CAPEX of 3.77M \in 2009, 6% lower than planned. The trend continued through 2018, when the total actual CAPEX was 2.47M \in 2009, 5% lower than planned.

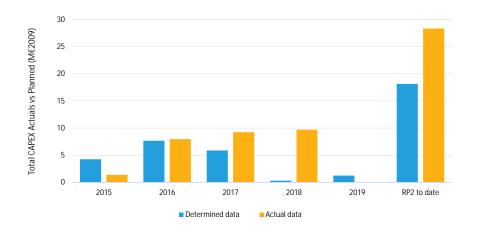
In terms of planned expenses, Lithuania represented 10%, with Poland accounting for 90% of the planned expenses. However, with Poland underspending and with Lithuania overspending with respect to the Performance Plan, the percentages of the actual expenses became 16% for Lithuania and Poland representing the remaining 84%.

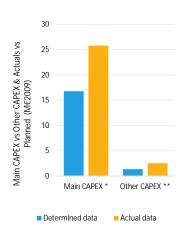


4.1.1 Lithuania - Oro Navigacija

Throughout the RP2 to date, Lithuania overspent 10.17M \in_{2009} (+56%) with respect to the Performance Plan. Despite higher than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-0.92M \in_{2009}). Lithuania planned seven main projects for RP2: five projects have been delayed; one has been completed; and one will start in 2019 and is expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	4.27	7.68	5.87	0.32	1.26	18.14
- Main CAPEX *	3.75	7.55	5.43	0.05	1.01	16.78
- % Main into Total CAPEX	88%	98%	92%	15%	80%	92%
- Other CAPEX **	0.51	0.13	0.44	0.27	0.25	1.36
- % Other into Total CAPEX	12%	2%	8%	85%	20%	8%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	1.40	7.96	9.24	9.72	- [28.31
- Main CAPEX	0.71	7.60	8.90	8.57	-	25.78
- % Main into Total CAPEX	51%	95%	96%	88%	-	91%
- Other CAPEX	0.69	0.37	0.33	1.14	-	2.53
- % Other into Total CAPEX	49%	5%	4%	12%	-	9%
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(2.87)	0.28	3.36	9.39	-	10.17
- Main CAPEX	(3.04)	0.05	3.47	8.52	-	9.00
- Other CAPEX	0.18	0.23	(0.11)	0.87		1.17
Total CAPEX (%)	-67%	4%	57%	2896%	-	56%
- Main CAPEX (%)	-81%	1%	64%	16952%	-	54%
- Other CAPEX (%)	34%	177%	-25%	318%	-	86%





The total capital expenditure to date is $28.31M \in_{2009}$. Throughout RP2 to date, Lithuania spent $10,17M \in_{2009}$ (+56%) more CAPEX than originally planned. For RP2 to date, the main CAPEX is 54% higher than planned, while other CAPEX is 86% higher.

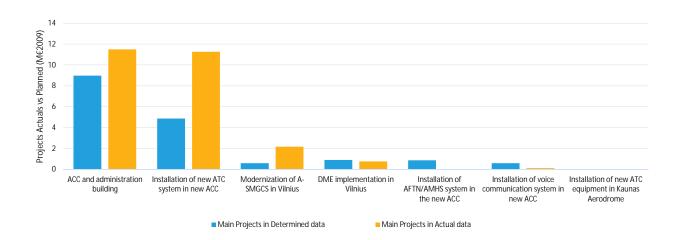
In 2015, Lithuania spent 2.87M \in ₂₀₀₉ less than planned, while for 2016 and 2017, Lithuania overspent 0.28M \in ₂₀₀₉ and 3.36M \in ₂₀₀₉, respectively. In 2018, actual CAPEX is 9.39M \in ₂₀₀₉ higher than planned (+2896%).

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Lithuania - Oro Navigacija						
# Main Projects in Determined data (M€2009)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 ACC and administration building	2.04	4.46	2.48		İ	8.98
2 Installation of new ATC system in new ACC	1.30	1.87	1.67	0.02	0.49	4.87
3 Modernization of A-SMGCS in Vilnius	0.33	0.23	1.07	0.02	0.47	0.59
4 DME implementation in Vilnius	0.08	0.54	0.27		0.01	0.89
5 Installation of AFTN/AMHS system in the new ACC	0.00	0.26	0.60			0.86
6 Installation of voice communication system in new ACC		0.20	0.41	-	-	0.59
7 Installation of new ATC equipment in Kaunas Aerodrome	-	-	-	-	0.21	
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 ACC and administration building	0.60	0.11	5.24	5.54	-	11.49
2 Installation of new ATC system in new ACC	-	5.87	2.97	2.41	-	11.25
3 Modernization of A-SMGCS in Vilnius	-	0.97	0.69	0.51	-	2.17
4 DME implementation in Vilnius	0.11	0.64	-	-	-	0.76
5 Installation of AFTN/AMHS system in the new ACC	-	-	-	-	-	-
6 Installation of voice communication system in new ACC	-	-	-	0.11	-	0.11
7 Installation of new ATC equipment in Kaunas Aerodrome	-	-	-	-	-	-
# Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
1 ACC and administration building	(1.44)	(4.35)	2.76	5.54	- [2.51
2 Installation of new ATC system in new ACC	(1.30)	4.00	1.30	2.38	-	6.39
3 Modernization of A-SMGCS in Vilnius	(0.33)	0.74	0.69	0.49	-	1.58
4 DME implementation in Vilnius	0.03	0.10	(0.27)	-	-	(0.13)
5 Installation of AFTN/AMHS system in the new ACC	-	(0.26)	(0.60)	-	-	(0.86)
6 Installation of voice communication system in new ACC	-	(0.18)	(0.41)	0.11	-	(0.48)
7 Installation of new ATC equipment in Kaunas Aerodrome	-	-	-	-	-	-

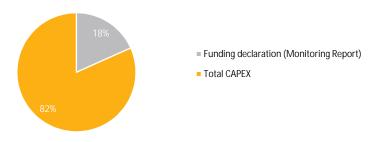


RP2 to date, the project "ACC and administration building" is the flagship project, with a steady flow of investment throughout the period. The second largest project, in terms of CAPEX, is the "Installation of voice communication system in the new ACC", receiving allocations from 2016. Lithuania has also planned investments regarding the projects "Installation of AFTN/AMHS system in the new ACC" and "Installation of new ATC equipment in Kaunas Aerodrome"; however, no actual investment was put in place.

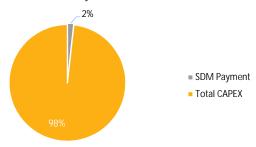


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Lithuania - Oro Navigacija								
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date		
2 Installation of new ATC system in new ACC	-	1.90	-	2.83	- [4.73		
3 Modernization of A-SMGCS in Vilnius	-	0.46	-	-	-	0.46		
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date		
Funding declaration (Monitoring Report)	-	2.35	-	2.83	- [5.18		
SDM Payment	-	-	0.50	=	-	0.50		

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



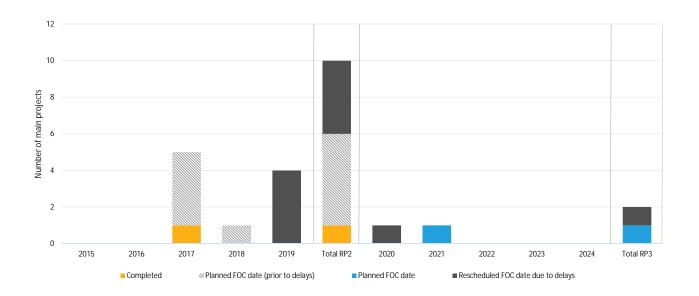
Two projects were granted through the CEF 2015 call: the "Installation of new ATC system in new ACC (Agreement No INEA / CEF/TRAN/M2015/1127304)" and the "Modernization of A-SMGCS (Agreement No INEA / CEF/TRAN/M2015/1127457)" in Vilnius. The application for voice communication/AFTN/AMHS systems funding through CEF 2016 call was unsuccessful.

The total amount granted to Lithuania for RP2 to date is $5.18M \in_{2009}$, which represents 18% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT Lithuania - C	Dro Naviga	acija
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#	Main Projects	Status in 2018	FOC date*	Expected benefit per KPA		PCP	NOP		
				SAF	ENV	CAP	CEF		
1	ACC and administration building	Delayed	2019	Х	Х	Х	Х		х
2	Installation of new ATC system in new ACC	Delayed	2019	Х	Х	Х	Х	Х	Х
3	Modernization of A-SMGCS in Vilnius	Delayed	2019	Х	Х	Х	Х		
4	DME implementation in Vilnius	Completed	2017	Х	Х	Х	Х		
5	Installation of AFTN/AMHS system in the new ACC	Delayed	2020	Х			Х		
6	Installation of voice communication system in new ACC	Delayed	2019	Х			Х		
7	Installation of new ATC equipment in Kaunas Aerodrome	Not started	2021	Х	Х	Х	Х		



Lithuania planned seven main projects for RP2: five projects have been delayed; one has been completed; and one will start in 2019 and is expected to continue through RP3.

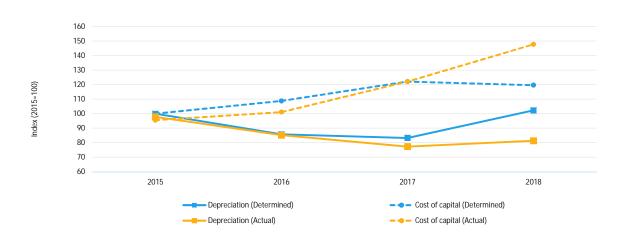
All projects are expected to improve safety and cost-efficiency. Five of these projects are also expected to have a positive impact on environment and capacity.

The actual investment in RP2 to date for the project linked to the Pilot Common Project is $11.25M \in_{2009}$, representing 40% of the actual total CAPEX. Two projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Lithuania -	Oro Navigacija					
Determine distance (MCC)	00150	004/D	00470	00400	00100	DDO to date
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	3.50	3.00	2.91	3.57	3.27	12.98
- En route	2.50	2.08	2.11	2.65	2.41	9.34
- Terminal	0.99	0.92	0.80	0.93	0.86	3.64
Cost of Capital	0.73	0.79	0.89	0.87	0.78	3.28
- En route	0.51	0.54	0.63	0.63	0.56	2.32
- Terminal	0.21	0.25	0.26	0.24	0.22	0.97
Total	4.22	3.79	3.80	4.45	4.05	16.26
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
					•	
Depreciation	3.42	2.98	2.70	2.84	-	11.94
- En route	2.47	2.08	2.00	2.12	-	8.67
- Terminal	0.95	0.89	0.70	0.72	-	3.27
Cost of Capital	0.70	0.74	0.89	1.08	-	3.40
- En route	0.51	0.56	0.72	0.91	-	2.71
- Terminal	0.18	0.17	0.16	0.16	-	0.69
Total	4.12	3.71	3.59	3.92	-	15.34
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.08)	(0.02)	(0.21)	(0.73)	<u>-</u> [(1.04)
- En route	(0.04)	0.01	(0.10)	(0.53)	-	(0.66)
- Terminal	(0.04)	(0.02)	(0.10)	(0.20)	_	(0.37)
Cost of Capital	(0.03)	(0.06)	0.00	0.20	_	0.12
- En route	(0.00)	0.03	0.10	0.28	_	0.40
- Terminal	(0.03)	(0.08)	(0.10)	(0.07)	_	(0.28)
Total	(0.11)	(0.07)	(0.21)	(0.53)	_	(0.92)
	(0.11)	(0.0.)	(0.2./	(0.00)		(0.72)



Over the first 4 years of RP2, the actual CAPEX is 56% higher than determined (overspent). Despite this fact, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 0.92M \in_{2009} for investments that have been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by $1.73M \in_{2009}$. This was due to delays in project implementation and shifts in investments allocation; as some investments that were initially planned as long-term assets were reported under a different code (e.g. cost items).

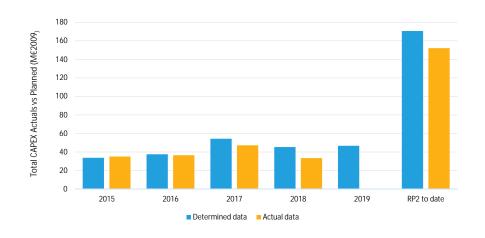
Throughout RP2 to date, the actual cost of capital was 0.12M \in 2009 higher than determined. This was due to the higher than foreseen book value of the fixed en-route asset base compared to Performance Plan (as a result of completed projects at the end of 2015-2016 and a revaluation of property, plant and equipment at the end of 2017).

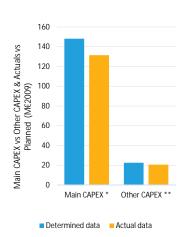


4.1.2 Poland - PANSA

Throughout the RP2 to date, Poland underspent $18.53 \text{M} \in_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-0.19M \in_{2009}). Poland planned 13 main projects for RP2: three projects have been completed; one has been delayed until 2021; and nine have been started, being expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	33.64	37.48	54.35	45.19	46.65	170.65
- Main CAPEX *	29.81	30.06	48.69	39.61	45.39	148.17
- % Main into Total CAPEX	89%	80%	90%	88%	97%	87%
- Other CAPEX **	3.83	7.42	5.66	5.58	1.26	22.49
- % Other into Total CAPEX	11%	20%	10%	12%	3%	13%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	35.15	36.43	47.21	33.33	-[152.12
- Main CAPEX	31.15	31.27	40.47	28.58	-	131.47
- % Main into Total CAPEX	89%	86%	86%	86%	-	86%
- Other CAPEX	4.00	5.17	6.74	4.75	-	20.65
- % Other into Total CAPEX	11%	14%	14%	14%	-	14%
Difference between Actual and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	1.51	(1.04)	(7.14)	(11.86)	- [(18.53)
- Main CAPEX	1.34	1.21	(8.21)	(11.03)	-	(16.69)
- Other CAPEX	0.17	(2.25)	1.08	(0.83)	-	(1.84)
Total CAPEX (%)	4%	-3%	-13%	-26%	-	-11%
- Main CAPEX (%)	4%	4%	-17%	-28%	-	-11%
- Other CAPEX (%)	4%	-30%	19%	-15%	-	-8%





The total capital expenditure to date is 152,12M \in ₂₀₀₉. During RP2, Poland spent 18.53M \in ₂₀₀₉ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 11.27% lower than planned, while other CAPEX is 8.16% lower.

In 2015, Poland spent 1.51M \in ₂₀₀₉ more than initially planned. For 2016, 2017 and 2018, Poland underspent 1.04M \in ₂₀₀₉, 7.14M \in ₂₀₀₉ and 11.86M \in ₂₀₀₉ respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

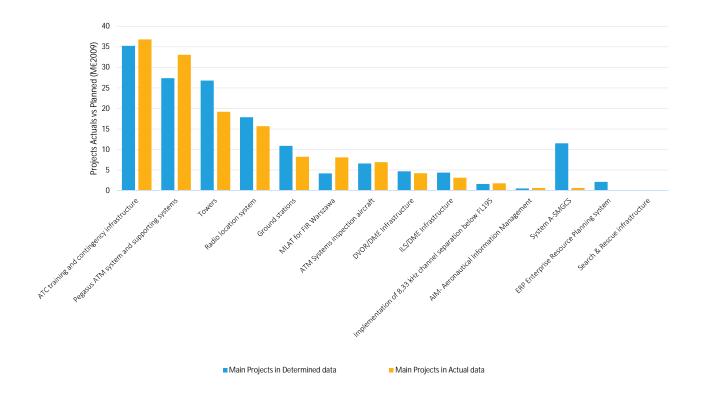
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Poland - PANSA						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
4 4 -0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		10.50			1	
1 ATC training and contingency infrastructure	4.94	12.53	2.53	15.24	26.96	35.24
Pegasus ATM system and supporting systems	7.21	2.91	14.14	3.12	-	27.38
3 Towers	1.59	5.18	12.68	7.34	5.22	26.80
4 Radio location system	4.85	3.52	9.39	0.10	7.51	17.87
5 Ground stations	2.47	0.09	4.28	4.07	1.11	10.91
6 MLAT for FIR Warszawa	-	0.71	1.45	2.04	1.49	4.21
7 ATM Systems inspection aircraft	6.61	-	-	-	-	6.61
8 DVOR/DME Infrastructure	1.07	1.46	1.19	0.99	1.98	4.72
9 ILS/DME Infrastructure	1.04	0.88	0.98	1.49	-	4.38
10 Implementation of 8,33 kHz channel separation below FL195	-	1.62	-	-	-	1.62
11 AIM- Aeronautical Information Management	0.02	0.52	-	-	-	0.53
12 System A-SMGCS	-	6.42	1.04	4.08	-	11.54
13 ERP Enterprise Resource Planning system	-	-	1.00	1.14	1.11	2.14
14 Search & Rescue infrastructure	-	-	-	-	-	-
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 ATC training and contingency infrastructure	5.16	13.29	8.52	9.81	<u>-</u> [36.78
2 Pegasus ATM system and supporting systems	7.54	3.04	15.23	7.22	-	33.04
3 Towers	1.66	6.49	9.74	1.30	-	19.19
4 Radio location system	5.07	3.01	1.32	6.28	_	15.67
5 Ground stations	2.58	0.03	3.54	2.11		8.26
6 MLAT for FIR Warszawa	2.30	7.71	0.02	0.37		8.09
7 ATM Systems inspection aircraft	6.91	0.00	0.02	0.57		6.92
8 DVOR/DME Infrastructure	1.12	1.50	0.02	0.72		4.25
9 ILS/DME Infrastructure	1.08	0.86	0.43	0.72		3.13
10 Implementation of 8,33 kHz channel separation below FL195		1.78	0.43	0.70	-+	1.78
TO THINICHICHIAUUH ULO.SS NTZ CHAHRELSCNALAUUH DCIUW FL 173						
	- 0.02		0.42	0.01		
11 AIM- Aeronautical Information Management	0.02	0.19	0.43	0.01	-	0.65
11 AIM- Aeronautical Information Management12 System A-SMGCS	0.02	0.19 0.32	0.43	0.01	-	
11 AlM- Aeronautical Information Management		0.19		0.01	-	0.65



INVESTMENTS PER MAIN PROJECT Poland - PANSA						
# Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
1 ATC training and contingency infrastructure	0.22	0.76	5.98	(5.42)	-	1.54
2 Pegasus ATM system and supporting systems	0.32	0.14	1.10	4.10	-	5.66
3 Towers	0.07	1.31	(2.95)	(6.05)	-	(7.61)
4 Radio location system	0.22	(0.51)	(8.07)	6.17	-	(2.20)
5 Ground stations	0.11	(0.07)	(0.73)	(1.97)	-	(2.66)
6 MLAT for FIR Warszawa	-	7.00	(1.44)	(1.67)	-	3.89
7 ATM Systems inspection aircraft	0.30	0.00	0.02	-	-	0.31
8 DVOR/DME Infrastructure	0.05	0.04	(0.28)	(0.26)	-	(0.46)
9 ILS/DME Infrastructure	0.05	(0.02)	(0.55)	(0.72)	-	(1.25)
10 Implementation of 8,33 kHz channel separation below FL195	=	0.15	-	-	-	0.15
11 AIM- Aeronautical Information Management	0.00	(0.32)	0.43	0.01	-	0.11
12 System A-SMGCS	-	(6.10)	(0.71)	(4.08)	-	(10.89)
13 ERP Enterprise Resource Planning system	=	-	(1.00)	(1.14)	-	(2.14)
14 Search & Rescue infrastructure	-	-	-	-	-	-



RP2 to date, Poland's main project is the "ATC training and contingency infrastructure" with a total actual investment of $36.78M \in_{2009}$. Compared to the initial estimations, Poland spent an additional amount of $1.54M \in_{2009}$ for this project.

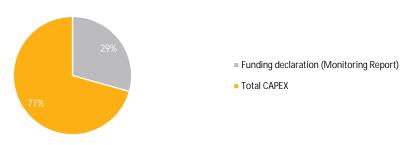
The second major project in terms of CAPEX is the "Pegasus ATM system and supporting system", received a total actual investment of $33.04M \epsilon_{2009}$, exceeding the initial estimations by $5.66M \epsilon_{2009}$.

Poland has planned investments for the project "ERP Enterprise Resource Planning system", however no investments were put in place.

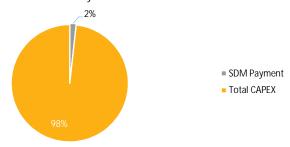


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Poland - PANSA						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	13.79	13.61	6.56	10.68	-	44.63
Actual funding declaration vs Payments (M€2009)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	13.79	13.61	6.56	10.68	-	44.63
SDM Payment	-	-	2.67	-	-	2.67

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



Poland received funds from CEF for the years 2014-2016, and from the Operational Programme Infrastructure & Environment for the periods 2007-2013 and 2014-2020. In addition to these funds, Poland was granted funds under the Regional Operational Programme for Lubuskie Voivodeship.

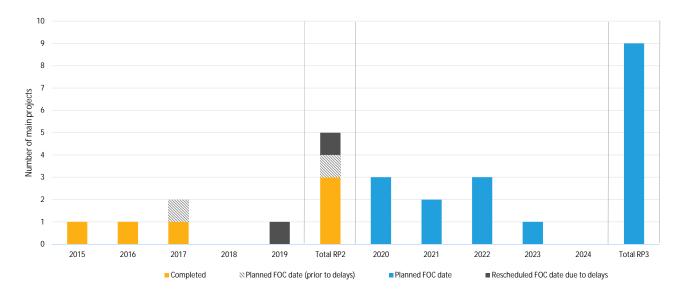
Limited information in the 2018 Monitoring Report does not allow the link between the 14 projects and the respective investments.

The total amount granted to Poland during the RP2 to date is 44.63M€₂₀₀₉, which represents 29% of the actual total CAPEX.



	EXPECTED BEI	NEFIT PER PROJECT	Poland - PANSA
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# Main Projects	Status in 2018 FOC date* Expected benefit per KPA						PCP	NOP
			SAF	ENV	CAP	CEF		
1 ATC training and contingency infrastructure	Ongoing	2023		Х			Х	
2 Pegasus ATM system and supporting systems	Ongoing	2020	Х	Х	Х	Х	Х	
3 Towers	Ongoing	2022	Х		Х	Х		
4 Radio location system	Ongoing	2020	Х	Х	Х	Х		
5 Ground stations	Ongoing	2021	Х	Х	Х	Х		
6 MLAT for FIR Warszawa	Ongoing	2022	Х	Х	Х	Х		
7 ATM Systems inspection aircraft	Completed	2015	Х		Х	Х		
8 DVOR/DME Infrastructure	Ongoing	2021		Х				
9 ILS/DME Infrastructure	Ongoing	2022	Х	Х	Х	Х		
10 Implementation of 8,33 kHz channel separation below FL195	Completed	2016	Х		Х			Х
11 AIM- Aeronautical Information Management	Completed	2017	Х	Х	Х	Х	Х	
12 System A-SMGCS	Ongoing	2020	Х	Х	Х	Х	Х	
13 ERP Enterprise Resource Planning system	Delayed	2021						
14 Search & Rescue infrastructure	=	-	Х					



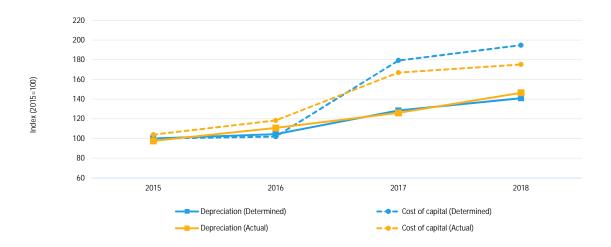
Poland planned 13 main projects for RP2: three projects have been completed; one has been delayed until 2021; and nine have been started, being expected to continue through RP3.

Poland set safety as a priority with 11 projects expected to bring benefits; followed by environment and cost-efficiency where eight projects are expected to bring benefits.

The actual investment made in RP2 to date for the four projects that were linked to the Pilot Common Project is $71.11M \in_{2009}$. This amount represents 47% of the actual total CAPEX. One project was included in the Network Operations Plan.



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Poland - F	PANSA					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	12.64	13.19	16.24	17.82	17.93	59.89
- En route	10.66	11.05	13.42	14.92	14.85	50.05
- Terminal	1.98	2.13	2.82	2.90	3.08	9.84
Cost of Capital	9.31	9.48	16.68	18.13	4.39	53.60
- En route	7.92	8.03	15.15	17.06	3.23	48.16
- Terminal	1.38	1.46	1.53	1.07	1.15	5.44
Total	21.95	22.67	32.92	35.95	22.32	113.49
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to dat
Depreciation	12.34	13.99	15.93	18.51	-1	60.77
- En route	10.44	11.88	13.93	16.09	-	52.33
- Terminal	1.90	2.11	2.00	2.42	-	8.44
Cost of Capital	9.67	11.01	15.54	16.30	-	52.53
- En route	8.28	9.39	14.16	15.20	-	47.03
- Terminal	1.39	1.62	1.38	1.11	-	5.50
Total	22.01	25.00	31.47	34.81	-	113.30
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to dat
Depreciation	(0.31)	0.80	(0.31)	0.69	-1	0.88
- En route	(0.22)	0.83	0.51	1.17	-	2.29
- Terminal	(0.09)	(0.02)	(0.82)	(0.48)	-	(1.40
Cost of Capital	0.37	1.53	(1.14)	(1.83)	-	(1.07
- En route	0.35	1.37	(0.99)	(1.87)	-	(1.13
- Terminal	0.01	0.16	(0.15)	0.04		0.06
Total	0.06	2.33	(1.45)	(1.13)	-	(0.19



Over the first 4 years of RP2, 11% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed $0.19M \in_{2009}$ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by $0.88M \in_{2009}$. This was due to the application of new depreciation methods that consider the actual periods in which the assets are expected to be used.

Throughout RP2 to date, the actual cost of capital was 1.07M \in _{2009} lower than determined. This was mainly due to a lower fixed assets base, caused by alterations in the Investment Plan and the updated depreciation periods.

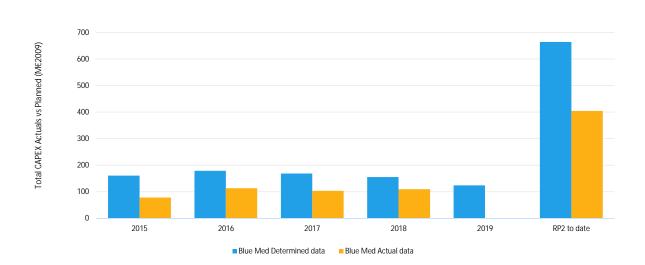


4.2 Blue MED FAB

Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to da
otal CAPEX	161.16	178.77	168.62	155.66	124.26	664.2
- Main CAPEX	60.97	104.68	101.88	84.22	57.52	351.7
- % Main into Total CAPEX	38%	59%	60%	54%	46%	53
- Other CAPEX	100.18	74.10	66.74	71.44	66.74	312.4
- % Other into Total CAPEX	62%	41%	40%	46%	54%	47
- Cyprus in Total CAPEX in BLUE MED	6.18	3.43	2.06	-	-	11.6
- % Cyrpus in Total CAPEX in BLUE MED	4%	2%	1%	0%	0%	2
- Greece in Total CAPEX in BLUE MED	15.81	26.55	24.77	25.85	22.04	92.9
- % Greece in Total CAPEX in BLUE MED	10%	15%	15%	17%	18%	14
- Italy in Total CAPEX in BLUE MED	137.75	141.41	133.46	123.67	101.19	536.3
- % Italy in Total CAPEX in BLUE MED	85%	79%	79%	79%	81%	8.
- Malta in Total CAPEX in BLUE MED	1.41	7.38	8.33	6.14	1.03	23.
- % Malta in Total CAPEX in BLUE MED	1%	4%	5%	4%	1%	4
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to da
otal CAPEX	78.33	113.09	103.53	109.51	- [404.
- Main CAPEX	24.26	63.22	50.11	63.07	-	200.
- % Main into Total CAPEX	31%	56%	48%	58%	-	5
- Other CAPEX	54.07	49.87	53.42	46.44	-	203.
- % Other into Total CAPEX	69%	44%	52%	42%	-	5
- Cyprus in Total CAPEX in BLUE MED	0.66	1.78	0.80	1.12	- [4.
- % Cyrpus in Total CAPEX in BLUE MED	1%	2%	1%	1%	-	
- Greece in Total CAPEX in BLUE MED	-	7.52	0.40	5.05	-	12.
- % Greece in Total CAPEX in BLUE MED	0%	7%	0%	5%	-	
- Italy in Total CAPEX in BLUE MED	75.77	103.10	100.30	100.07	-	379
- % Italy in Total CAPEX in BLUE MED	97%	91%	97%	91%	-	9
<u>, </u>						
- Malta in Total CAPEX in BLUE MED	1.90	0.70	2.03	3.27	-	7.



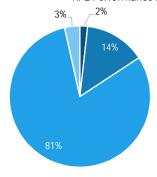
OVERALL INVESTMENTS Blue MED FAB						
Difference between Actuals and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(82.83)	(65.68)	(65.09)	(46.16)	-	(259.75)
- Main CAPEX	(36.72)	(41.46)	(51.77)	(21.15)	-	(151.10)
- Other CAPEX	(46.11)	(24.22)	(13.32)	(25.00)	-	(108.65)
Total CAPEX (%)	-51%	-37%	-39%	-30%	-	-39%
- Main CAPEX (%)	-60%	-40%	-51%	-25%	-	-43%
- Other CAPEX (%)	-46%	-33%	-20%	-35%	-	-35%





OVERALL INVESTMENTS Blue MED FAB





- % Cyrpus in Total CAPEX in BLUE MED
- % Greece in Total CAPEX in BLUE MED
- % Italy in Total CAPEX in BLUE MED
- % Malta in Total CAPEX in BLUE MED

RP2 to date, the total actual investments in CAPEX for the BLUE MED FAB have been lower than determined in the Performance Plan. Actual investments were made for a total amount of $404.46\text{M} \in 2009$, while in the Performance Plan they were set out to be worth $664.21\text{M} \in 2009$, a difference of $259.75\text{M} \in 2009$ (or 39%). The underinvestment has been the case throughout RP2, with the biggest difference to occur in 2015 by 51% (or $82.83\text{M} \in 2009$) and the smallest in 2018 by 30% (or $6.16\text{M} \in 2009$).

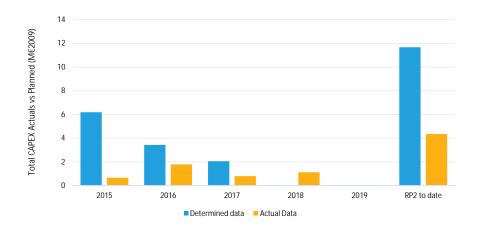
Cyprus and Malta have a minimal share in the total investments made with respectively 1% and 2% of the actual investments. These shares are only slightly lower than initially determined in the Performance Plan. The share of Greece in actual investments is lower than planned with an average of only 3%, while the expected was at 14%. This is because in 2015 no investments were made, while in 2017 and 2018 Greece invested approximately only 28% of the expected investment. The biggest share corresponds to Italy, who is responsible for 94% of the total actual investments, while only 81% was planned.

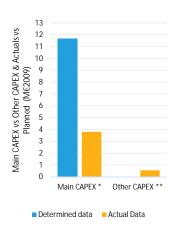


4.2.1 Cyprus - DCAC Cyprus

Throughout the RP2 to date, Cyprus underspent 7.31M \in_{2009} (-63%) with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-10.27M \in_{2009}). Cyprus planned six main projects for RP2: three projects have been completed, two have been delayed and one has been started. Three projects are expected to finish in RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	6.18	3.43	2.06	_	-	11.67
- Main CAPEX *	6.18	3.43	2.06	-	-	11.67
- % Main into Total CAPEX	100%	100%	100%	-	-	100%
- Other CAPEX **	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	-	-	-
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	0.66	1.78	0.80	1.12	- [4.35
- Main CAPEX	0.56	1.34	0.80	1.10	-	3.80
- % Main into Total CAPEX	85%	76%	100%	98%	-	87%
- Other CAPEX	0.10	0.43	-	0.02	-	0.55
- % Other into Total CAPEX	15%	24%	0%	2%	-	13%
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(5.52)	(1.65)	(1.26)	1.12	- [(7.31)
- Main CAPEX	(5.62)	(2.09)	(1.26)	1.10	-	(7.87)
- Other CAPEX	0.10	0.43	-	0.02	-	0.55
Total CAPEX (%)	-89%	-48%	-61%	-	-	-63%
- Main CAPEX (%)	-91%	-61%	-61%	-	-	-67%
- Other CAPEX (%)	-	-	-	-	-	-





The total capital expenditure to date is $4.35 \text{M} \in_{2009}$. For RP2 to date, Cyprus spent $7.31 \text{M} \in_{2009}$ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 67% lower than planned and other CAPEX was introduced, though it was not planned.

In 2015, Cyprus spent 5.52M \in ₂₀₀₉ less (-89%) than planned. For 2016 and 2017, Cyprus underspent 1.65M \in ₂₀₀₉ and 1.26M \in ₂₀₀₉, respectively. In 2018, actual CAPEX was 1.12M \in ₂₀₀₉ higher than planned, as there were no investments planned for this year.

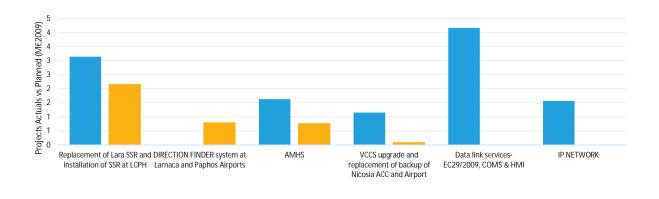
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



6 IP NETWORK

ESTMENTS PER MAIN PROJECT Cyprus - DCAC Cyprus						
Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Replacement of Lara SSR and installation of SSR at LCPH	2.11	1.04	-	-	-	3.14
DIRECTION FINDER system at Larnaca and Paphos Airports	-	-	-	-	-	
AMHS	1.37	0.26	-	-	-	1.63
VCCS upgrade and replacement of backup of Nicosia ACC and Airport	1.11	0.04	-	-	-	1.15
,	1.06	1.57	1.54	-	-	4.17
IP NETWORK	0.53	0.52	0.51	-	-	1.57
Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Replacement of Lara SSR and installation of SSR at LCPH	-	0.61	0.80	0.74	-	2.16
DIRECTION FINDER system at Larnaca and Paphos Airports	0.52	0.12	-	0.16	-	0.80
AMHS	0.04	0.61	-	0.11	-	0.76
VCCS upgrade and replacement of backup of Nicosia ACC and Airport	-	-	-	0.09	-	0.09
Data link services- EC29/2009, COMS & HMI	-	-	-	-	-	-
IP NETWORK	=	-	-	-	-	-
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Replacement of Lara SSR and installation of SSR at LCPH	(2.11)	(0.42)	0.80	0.74	-	(0.99)
DIRECTION FINDER system at Larnaca and Paphos Airports	0.52	0.12	-	0.16	-	0.80
AMHS	(1.33)	0.35	-	0.11	-	(0.87)
VCCS upgrade and replacement of backup of Nicosia ACC and Airport	(1.11)	(0.04)		0.09		(1.07)
	(1.06)	(1.57)				
	Replacement of Lara SSR and installation of SSR at LCPH DIRECTION FINDER system at Larnaca and Paphos Airports AMHS VCCS upgrade and replacement of backup of Nicosia ACC and Airport Data link services- EC29/2009, COMS & HMI IP NETWORK Main Projects in Actual data (M€₂009) Replacement of Lara SSR and installation of SSR at LCPH DIRECTION FINDER system at Larnaca and Paphos Airports AMHS VCCS upgrade and replacement of backup of Nicosia ACC and Airport Data link services- EC29/2009, COMS & HMI IP NETWORK Difference between Actual and Determined (M€₂009) Replacement of Lara SSR and installation of SSR at LCPH DIRECTION FINDER system at Larnaca and Paphos Airports AMHS	Main Projects in Determined data (M€2009) 2015D Replacement of Lara SSR and installation of SSR at LCPH 2.11 DIRECTION FINDER system at Larnaca and Paphos Airports - AMHS 1.37 VCCS upgrade and replacement of backup of Nicosia ACC and Airport 1.11 Data link services- EC29/2009, COMS & HMI 1.06 IP NETWORK 0.53 Main Projects in Actual data (M€2009) 2015A Replacement of Lara SSR and installation of SSR at LCPH - DIRECTION FINDER system at Larnaca and Paphos Airports 0.52 AMHS 0.04 VCCS upgrade and replacement of backup of Nicosia ACC and Airport - Difference between Actual and Determined (M€2009) 2015 Replacement of Lara SSR and installation of SSR at LCPH (2.11) DIRECTION FINDER system at Larnaca and Paphos Airports 0.52 AMHS (1.33) VCCS upgrade and replacement of backup of Nicosia ACC and Airport (1.11)	Main Projects in Determined data (M€2009)2015D2016DReplacement of Lara SSR and installation of SSR at LCPH2.111.04DIRECTION FINDER system at Larnaca and Paphos AirportsAMHS1.370.26VCCS upgrade and replacement of backup of Nicosia ACC and Airport1.110.04Data link services- EC29/2009, COMS & HMI1.061.57IP NETWORK0.530.52Main Projects in Actual data (M€2009)2015A2016AReplacement of Lara SSR and installation of SSR at LCPH-0.61DIRECTION FINDER system at Larnaca and Paphos Airports0.520.12AMHS0.040.61VCCS upgrade and replacement of backup of Nicosia ACC and AirportData link services- EC29/2009, COMS & HMIIP NETWORKDifference between Actual and Determined (M€2009)20152016Replacement of Lara SSR and installation of SSR at LCPH(2.11)(0.42)DIRECTION FINDER system at Larnaca and Paphos Airports0.520.12AMHS(1.33)0.35VCCS upgrade and replacement of backup of Nicosia ACC and Airport(1.11)(0.04)	Main Projects in Determined data (M€2009) 2015D 2016D 2017D Replacement of Lara SSR and installation of SSR at LCPH 2.11 1.04 - DIRECTION FINDER system at Larnaca and Paphos Airports - - - AMHS 1.37 0.26 - VCCS upgrade and replacement of backup of Nicosia ACC and Airport 1.11 0.04 - Data link services- EC29/2009, COMS & HMI 1.06 1.57 1.54 IP NETWORK 0.53 0.52 0.51 Main Projects in Actual data (M€2009) 2015A 2016A 2017A Replacement of Lara SSR and installation of SSR at LCPH - 0.61 0.80 DIRECTION FINDER system at Larnaca and Paphos Airports 0.52 0.12 - AMHS 0.04 0.61 - VCCS upgrade and replacement of backup of Nicosia ACC and Airport - - - Difference between Actual and Determined (M€2009) 2015 2016 2017 Replacement of Lara SSR and installation of SSR at LCPH (2.11) (0.42) 0.80 DIRECTION FINDER	Main Projects in Determined data (M€₂₀₀₀) 2015D 2016D 2017D 2018D Replacement of Lara SSR and installation of SSR at LCPH 2.11 1.04 - - DIRECTION FINDER system at Larnaca and Paphos Airports - - - - AMHS 1.37 0.26 - - VCCS upgrade and replacement of backup of Nicosia ACC and Airport 1.11 0.04 - - Data link services- EC29/2009, COMS & HMI 1.06 1.57 1.54 - IP NETWORK 0.53 0.52 0.51 - Main Projects in Actual data (M€₂₀₀₀) 2015A 2016A 2017A 2018A Replacement of Lara SSR and installation of SSR at LCPH - 0.61 0.80 0.74 DIRECTION FINDER system at Larnaca and Paphos Airports 0.52 0.12 - 0.16 AMHS 0.04 0.61 - 0.09 Data link services- EC29/2009, COMS & HMI - - - - IP NETWORK - - - - -	Main Projects in Determined data (M€₂₀००) 2015D 2016D 2017D 2018D 2019D Replacement of Lara SSR and installation of SSR at LCPH 2.11 1.04 -<



(0.53)

(0.52)

(0.51)

■ Main Projects in Determined data

Main Projects in Actual data

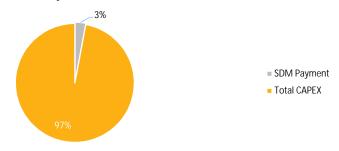
RP2 to date, although the main project in the Performance Plan is "Data link services – EC29/2009, COMS & HMI", 4.17M \in_{2009} (or 36%) of the determined CAPEX, no actual investments have been put in place. In fact, half of the actual investments in RP2 (2.16M \in_{2009}) were made for the project "Replacement of Lara SSR and installation of SSR at LCPH". Furthermore, while no investments were planned for the "Direction finder system at Larnaca and Paphos Airports", actual data reveals an investment of 0.8M

(1.57)



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Cypr	us - DCAC Cyprus					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
	-	-	-	-	-]	<u>-</u>
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	-	-	-	-	-
SDM Payment	-	-	0.11	-	-	0.11

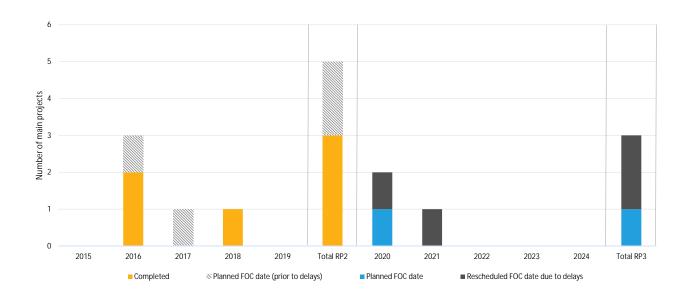
% of SDM Payment in Total CAPEX for RP2 to date





EXPECTED BENEFIT PER PROJECT Cyprus	s - DCAC Cyprus
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#	Main Projects	Status in 2018	FOC date*	Ехре	ected be	nefit per	· KPA	PCP	NOP
				SAF	ENV	CAP	CEF		
1	Replacement of Lara SSR and installation of SSR at LCPH	Completed	2018	Х		Х			
2	DIRECTION FINDER system at Larnaca and Paphos Airports	Completed	2016	Х					
3	AMHS	Completed	2016	Х					
4	VCCS upgrade and replacement of backup of Nicosia ACC and Airport	Delayed	2020	Х		Х			
5	Data link services- EC29/2009, COMS & HMI	Delayed	2021	Х		Х		Х	Х
6	IP NETWORK	Ongoing	2020				Х	Х	



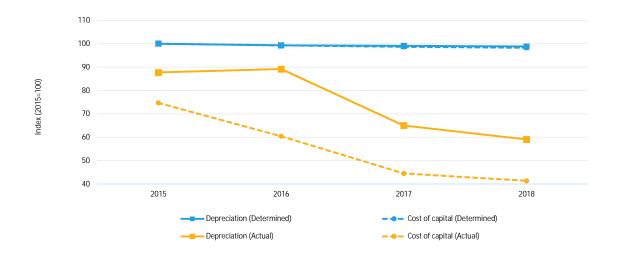
Cyprus planned six main projects for RP2: three projects have been completed, two have been delayed and one has been started. Three projects are expected to finish in RP3.

Five out of six projects are expected to improve safety, while three of them are expected to have positive impact on capacity. One project is expected to enhance cost-efficiency, while no project is expected to benefit the environment.

There was no actual investment in the two projects that were linked to the Pilot Common Project. One project was included in the Network Operations Plan.



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Cyprus - D	OCAC Cyprus					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	5.18	5.15	5.14	5.12	5.10	20.58
- En route	4.48	4.45	4.44	4.43	4.41	17.81
- Terminal	0.70	0.69	0.69	0.69	0.69	2.77
Cost of Capital	3.01	2.99	2.97	2.96	2.94	11.95
- En route	2.75	2.73	2.71	2.70	2.68	10.89
- Terminal	0.26	0.26	0.27	0.27	0.27	1.06
Total	8.20	8.14	8.11	8.08	8.04	32.53
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	4.55	4.62	3.37	3.06	-	15.60
- En route	4.03	4.08	2.86	2.59	-	13.56
- Terminal	0.52	0.54	0.51	0.47	-	2.04
Cost of Capital	2.25	1.82	1.34	1.25	-	6.66
- En route	2.06	1.66	1.23	1.17	-	6.12
- Terminal	0.19	0.16	0.11	0.08	-	0.55
Total	6.80	6.44	4.71	4.31	-	22.26
	0045	0047	2047	0040	2012	DDO L L L
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.64)	(0.53)	(1.77)	(2.06)	-	(4.99)
- En route	(0.46)	(0.37)	(1.59)	(1.84)	-	(4.25)
- Terminal	(0.18)	(0.16)	(0.18)	(0.22)	-	(0.73)
Cost of Capital	(0.76)	(1.17)	(1.63)	(1.71)	-	(5.28)
- En route	(0.69)	(1.07)	(1.48)	(1.53)	-	(4.77)
- Terminal	(0.07)	(0.10)	(0.15)	(0.19)	-	(0.51)
Total	(1.40)	(1.70)	(3.40)	(3.78)	-	(10.27)



Over the first 4 years of RP2, 63% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 10.27M€₂₀₀₉ (or 32%) for investments that have not been materialised RP2 to date.

Throughout RP2 to date, actual depreciation was lower than the determined one by $4.25M \in_{2009}$. This was mainly due to delayed investments during RP2.

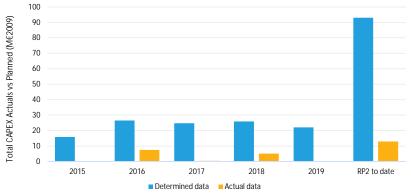
Throughout RP2 to date, Cyprus' cost of capital was 5.28M \in 2009 lower than determined. The actual fixed asset base was lower than planned, causing a reduction in the cost of capital.

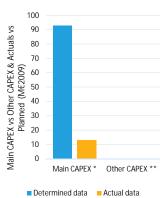


4.2.2 Greece - HCAA

Throughout the RP2 to date, Greece underspent $80.01 \text{M} \in_{2009}$ (-86%) with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-16.49 M \in_{2009}). Greece planned 24 main projects for RP2: eight projects have been completed, 13 have been started (six expected to continue through RP3), two have been replaced and one has been cancelled.

Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	15.81	26.55	24.77	25.85	22.04	92.98
- Main CAPEX *	15.81	26.55	24.77	25.85	22.04	92.98
- % Main into Total CAPEX	100%	100%	100%	100%	-	100%
- Other CAPEX **	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	-	0%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	-	7.52	0.40	5.05	-	12.96
- Main CAPEX	-	7.52	0.40	5.05	-	12.96
- % Main into Total CAPEX	0%	100%	100%	100%	-	100%
- Other CAPEX	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	-	0%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(15.81)	(19.03)	(24.38)	(20.80)	- [(80.01)
- Main CAPEX	(15.81)	(19.03)	(24.38)	(20.80)	-	(80.01)
- Other CAPEX	-	-	-	-	-	
Total CAPEX (%)	-100%	-72%	-98%	-80%	-	-86%
- Main CAPEX (%)	-100%	-72%	-98%	-80%	-	-86%
- Other CAPEX (%)	0%	0%	0%	0%	-	0%





The total capital expenditure to date is $12.96M \in_{2009}$. For RP2 to date, Greece spent $80.01M \in_{2009}$ (-86%) less CAPEX than originally planned. For RP2 to date, there was no other CAPEX planned or invested.

Throughout the period, actual investments have been much lower than initially planned, in every year, 15.81M \in _{2009} less than planned in 2015, 19.03M \in _{2009} less than planned in 2016, 24.38M \in _{2009} less than planned in 2017 and 20.80M \in _{2009} less than planned in 2018

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



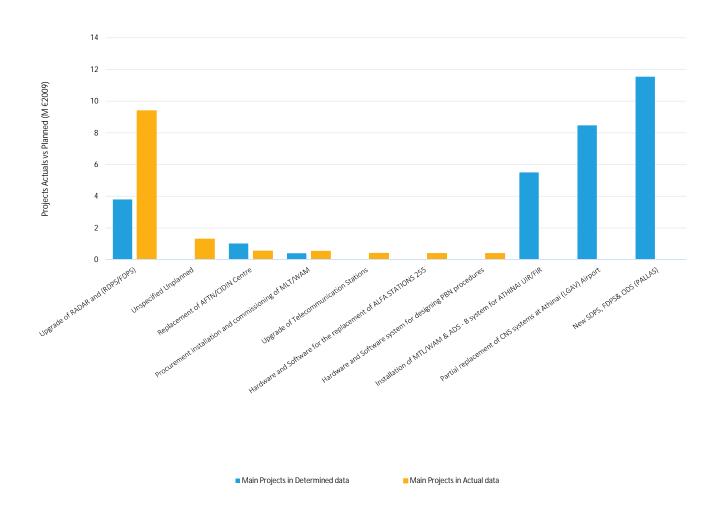
INVESTMENTS PER MAIN PROJECT Greece - HCAA						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 Upgrade of RADAR and (RDPS/FDPS)	3.79	_	_	_	- 1	3.79
2 Unspecified Unplanned	-	_	_	_	_	
3 Replacement of AFTN/CIDIN Centre	1.01	_	-	-	-	1.01
4 Procurement installation and commissioning of MLT/WAM	0.41	_		-	_	0.41
5 Upgrade of Telecommunication Stations	-	_	_	_	_	
6 Hardware and Software for the replacement of ALFA STATIONS 255	-	-	-	-	-	-
7 Hardware and Software system for designing PBN procedures	-	-	-	-	-	-
8 Installation of MTL/WAM & ADS - B system for ATHINAI UIR/FIR	-	1.19	2.17	2.14	1.67	5.51
9 Partial replacement of CNS systems at Athinai (LGAV) Airport	-	1.83	3.34	3.30	2.57	8.47
10 New SDPS, FDPS& ODS (PALLAS)	-	-	-	11.55	11.37	11.55
11 Procurement of 350 VHF transceivers	0.78	1.89	2.05	-	-	4.72
12 Procurement of 40 UHF 100W transceivers	0.37	0.90	0.97	-	-	2.25
13 Procurement of ATIS - VOLMET systems	0.18	0.26	-	-	-	0.44
14 Procurement of MLT system for Athinai (LGAV) Airport	0.61	1.49	1.61	-	-	3.71
15 MLT/WAM and VCS systems for Andravida (LGAD) Airport	-	0.23	0.56	0.60	-	1.39
16 Procurement of MLT/WAM and VCS systems for Chania Airport	0.23	0.56	0.61	-	-	1.40
17 New Tower Simulator	0.34	-	-	-	-	0.34
18 Elementary Mode S Sensor (MSSR/EMS) at Himittos Mountain	0.86	1.24	-	-	-	2.09
19 Replacement of 4 En-route Secondary Surveillance RADAR	-	1.65	3.01	2.97	2.31	7.63
20 Replacement of 4 RADAR (PSR/EMS) for LGTS, LGIR, LGRP and LGKR	-	2.93	5.35	5.28	4.11	13.56
21 Replacement of 6 DVOR, 4 CVOR, 9 DME and 1 ILS	1.26	3.07	3.31	-	-	7.64
22 Replacement of Data and Voice Recorders	0.46	1.13	1.22	-	-	2.81
23 Replacement of five VCS/RCS at LGTS, LGIR, LGRP, LGKR, LGKO	1.34	1.94	-	-	-	3.28
24 Replacement of main VCS/RCS sys of Athinai and Makedonia ACCs	3.94	5.69	-	-	-	9.63
25 Upgrade of AIS system	0.22	0.54	0.58	-	-	1.35
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
" Man 110 Joseph 117 lotter data (110 2009)	2010/1	2010/1	201771	2010/1	2017/1	nii 2 to dato
1 Upgrade of RADAR and (RDPS/FDPS)	-	5.67	-	3.73	-	9.40
2 Unspecified Unplanned	-	1.30	-	-	-	1.30
3 Replacement of AFTN/CIDIN Centre	-	0.54	-	-	-	0.54
4 Procurement installation and commissioning of MLT/WAM	-	-	-	0.54	-	0.54
5 Upgrade of Telecommunication Stations	-	-	0.40	-	-	0.40
6 Hardware and Software for the replacement of ALFA STATIONS 255	-	-	-	0.39	-	0.39
7 Hardware and Software system for designing PBN procedures	-	-	-	0.39	-	0.39
8 Installation of MTL/WAM & ADS - B system for ATHINAI UIR/FIR	-	-	-	-	-	
9 Partial replacement of CNS systems at Athinai (LGAV) Airport	-	-	-	-	-	
10 New SDPS, FDPS& ODS (PALLAS)	-	-	-	-	-	
11 Procurement of 350 VHF transceivers	-	-	-	-	-	-
12 Procurement of 40 UHF 100W transceivers	-	-	-	-	-	
13 Procurement of ATIS - VOLMET systems	-	-	-	-	-	
14 Procurement of MLT system for Athinai (LGAV) Airport	-	-	-	-	-	
15 MLT/WAM and VCS systems for Andravida (LGAD) Airport 16 Procurement of MLT/WAM and VCS systems for Chania Airport	-	-	-	-	-	
17 New Tower Simulator	-		-	-	-	-
18 Elementary Mode S Sensor (MSSR/EMS) at Himittos Mountain		<u> </u>	-	-	-	
19 Replacement of 4 En-route Secondary Surveillance RADAR						
20 Replacement of 4 RADAR (PSR/EMS) for LGTS, LGIR, LGRP and LGKR				_	-	
21 Replacement of 6 DVOR, 4 CVOR, 9 DME and 1 ILS	-	-	-	-	_	
22 Replacement of Data and Voice Recorders	-	_	_	-	-	_
23 Replacement of five VCS/RCS at LGTS, LGIR, LGRP, LGKR, LGKO	-	-	-	-	-	
24 Replacement of main VCS/RCS sys of Athinai and Makedonia ACCs	-	-	-	-	-	-
25 Upgrade of AIS system	-	-	-	-	-	_
					L	



INVESTMENTS PER MAIN PROJECT Greece - HCAA						
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 RP:	2 to date
1 Upgrade of RADAR and (RDPS/FDPS)	(3.79)	5.67	-	3.73	-	5.61
2 Unspecified Unplanned	-	1.30	-	-	-	1.30
3 Replacement of AFTN/CIDIN Centre	(1.01)	0.54	-	-	-	(0.47)
4 Procurement installation and commissioning of MLT/WAM	(0.41)	-	-	0.54	-	0.13
5 Upgrade of Telecommunication Stations	-	-	0.40	-	-	0.40
6 Hardware and Software for the replacement of ALFA STATIONS 255	-	-	-	0.39	-	0.39
7 Hardware and Software system for designing PBN procedures	=	-	-	0.39	-	0.39
8 Installation of MTL/WAM & ADS - B system for ATHINAI UIR/FIR	-	(1.19)	(2.17)	(2.14)	-	(5.51)
9 Partial replacement of CNS systems at Athinai (LGAV) Airport	-	(1.83)	(3.34)	(3.30)	-	(8.47)
10 New SDPS, FDPS& ODS (PALLAS)	-	-	-	(11.55)	-	(11.55)
11 Procurement of 350 VHF transceivers	(0.78)	(1.89)	(2.05)	-	-	(4.72)
12 Procurement of 40 UHF 100W transceivers	(0.37)	(0.90)	(0.97)	-	-	(2.25)
13 Procurement of ATIS - VOLMET systems	(0.18)	(0.26)	-	-	-	(0.44)
14 Procurement of MLT system for Athinai (LGAV) Airport	(0.61)	(1.49)	(1.61)	-	-	(3.71)
15 MLT/WAM and VCS systems for Andravida (LGAD) Airport	=	(0.23)	(0.56)	(0.60)	-	(1.39)
16 Procurement of MLT/WAM and VCS systems for Chania Airport	(0.23)	(0.56)	(0.61)	-	-	(1.40)
17 New Tower Simulator	(0.34)	-	-	-	-	(0.34)
18 Elementary Mode S Sensor (MSSR/EMS) at Himittos Mountain	(0.86)	(1.24)	-	-	-	(2.09)
19 Replacement of 4 En-route Secondary Surveillance RADAR	-	(1.65)	(3.01)	(2.97)	-	(7.63)
20 Replacement of 4 RADAR (PSR/EMS) for LGTS, LGIR, LGRP and LGKR	-	(2.93)	(5.35)	(5.28)	-	(13.56)
21 Replacement of 6 DVOR, 4 CVOR, 9 DME and 1 ILS	(1.26)	(3.07)	(3.31)	-	-	(7.64)
22 Replacement of Data and Voice Recorders	(0.46)	(1.13)	(1.22)	-	-	(2.81)
23 Replacement of five VCS/RCS at LGTS, LGIR, LGRP, LGKR, LGKO	(1.34)	(1.94)	-	-	-	(3.28)
24 Replacement of main VCS/RCS sys of Athinai and Makedonia ACCs	(3.94)	(5.69)	-	-	-	(9.63)
25 Upgrade of AIS system	(0.22)	(0.54)	(0.58)	-	-	(1.35)



INVESTMENTS PER MAIN PROJECT Greece - HCAA



Greece had planned investments for 25 new main projects: only 6 received investments during RP2 with 4 of these not originally planned in the Performance Plan.

During RP2, Greece was set to invest an amount of 13.56M€₂₀₀₉ (15% of the planned budget) in the project "Replacement of 4 RADAR systems". However, Greece reported major shifts and mergers of projects. In fact, a significant share of the investments, namely 9.40M€₂₀₀₉ was allocated to "Upgrade of RADAR and Flight Plans Data Processing System". Another major project of 11.55M€₂₀₀₉ is "Procurement installation and commissioning of a new SDPS, FDPS& ODS (PALLAS)". However, Greece reported that the projects "SDPS/FDPS/ODS", the "VCS/RCS for Athinai and Makedonia ACCs" and the "Replacement of Data and Voice Recorders" will be merged into a single procurement. No investments have been placed so far, as the call for tenders has just been launched.

Note that the graph above presents only 10 projects with the most significant actual investments.

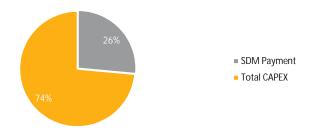


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Greece - HCAA						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	-	1.35	-	-	-	1.35
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	1.35	-	-	-	1.35
SDM Payment	0.82	0.71	1.90	-	-	3.43

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



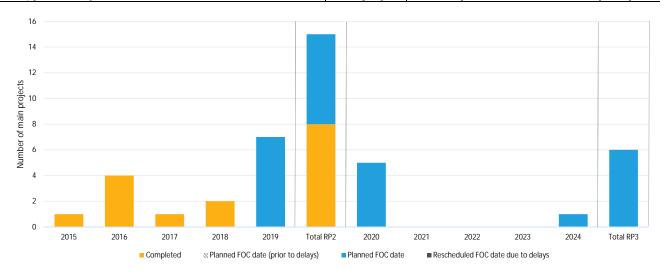
During RP2, Greece received 1.35M \in ₂₀₀₉ of funding, all in 2016. This amount covered 10% of the actual total CAPEX and 0.04 % of the planned one. However, the total SDM Payment presents funding of 3.43M \in ₂₀₀₉ for the period 2015-2017.

No clear information with regards to the source of the funding has been provided.



EXPECTED BEINEFIT PER P	KOJECT GIEECE - HCA	A.

# Main Projects	Status in 2018	FOC date*	Expe	ected be	nefit per	· KPA	PCP	NOP
· Man 115,000	010100 111 2010	100 0010						.101
			SAF	ENV	CAP	CEF		
1 Upgrade of RADAR and (RDPS/FDPS)	Completed	2016	Х	Х	х	Х		Х
2 Unspecified Unplanned		-	-	-	-	-	-	-
3 Replacement of AFTN/CIDIN Centre	Completed	2018	Х			Х		
4 Procurement installation and commissioning of MLT/WAM	Completed	2016	Х	Х	Х			
5 Upgrade of Telecommunication Stations	Ongoing	2019	Х	Х	Х	Х		
6 Hardware and Software for the replacement of ALFA STATIONS 255	Completed	2015	Х			Х		
7 Hardware and Software system for designing PBN procedures	Ongoing	2019	Х	Х	Х	Х		Х
8 Installation of MTL/WAM & ADS - B system for ATHINAI UIR/FIR	Ongoing	2020	Х	Х	Х			İ
9 Partial replacement of CNS systems at Athinai (LGAV) Airport	Ongoing	2020	Х	Х	Х	Х		
10 New SDPS, FDPS& ODS (PALLAS)	Ongoing	2024	Х	Х	Х	Х		
11 Procurement of 350 VHF transceivers	Completed	2017	Х	Х	Х	Х		
12 Procurement of 40 UHF 100W transceivers	Ongoing	2019	Х		Х	Х		
13 Procurement of ATIS - VOLMET systems	Completed	2016	Х			Х		
14 Procurement of MLT system for Athinai (LGAV) Airport	Ongoing	2020	Х	Х	Х	Х		
15 MLT/WAM and VCS systems for Andravida (LGAD) Airport	Replaced	-	Х	Х	Х			Х
16 Procurement of MLT/WAM and VCS systems for Chania Airport	Replaced	-	Х	Х	Х	Х		Х
17 New Tower Simulator	Completed	2018	Х					
18 Elementary Mode S Sensor (MSSR/EMS) at Himittos Mountain	Ongoing	2019	Х	Х	Х	Х		
19 Replacement of 4 En-route Secondary Surveillance RADAR	Ongoing	2019	Х	Х		Х		
20 Replacement of 4 RADAR (PSR/EMS) for LGTS, LGIR, LGRP and LGKR	Ongoing	2019	Х	Х	Х	Х		
21 Replacement of 6 DVOR, 4 CVOR, 9 DME and 1 ILS	Ongoing	2020	Х	Х	Х	Х		
22 Replacement of Data and Voice Recorders	Cancelled	-						
23 Replacement of five VCS/RCS at LGTS, LGIR, LGRP, LGKR, LGKO	Ongoing	2020	Х	Х	Х	Х		Х
24 Replacement of main VCS/RCS sys of Athinai and Makedonia ACCs	Completed	2016				Х		Х
25 Upgrade of AIS system	Ongoing	2019	Х	•	•	,		



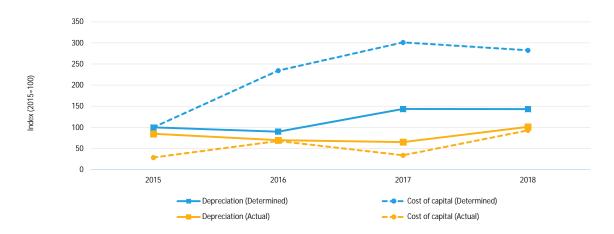
Greece planned 24 main projects for RP2: eight projects have been completed, 13 have been started (six expected to continue through RP3), two have been replaced and one has been cancelled.

The reported projects are expected to enhance all four performance areas, with safety (22 out of 25) and cost efficiency (19 out of 25) as the priorities.

None of the projects are reported to be linked to the Pilot Common Project. Six projects were included in the Network Operations Plan.



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Greece - H	CAA					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	3.72	3.34	5.34	5.32	10.07	17.72
- En route	3.65	3.27	4.81	4.80	8.31	16.53
- Terminal	0.07	0.07	0.53	0.52	1.76	1.19
Cost of Capital	1.54	3.62	4.65	4.36	6.70	14.16
- En route	1.41	3.28	3.89	3.80	5.48	12.38
- Terminal	0.13	0.33	0.76	0.56	1.22	1.78
<u>Total</u>	5.26	6.96	9.99	9.68	16.77	31.88
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	3.15	2.59	2.43	3.77	-1	11.94
- En route	3.15	2.59	2.43	3.70	-	11.87
- Terminal	-	-	-	0.07	-	0.07
Cost of Capital	0.44	1.05	0.53	1.43	-	3.45
- En route	0.44	1.05	0.53	1.39	-	3.41
- Terminal	-	-	-	0.04	-	0.04
Total	3.59	3.64	2.96	5.20	-	15.39
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.57)	(0.75)	(2.91)	(1.55)	- [(5.78)
- En route	(0.50)	(0.68)	(2.38)	(1.10)	-	(4.66)
- Terminal	(0.07)	(0.07)	(0.53)	(0.45)	-	(1.12)
Cost of Capital	(1.10)	(2.57)	(4.12)	(2.92)	-	(10.71)
- En route	(0.97)	(2.24)	(3.36)	(2.41)	-	(8.97)
- Terminal	(0.13)	(0.33)	(0.76)	(0.52)	-	(1.74)
Total	(1.67)	(3.32)	(7.03)	(4.47)	-	(16.49)



Over the first 4 years of RP2, 86% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 16.49M \in 2009 (or 52%) for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 5.78M€₂₀₀₉. This was due to reallocation of investments and the downtrend in project implementation. In fact, the determined depreciation was planned to increase from 2016 to 2019, as the projects starting at the beginning of RP2 (or even in RP1) should have already been completed by the end of the period. However, the low completion rate of 6 projects resulted in lower than anticipated depreciation, which only increased as of 2017.

Throughout RP2 to date, the actual cost of capital was lower than the determined one by 10.71M€₂₀₀₉. This was caused by lower than expected investments during RP2, resulting in lower assets. In fact, the determined cost of capital was planned to significantly increase from 2015 to 2017. As above, the low completion rate caused the decrease in actual cost of capital in 2017.

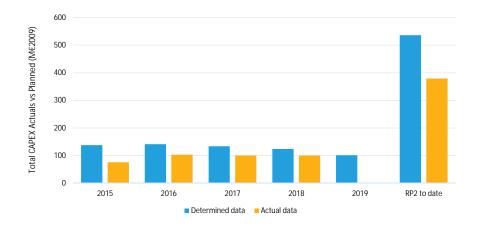


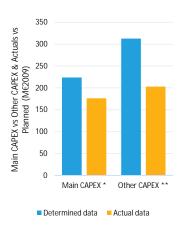
4.2.3 Italy - ENAV

- Other CAPEX (%)

Throughout the RP2 to date, Italy underspent 157.07M \in 2009 with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-52.37M \in 2009). Italy planned 56 main projects for RP2: four projects have been completed, two have been delayed, 50 have been started, one of which continues from RP1 and 42 are expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	137.75	141.41	133.46	123.67	101.19	536.30
- Main CAPEX *	37.57	67.31	66.72	52.23	34.46	223.84
- % Main into Total CAPEX	27%	48%	50%	42%	34%	42%
- Other CAPEX **	100.18	74.10	66.74	71.44	66.74	312.45
- % Other into Total CAPEX	73%	52%	50%	58%	66%	58%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	75.77	103.10	100.30	100.07	- [379.23
- Main CAPEX	21.97	53.65	46.88	53.65	-	176.16
- % Main into Total CAPEX	29%	52%	47%	54%	-	46%
- Other CAPEX	53.80	49.44	53.42	46.42	-	203.08
- % Other into Total CAPEX	71%	48%	53%	46%	-	54%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(61.99)	(38.31)	(33.16)	(23.60)	- [(157.07)
- Main CAPEX	(15.60)	(13.66)	(19.85)	1.42	-	(47.69)
- Other CAPEX	(46.39)	(24.65)	(13.32)	(25.02)	-	(109.38)
Total CAPEX (%)	-45%	-27%	-25%	-19%	-	-29%
- Main CAPEX (%)	-42%	-20%	-30%	3%	-	-21%





-50%

-33%

-52%

-62%

The total capital expenditure to date is 379.23M \in_{2009} . For RP2 to date, Italy spent 157.07M \in_{2009} less CAPEX than originally planned. For RP2 to date, the main CAPEX is 21% lower than planned and the other CAPEX is 50% lower than planned.

Italy invested less than initially planned, in every year of RP2 to date, 61.99M€2009 less in 2015, 38.31M€2009 less in 2016, 33.16M€2009 less in 2017 and 23.60M€2009 less in 2018.

-50%

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



·						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
1 4Flight	2.71	17.97	40.99	28.28	17.68	89.95
2 COFLIGHT	3.58	8.20	7.00	7.53	0.76	26.32
3 Datalink 2000+ implementation (phase 2)	11.50	14.44	0.01	-	-	25.95
4 Deconflicting Tools	5.19	4.54	1.32	-	-	11.06
5 ENET	4.19	7.24	1.49	0.64	0.71	13.56
6 Ground-ground and air-ground phone comm. Adapt. to VoIP	0.61	1.21	1.40	1.20	1.51	4.42
7 New TWR system architecture	1.81	0.89	1.70	1.78	1.05	6.19
8 TBT 8.33 KH completion below FL195	0.80	1.23	1.73	1.91	2.94	5.65
9 New SMR and new data fusion system at Milano Linate	1.26	1.03	0.40	-	-	2.70
10 BT Genova	=	-	-	-	-	
11 Oracle license upgrade	-	-	-	-	-	
12 ENET Completion	0.04	1.51	3.21	2.51	1.21	7.28
13 AIDA	1.26	1.61	0.97	0.26	-	4.10
14 Free Route	-	-	-	-	-	
15 ASMGCS Level 2	0.74	1.96	2.50	2.83	2.08	8.03
16 Allestimento TWR/BT Treviso	-	- 0.40	-	- 0.05	-	4.0
17 NOAS (New Operational Area System)	0.48	0.48	0.24	0.05	- 0.44	1.24
18 New SMR at Milano Malpensa	0.10	0.72	0.69	0.36	0.16	1.87
19 New SMR at Roma Fiumicino	0.19	0.72	0.80	1.12	1.10	2.83
20 Mode S Radar Plan	0.42	0.62	0.62	0.96	1.43	2.62
21 A-CDM	0.39	0.02	-	-	-	0.41
22 Radioassistenze APT	-	-	-	-	-	
23 Nuovi sistemi di supervisione	- 0.10	- 0.47	- 0.44	- 0.00	- 0.00	1.00
24 ADS-B completion25 Accesso WEB alle informazioni aeronautiche (Self Briefing)	0.12 0.73	0.47	0.41	0.23	0.09	1.23
26 Nuove dotazioni informatiche utente	0.73	0.04	0.07	0.03		1.47
27 Consolidamenti APP/ACC	<u>-</u>			<u> </u>	-	
28 Sistema di configurazione logistica	<u> </u>				-	
29 Automated ENV data interchange						
30 ADQ	0.36	0.32	0.13			0.81
31 Revisione Radar ERR	-	-	-	_	_	0.01
32 Radioassistenze Rotta	-	_	_	_	_	
33 Prodotti publishing	-	-	-	-	-	
34 Software analisi safety	-	-	-	-	-	-
35 eTOD	0.65	0.50	0.28	0.07	-	1.50
36 Remote tower	-	-	-	-	-	
37 OOCC TWR Rimini	-	-	-	-	-	
38 Evoluzione rete ENET	-	-	-	-	-	
39 Applicazioni SIO	-	-	-	-	-	
40 Interventi di adeguamento ed ottimizzazione energetica edifici	-	-	-	-	-	
41 Adeguamenti TBT 8,33 KHz	-	-	-	-	-	
42 Multilateration System (Venezia)	80.0	0.43	0.40	0.19	0.09	1.10
43 Nuova Sala apparati TWR Linate	-	-	-	-	-	
44 AMHS	-	-	-	-	-	
45 Completamenti Data Link	-	-	-	-	-	
46 Mezzi mobili di controllo Navaids	-	-	-	-	-	
47 Adeguamento infrastrutturale ACC Linate	-	-	-	-	-	
48 ENET 2 site preparation 49 TWR e BT Pantelleria	-	-	-	-	-	•
50 Ammodernamento AWOS		-	-	-	-	
51 Nuovo ACC Milano	<u>.</u>	<u> </u>	<u> </u>	<u> </u>	-	
52 Ristrutturazione Garage SDC	-			-	-	
53 Traffic complexity tool	<u> </u>			-		
54 Airport Safety Nets/A-SMGCS Integration	<u> </u>			1.22	1.79	1.22
55 DMAN	<u> </u>	-	0.09	1.07	1.79	1.16
56 P-RNAV navigation support tools	0.36	0.55	0.09	1.07	1.00	1.18



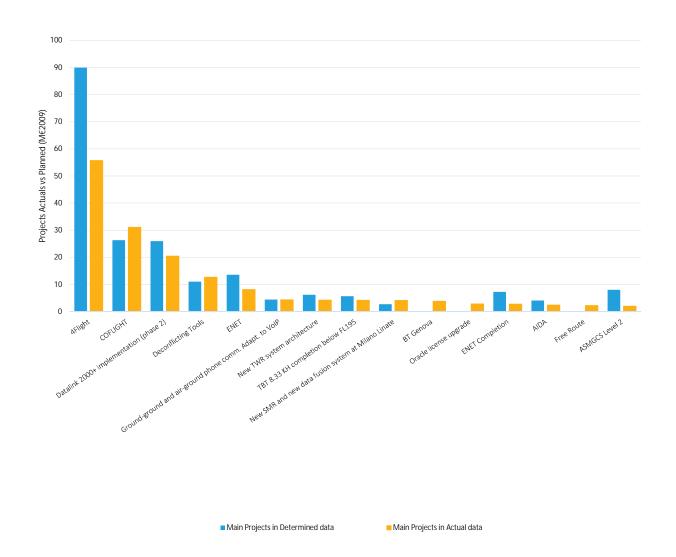
INV	ESTMENTS PER MAIN PROJECT Italy - ENAV						
#	Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1	4Flight	0.41	17.77	21.42	16.10	-1	55.71
2	COFLIGHT	0.79	11.43	9.05	9.84	-	31.11
3	Datalink 2000+ implementation (phase 2)	2.27	7.33	4.48	6.38	-	20.47
4	Deconflicting Tools	5.92	2.41	2.20	2.17	-	12.70
5	ENET	1.54	3.16	2.34	1.09	-	8.13
6	Ground-ground and air-ground phone comm. Adapt. to VoIP	3.22	0.84	0.24	0.07	-	4.37
7	New TWR system architecture	0.03	0.41	0.69	3.14	-	4.27
8	TBT 8.33 KH completion below FL195	0.54	1.73	0.24	1.71	-	4.22
	New SMR and new data fusion system at Milano Linate	2.43	0.39	1.01	0.31	-	4.13
	BT Genova	-	0.29	1.02	2.56	-	3.86
11	1 3	-	1.97	0.04	0.84	-	2.84
	ENET Completion	1.28	0.06	0.47	0.98	-	2.79
	AIDA	1.50	0.60	0.35	-	-	2.45
	Free Route	-	1.19	0.17	0.87	-	2.23
	ASMGCS Level 2	0.87	0.08	0.40	0.67	-	2.02
	Allestimento TWR/BT Treviso NOAS (New Operational Area System)	0.78	0.78 0.89	0.23	0.81	-	1.83
			0.89	1 20	- 0.10	-	1.67
	New SMR at Milano Malpensa	-		1.28	0.12	-	1.47
	New SMR at Roma Fiumicino	-	0.00	0.06	1.18	-	1.24
	Mode S Radar Plan	-	0.63	0.25	0.15	-	1.03
	A-CDM Radioassistenze APT	-	0.22	0.21	0.23	-	0.66
	Nuovi sistemi di supervisione	-	- 0.04	0.02	0.64	-	0.64 0.56
	ADS-B completion	0.08	0.04 0.17	0.02	0.50	-	0.56
	Accesso WEB alle informazioni aeronautiche (Self Briefing)	0.08	0.17	0.19	0.10		0.50
	Nuove dotazioni informatiche utente	0.20	0.12	0.10	0.23		0.46
27					0.45	_	0.45
	Sistema di configurazione logistica	_	_	0.06	0.39	_	0.45
	Automated ENV data interchange	-	-	0.07	0.33	-	0.40
	ADQ	-	0.31	0.04	0.04	-	0.39
31	Revisione Radar ERR	-	-	0.03	0.35	-	0.38
32	Radioassistenze Rotta	-	-	-	0.33	-	0.33
33	Prodotti publishing	-	-	-	0.32	-	0.32
	Software analisi safety	-	0.21	0.05	-	-	0.26
	eTOD	-	0.22	-	-	-	0.22
	Remote tower	-	-	-	0.20	-	0.20
37	OOCC TWR Rimini	-	0.09	0.01	0.03	-	0.12
	Evoluzione rete ENET	-	-	-	0.11	-	0.11
	Applicazioni SIO	-	-	-	0.11	-	0.11
	Interventi di adeguamento ed ottimizzazione energetica edifici	-	-	0.03	80.0	-	0.11
	Adeguamenti TBT 8,33 KHz	0.05	-	0.01	0.09	-	0.09
	Multilateration System (Venezia) Nuova Sala apparati TWR Linate	0.05	0.03	0.01	0.01	-	0.05
	AMHS	-	0.03	0.02	0.01	-	0.05
	Completamenti Data Link	-	0.00	0.03	0.04	-	0.03
	Mezzi mobili di controllo Navaids	-	-	0.03	0.04	-	0.04
	Adeguamento infrastrutturale ACC Linate	<u>-</u>		0.00	0.00	-	0.04
	ENET 2 site preparation	-	-	-	0.02	-	0.02
	TWR e BT Pantelleria	-	-	-	0.01	-	0.01
	Ammodernamento AWOS	-	_	_	0.00	-	0.00
	Nuovo ACC Milano	-	-	-	0.00	-	0.00
52	Ristrutturazione Garage SDC	-	-	-	0.00	-	0.00
53	Traffic complexity tool	-	-	-	0.00	-	0.00
	Airport Safety Nets/A-SMGCS Integration	-	-	-			
	DMAN	-	-	-	-	-	-
56	P-RNAV navigation support tools PENS	-	-	-	-	-	-
		-	(0.00)				(0.00)



4Flight COFLIGHT Datalink 2000+ implementation (phase 2) Deconflicting Tools ENET Ground-ground and air-ground phone comm. Adapt. to VoIP New TWR system architecture TBT 8.33 KH completion below FL195 New SMR and new data fusion system at Milano Linate BT Genova Oracle license upgrade ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(2.30) (2.80) (9.23) 0.72 (2.66) 2.61 (1.78) (0.26) 1.17	(0.20) 3.23 (7.11) (2.13) (4.08) (0.37) (0.48) 0.51	(19.58) 2.05 4.47 0.88 0.86 (1.16)	(12.17) 2.31 6.38 2.17 0.45	-	(34.2
COFLIGHT Datalink 2000+ implementation (phase 2) Deconflicting Tools ENET Ground-ground and air-ground phone comm. Adapt. to VoIP New TWR system architecture TBT 8.33 KH completion below FL195 New SMR and new data fusion system at Milano Linate BT Genova Oracle license upgrade ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(2.80) (9.23) 0.72 (2.66) 2.61 (1.78) (0.26) 1.17	3.23 (7.11) (2.13) (4.08) (0.37) (0.48) 0.51	2.05 4.47 0.88 0.86 (1.16)	2.31 6.38 2.17 0.45	-	4.7
Datalink 2000+ implementation (phase 2) Deconflicting Tools ENET Ground-ground and air-ground phone comm. Adapt. to VoIP New TWR system architecture TBT 8.33 KH completion below FL195 New SMR and new data fusion system at Milano Linate BT Genova Oracle license upgrade ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(9.23) 0.72 (2.66) 2.61 (1.78) (0.26) 1.17	(7.11) (2.13) (4.08) (0.37) (0.48) 0.51	4.47 0.88 0.86 (1.16)	6.38 2.17 0.45	-	/_
Deconflicting Tools ENET Ground-ground and air-ground phone comm. Adapt. to VoIP New TWR system architecture TBT 8.33 KH completion below FL195 New SMR and new data fusion system at Milano Linate BT Genova Oracle license upgrade ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	0.72 (2.66) 2.61 (1.78) (0.26) 1.17	(2.13) (4.08) (0.37) (0.48) 0.51	0.88 0.86 (1.16)	2.17 0.45		(5.4
ENET Ground-ground and air-ground phone comm. Adapt. to VoIP New TWR system architecture TBT 8.33 KH completion below FL195 New SMR and new data fusion system at Milano Linate BT Genova Oracle license upgrade ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(2.66) 2.61 (1.78) (0.26) 1.17	(4.08) (0.37) (0.48) 0.51	0.86 (1.16)	0.45	- 1	1.6
New TWR system architecture TBT 8.33 KH completion below FL195 New SMR and new data fusion system at Milano Linate BT Genova Oracle license upgrade ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	2.61 (1.78) (0.26) 1.17	(0.48) 0.51	(1.16)		-	(5.4
TBT 8.33 KH completion below FL195 New SMR and new data fusion system at Milano Linate BT Genova Oracle license upgrade ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(0.26) 1.17 -	0.51	(4.04)	(1.13)	-	(0.0
New SMR and new data fusion system at Milano Linate DBT Genova Oracle license upgrade EENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	1.17		(1.01)	1.36	-	(1.9
Oracle license upgrade PENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	-		(1.48)	(0.20)	-	(1.4
Oracle license upgrade E ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	-	(0.64)	0.60	0.31	-	1.
E ENET Completion AIDA Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente		0.29	1.02	2.56	-	3.
3 AIDA 4 Free Route 5 ASMGCS Level 2 6 Allestimento TWR/BT Treviso 7 NOAS (New Operational Area System) 8 New SMR at Milano Malpensa 9 New SMR at Roma Fiumicino 9 Mode S Radar Plan A-CDM 1 Radioassistenze APT 1 Nuovi sistemi di supervisione 1 ADS-B completion 1 Accesso WEB alle informazioni aeronautiche (Self Briefing) 1 Nuove dotazioni informatiche utente		1.97	0.04	0.84	-	2.
Free Route ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	1.24	(1.45)	(2.74)	(1.53)	-	(4.
ASMGCS Level 2 Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	0.24	(1.01)	(0.62)	(0.26)	-	(1.
Allestimento TWR/BT Treviso NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	<u>-</u>	1.19	0.17	0.87	-	2.
NOAS (New Operational Area System) New SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	0.13	(1.88)	(2.10)	(2.16)		(6.
Rew SMR at Milano Malpensa New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente		0.78	0.23	0.81	-	1
New SMR at Roma Fiumicino Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	0.30	0.41	(0.24)	(0.05)		0
Mode S Radar Plan A-CDM Radioassistenze APT Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(0.10)	(0.65)	0.59	(0.24)	-	(0
A-CDM P. Radioassistenze APT Radioassistenze APT Radioassistemi di supervisione RADS-B completion RACCESSO WEB alle informazioni aeronautiche (Self Briefing) Ruove dotazioni informatiche utente	(0.19)	(0.72)	(0.74)	0.06	-	(1
Radioassistenze APT Reliance Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(0.42)	0.00	(0.36)	(0.81)	-	(1
Nuovi sistemi di supervisione ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	(0.39)	0.20	0.21	0.23	-	0
ADS-B completion Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	-	-	-	0.64	-	0
Accesso WEB alle informazioni aeronautiche (Self Briefing) Nuove dotazioni informatiche utente	- (0.05)	0.04	0.02	0.50	-	0
Nuove dotazioni informatiche utente	(0.05)	(0.30)	(0.22)	(0.14)	-	(0
	(0.45)	(0.44)	(0.07)	(0.01)		(0
CONSOLIDAMENTI APPIACC	-	0.12	0.10	0.23		0
Sistema di configurazione logistica	-	-	- 0.04	0.45	-	0
Automated ENV data interchange	-	-	0.06	0.39	-	0
Automated Livy data interchange	(0.36)	(0.01)	(0.10)	0.04		(0
Revisione Radar ERR	(0.30)	(0.01)	0.03	0.35	-	0
Radioassistenze Rotta		_	-	0.33	_	0
Prodotti publishing	-	_		0.32	_	0
Software analisi safety	_	0.21	0.05		-	0
is eTOD	(0.65)	(0.28)	(0.28)	(0.07)	_	(1
Remote tower	-	-	-	0.20	_	0
OOCC TWR Rimini	-	0.09	0.01	0.03	-	0
Evoluzione rete ENET	-	-	-	0.11	-	0
Applicazioni SIO	-	-	-	0.11	-	0
Interventi di adeguamento ed ottimizzazione energetica edifici	-	-	0.03	0.08	-	0
Adeguamenti TBT 8,33 KHz	-	-	-	0.09	-	0
Multilateration System (Venezia)	(0.03)	(0.43)	(0.40)	(0.19)	-	(1
Nuova Sala apparati TWR Linate		0.03	0.02	0.01	-	0
AMHS	-	0.00	0.05	-	-	0
Completamenti Data Link	-	-	-	0.04	-	0
Mezzi mobili di controllo Navaids	-	-	0.03	0.00	-	0
Adeguamento infrastrutturale ACC Linate	-	-	0.00	0.02	-	0
B ENET 2 site preparation	-	-		0.02	-	0
TWR e BT Pantelleria	-	-		0.01	-	0
Ammodernamento AWOS	-	-	-	0.00		0
Nuovo ACC Milano	-	-		0.00	-	0
? Ristrutturazione Garage SDC	-	-	-	0.00	-	0
3 Traffic complexity tool	-	-	-	0.00	- 1	0
Airport Safety Nets/A-SMGCS Integration						
DMAN	-	-	-	(1.22)	-	(1
p P-RNAV navigation support tools 7 PENS	(0.36)	(0.55)	(0.09) (0.27)		-	(1 (1 (1



INVESTMENTS PER MAIN PROJECT Italy - ENAV



RP2 to date, the major project "4flight" received the actual investment that was originally planned in the Performance Plan. The project "COFLIGHT" received more investments than initially planned, resulting in a total investment of $31M\epsilon_{2009}$, with $4.79M\epsilon_{2009}$ overspent. Other important projects like "Datalink 2000+ implementation", "Deconflicting Tools" and "ENET" received only 12%, 7% and 5% of the investments expected.

Note that the graph above presents only 15 projects with the most significant actual investments.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Italy - ENAV						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	-	9.83	10.42	-	-	20.24
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	9.83	10.42	-	-	20.24
SDM Payment	7.18	2.47	19.88	-	-	29.52

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



During RP2, Italy reported 20.24M \in 2009 of funding. The funding was received over the course of 2017 and 2018, covering 5% of the actual total CAPEX.

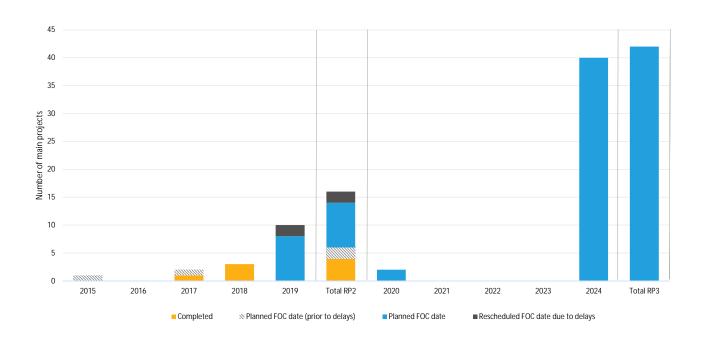
The amount of funding reported in the Monitoring Report is lower than the one reported in the SDM Payment due to a possible mismatch in payments.



#	Main Projects	Status in 2018	FOC date*	date* Expected benefit per KPA					NO
				SAF	ENV	CAP	CEF		
1	4Flight	Ongoing	2024	X	Х	Х	Х	х	х
	COFLIGHT	Ongoing	2024	Х	Х	Х	Х	Х	
3	Datalink 2000+ implementation (phase 2)	Ongoing	2019	Х			Х	Х	
4	Deconflicting Tools	Completed	2018	Х		Х		Х	
-	ENET	Ongoing	2024			Х	Х	Х	
	Ground-ground and air-ground phone communication adaptation to VoIP	Ongoing	2024	Х			Х	<u> </u>	
	New TWR system architecture	Ongoing	2020	Х			Х	Х	<u> </u>
	TBT 8.33 KH completion below FL195	Ongoing	2020			Х		<u> </u>	
	New SMR and new data fusion system at Milano Linate	Ongoing	2019	Х	Х	Х		<u> </u>	
	BT Genova	Ongoing	2024						<u> </u>
	Oracle license upgrade	Ongoing	2024						<u> </u>
	ENET Completion	Ongoing	2019			Х	Х	Х	<u> </u>
	AIDA	Completed	2018	Х	Х				
	Free Route	Ongoing	2024					 	2
	ASMGCS Level 2	Ongoing	2024	Х		Х		 	1
	Allestimento TWR/BT Treviso	Ongoing	2024					<u> </u>	<u> </u>
	NOAS (New Operational Area System)	Completed	2018	Х				<u> </u>	1
18	New SMR at Milano Malpensa	Ongoing	2019	Х	х	Х		Х	1
19	New SMR at Roma Fiumicino	Ongoing	2019	Х	Х	Х		Х	
20	Mode S Radar Plan	Ongoing	2024	Х		Х			
21	A-CDM	Ongoing	2019		Х	Х		Х	
22	Radioassistenze APT	Ongoing	2024						
23	Nuovi sistemi di supervisione	Ongoing	2024						
	ADS-B completion	Ongoing	2019	Х		Х			
25	Accesso WEB alle informazioni aeronautiche (Self Briefing)	Ongoing	2024	Х			Х	Х	
26	Nuove dotazioni informatiche utente	Ongoing	2024						
	Consolidamenti APP/ACC	Ongoing	2024						
	Sistema di configurazione logistica	Ongoing	2024						
	Automated ENV data interchange	Ongoing	2024						
-	ADQ	Ongoing	2019	Х				Х	
_	Revisione Radar ERR	Ongoing	2024					ļ	
	Radioassistenze Rotta	Ongoing	2024					ļ	
	Prodotti publishing	Ongoing	2024					ļ	
	Software analisi safety	Completed	2017						<u> </u>
	eTOD	Ongoing	2024	Х					<u> </u>
-	Remote tower	Ongoing	2024					 	<u> </u>
	OOCC TWR Rimini	Ongoing	2024					 	<u> </u>
	Evoluzione rete ENET	Ongoing	2024					 	₽
	Applicazioni SIO	Ongoing	2024					₩	
	Interventi di adeguamento ed ottimizzazione energetica edifici	Ongoing	2024					 	₽
	Adeguamenti TBT 8,33 KHz	Ongoing	2024					₩	
	Multilateration System (Venezia)	Ongoing	2024	Х	Х	Х		Х	₩
_	Nuova Sala apparati TWR Linate	Ongoing	2024					₩	₩
	AMHS Completementi Deta Link	Ongoing	2024	Х			Х	₩	₩
	Completamenti Data Link Mazzi mobili di controllo Navaido	Ongoing	2024					+	₩
	Mezzi mobili di controllo Navaids Adequamento infrastrutturale ACC Linate	Ongoing Ongoing	2024 2024					+	┢
	ENET 2 site preparation	Ongoing	2024					+-	\vdash
	TWR e BT Pantelleria	Ongoing	2024					+	+
	Ammodernamento AWOS	Ongoing	2024					+	╁
	Nuovo ACC Milano	Ongoing	2024					+-	\vdash
	Ristrutturazione Garage SDC	Ongoing	2024					+-	+
	Traffic complexity tool	Ongoing	2024					+-	+
	Airport Safety Nets/A-SMGCS Integration	Ongoing	2024	v	v	v	v		\vdash
_	DMAN	Delayed	2024	X	X	X	X	X	┢
	P-RNAV navigation support tools	1		X	X	Х	Х	Х	₩
	E-KINAV HAVIDAHOH SUDDOLI 100IS	Delayed	2024	Х	Х			1	1



EXPECTED BENEFIT PER PROJECT Italy - ENAV



Italy planned 56 main projects for RP2: four projects have been completed, two have been delayed, 50 have been started, one of which continues from RP1 and 42 are expected to continue through RP3.

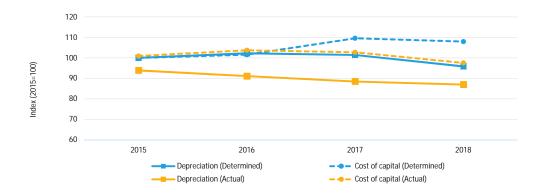
Limited information was available regarding the start and the end dates of the projects. Furthermore, many projects were 'unplanned' and no clear indication regarding their impact on the key performance areas was provided. To avoid confusion, the year of investment was considered as the start date, and the year 2024 was used as the foreseen completion date.

Projects with data available are expected to have a positive impact on "safety"; however, most of the information regarding other performance areas is missing.

The actual investment in RP2 to date for the 16 projects linked to the Pilot Common Project amounts to 136.72M \in ₂₀₀₉. This amount represents 36% of the actual total CAPEX. Three projects were included in the Network Operations Plan.



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Italy - ENA	\V					
INVESTIVIENTS VS DEFRECIATION AND GOST OF CAPITAL ITALY - ENA	· v					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	114.75	117.34	116.33	109.99	104.63	458.40
- En route	95.61	98.15	97.42	90.96	85.57	382.14
- Terminal	19.13	19.19	18.91	19.03	19.05	76.26
Cost of Capital	53.79	54.62	58.93	58.06	57.15	225.40
- En route	45.48	44.99	48.76	48.04	47.29	187.28
- Terminal	8.30	9.63	10.17	10.02	9.86	38.13
Total	168.53	171.96	175.26	168.05	161.77	683.80
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	107.74	104.52	101.54	99.83	-	413.63
- En route	89.27	86.74	84.43	83.70	-	344.13
- Terminal	18.47	17.78	17.12	16.13	-	69.50
Cost of Capital	54.29	55.79	55.24	52.47	-	217.79
- En route	45.91	45.95	43.69	42.23	-	177.79
- Terminal	8.38	9.84	11.55	10.24	-	40.01
Total	162.03	160.32	156.78	152.30	-	631.43
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(7.01)	(12.82)	(14.78)	(10.15)	- [(44.76
- En route	(6.34)	(11.41)	(12.99)	(7.26)	-	(38.01
- Terminal	(0.66)	(1.40)	(1.79)	(2.90)	-	(6.76
Cost of Capital	0.50	1.17	(3.69)	(5.59)	-	(7.61
- En route	0.42	0.96	(5.07)	(5.81)	-	(9.49
- Terminal	0.08	0.21	1.38	0.22	-	1.88
Total	(6.51)	(11.65)	(18.47)	(15.74)	-	(52.37



Over the first 4 years of RP2, 29% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed $52.37M \in_{2009}$ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 44.76M \in _{2009</sub>. This was due to the negative evolution of traffic (reduction in SUs), which forced the rationalisation of the spending pattern. Italy requested and obtained a reduction in costs of supplies and equipment for air traffic control. This cost reduction had a ripple effect throughout RP2 leading to a substantial decrease in the depreciation. Furthermore, changes in management structure in 2015 caused delays in project implementation, resulting in a lower depreciation. These delays on project implementation should be rebalanced by the end of RP2 (2019).

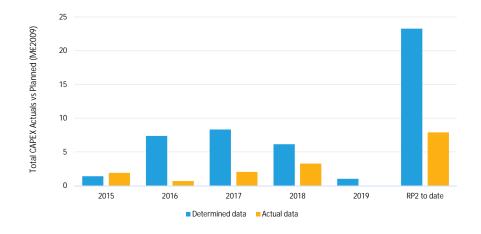
Throughout RP2 to date, the actual cost of capital was $7.61\text{M} \in \{2009\}$ lower than determined. This was due to a significant reduction in the actual net book value of fixed assets compared to the determined values from 2017 to 2018 (a reduction of 154.51M $\in \{2009\}$ in 2017 and 208.14M $\in \{2009\}$ in 2018).

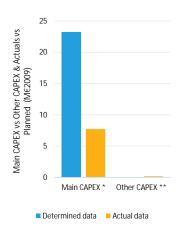


4.2.4 Malta - MATS

Throughout the RP2 to date, Malta underspent 15.36M€₂₀₀₉ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-2.44M ϵ_{2009}). Malta planned 42 main projects for RP2: 26 projects have been completed, ten have been started and six have been delayed with no clear indication as to when.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	1.41	7.38	8.33	6.14	1.03	23.27
- Main CAPEX *	1.41	7.38	8.33	6.14	1.03	23.27
- % Main into Total CAPEX	100%	100%	100%	100%	100%	100%
- Other CAPEX **	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	0%	0%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	1.90	0.70	2.03	3.27	-	7.91
- Main CAPEX	1.73	0.70	2.03	3.27	-	7.73
- % Main into Total CAPEX	91%	100%	100%	100%	-	98%
- Other CAPEX	0.17	-	-	-	-	0.17
- % Other into Total CAPEX	9%	0%	0%	0%	-	2%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	0.49	(6.68)	(6.29)	(2.87)	-	(15.36)
- Main CAPEX	0.32	(6.68)	(6.29)	(2.87)	-	(15.53)
- Other CAPEX	0.17	-	-	-	-	0.17
Total CAPEX (%)	35%	-90%	-76%	-47%	-	-66%
- Main CAPEX (%)	22%	-90%	-76%	-47%	-	-67%
- Other CAPEX (%)	_	-	-	-	-	-





The total capital expenditure to date is 7.91M€₂₀₀₉. For RP2 to date, Malta spent 15.36M€₂₀₀₉ more CAPEX than originally planned. For RP2 to date, the main CAPEX is 66% lower than planned; other CAPEX is 0.17M€₂₀₀₉ higher, as no other CAPEX was originally planned.

In 2015, Malta spent 0.49M€2009 more than planned. For 2016, 2017 and 2018, Malta underspent 6.68M€2009, 6.29M€2009 and 2.87M€2009, respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

** Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



1 Enroute PSR + WCL 2 Integrated datalink system 3 MNET 4 Redesign of Tower backup power system	-					
2 Integrated datalink system 3 MNET	-	0.88	1.73	_	<u>.</u> l	2.60
3 MNET			-	_	-	2.00
	0.09	0.18	0.09		_	0.35
	0.22	0.10	-	-	_	0.44
5 IT Hardware & Software Upgrades	0.22	0.06		0.03	0.03	0.4
6 AMHS	- 0.11	0.26		- 0.03	0.00	0.20
7 NCSS - Ground Movement	0.09	0.09	0.09	_	-	0.20
8 DME	0.18	-	-	-	-	0.18
9 Backup VCS	-	-	-	0.21	-	0.2
10 Microwave Comms link	0.09	_			-	0.09
11 New Control Tower / ACC	-	5.27	5.18	5.09	_	15.53
12 PCs - new and replacement	0.02	-	-	-	0.01	0.02
13 ADS-B	0.04	-	0.43	0.21	-	0.69
14 Radar Simulator	0.13		-	-	0.58	0.13
15 TAR MSSR antenna	0.09				0.00	0.09
16 A/C ops room / equip room	0.06	0.04				0.0
17 PBN Tool	0.04	0.04	0.01	0.01	0.01	0.07
18 Replacement of vehicles	0.02	0.20	0.01	0.05	0.02	0.0
19 FPL2012 Translator	0.04	-	-	- 0.03	0.02	0.04
20 Dual DER UPS					-	
	-	0.02	-	-	-	0.02
21 New PABX	0.04		-	-	-	0.04
22 AFTN / Server room Airconditioning	-	0.04	-	-	-	0.04
23 Remote system monitoring	-	-	0.04	-	-	0.04
24 Integrated security system	-	-	-	0.03	-	0.03
25 Radar Performance Tools	0.03	-	-	-	-	0.03
26 DER - UPS room airconditioning	0.01	-	-	-	-	0.0
27 OLDI recording 28 Automatic Safety Monitoring Tool (ASMT)	0.01	-	-	-	-	0.0
29 CPDLC	-	<u> </u>		0.34	-	0.34
30 DER dual genset		<u> </u>		0.08	-	0.08
31 Dual TAR UPS	<u> </u>	<u> </u>	<u> </u>	0.00	-	0.00
32 Electronic logging software	<u> </u>	-	-	-	-	
33 FMTP	<u> </u>	0.06			-	0.00
34 Garage and storage		0.00			0.13	0.00
34 Garage and storage 35 ICT office efficiency software				-	0.13	
36 ICT remote services	<u> </u>			-	-	
37 Installation of PV panels					0.25	
38 New Tx/Rx	0.07	<u> </u>	0.09	0.08	0.23	0.24
39 Project Management software	0.07	-	0.07	0.06	-	0.24
40 Safety Software Tools	0.01	0.01	0.02		-	0.04
41 SBS UPS	0.01	0.01	0.02		-	0.02
42 VOR & DME		- 0.04	0.65		-	0.65



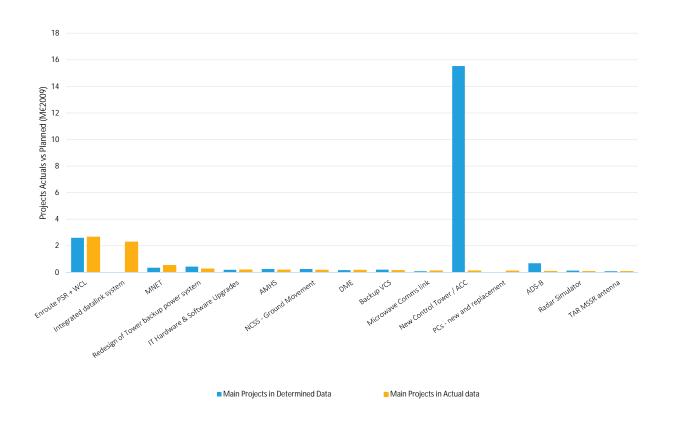
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to dat
1 Enroute PSR + WCL	0.86	0.15	1.39	0.26	-	2.60
2 Integrated datalink system	-	-	-	2.30	-	2.30
3 MNET	0.06	0.29	0.12	0.06	-	0.5
4 Redesign of Tower backup power system	0.07	0.08	0.11	-	-	0.2
5 IT Hardware & Software Upgrades	0.08	-	0.05	0.07	-	0.2
6 AMHS	=	-	-	0.19	-	0.1
7 NCSS - Ground Movement	0.09	-	0.04	0.05	-	0.1
8 DME	0.16	0.00	-	-	-	0.1
9 Backup VCS	-	-	0.04	0.10	-	0.1
10 Microwave Comms link	0.07	0.06	-	-	-	0.13
11 New Control Tower / ACC	=	-	0.02	0.10	-	0.1
12 PCs - new and replacement	0.03	0.04	0.02	0.02	-	0.1
13 ADS-B	=	=	0.09	-	-	0.0
14 Radar Simulator	-	-	0.08	-	-	0.0
15 TAR MSSR antenna	0.08	-	-	-	-	0.0
16 A/C ops room / equip room	0.06	0.02	-	-	-	0.0
17 PBN Tool	0.04	0.01	-	0.02	-	0.0
18 Replacement of vehicles	0.04	0.02	0.01	-	-	0.0
19 FPL2012 Translator	0.02	0.04	_	-	-	0.0
20 Dual DER UPS		-	0.05	-	-	0.0
21 New PABX	0.04	_	-		_	0.04
22 AFTN / Server room Airconditioning	-	_	_	0.04	-	0.0
23 Remote system monitoring			_	0.04	_	0.0
24 Integrated security system				0.03	_	0.0
25 Radar Performance Tools	0.02			- 0.03		0.0
26 DER - UPS room airconditioning	0.01	_	_	_	-	0.0
27 OLDI recording	0.01				_	0.0
28 Automatic Safety Monitoring Tool (ASMT)	-	_	_	-	-	0.0
29 CPDLC	_	_	-	_	-	
30 DER dual genset	-	-	-	-	-	
31 Dual TAR UPS	-	-	-	-	-	
32 Electronic logging software	-	-	-	-	-	
33 FMTP	-	-	-	-	-	
34 Garage and storage	-	-	-	-	-	
35 ICT office efficiency software	-	-	-	-	-	
36 ICT remote services	_	_	-	_	-	
37 Installation of PV panels	-	-		-	-	
38 New Tx/Rx	-	-		-	-	
39 Project Management software	-	_	_	_	-	
40 Safety Software Tools	_	_	_	-	-	
41 SBS UPS	-	_		_	_	
42 VOR & DME		_	_	_	_	



# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 RP	2 to date
1 Enroute PSR + WCL	0.86	(0.72)	(0.33)	0.26	-1	0.06
2 Integrated datalink system	- 0.00	(0.72)	(0.55)	2.30	-	2.30
3 MNET	(0.03)	0.12	0.04	0.06	_	0.18
4 Redesign of Tower backup power system	(0.05)	(0.14)	0.04	0.00	-	(0.18
5 IT Hardware & Software Upgrades	(0.13)	(0.06)	0.05	0.04	-	(0.10
6 AMHS	(0.03)	(0.26)	-	0.19	-	30.0)
7 NCSS - Ground Movement	(0.00)	(0.09)	(0.05)	0.05	-	(0.09
8 DME	(0.01)	0.00	-	-	-	(0.01
9 Backup VCS	-	-	0.04	(0.11)	-	(0.07
10 Microwave Comms link	(0.02)	0.06	-	-	-	0.04
11 New Control Tower / ACC	-	(5.27)	(5.15)	(4.99)	-	(15.41
12 PCs - new and replacement	0.01	0.04	0.02	0.02	-	0.09
13 ADS-B	(0.04)	-	(0.34)	(0.21)	-	(0.60
14 Radar Simulator	(0.13)	-	0.08	-	-	(0.05
15 TAR MSSR antenna	(0.01)	_	-	_	_	(0.01
16 A/C ops room / equip room	(0.00)	(0.03)	_		-	(0.03
17 PBN Tool	(0.01)	(0.00)	(0.01)	0.01	-	(0.0
18 Replacement of vehicles	0.02	(0.19)	(0.01)	(0.05)	-	(0.23
19 FPL2012 Translator	(0.03)	0.04	-	-	_	0.01
20 Dual DER UPS	(0.00)	(0.02)	0.05			0.03
21 New PABX	(0.00)	(0.02)	-		_	(0.00
22 AFTN / Server room Airconditioning	(0.00)	(0.04)		0.04	-	(0.00
23 Remote system monitoring		(0.04)	(0.04)	0.04		(0.00
24 Integrated security system			(0.04)	0.04		0.00
25 Radar Performance Tools	(0.00)			-	-	(0.00
26 DER - UPS room airconditioning	(0.00)	_	_	_	-	(0.00
27 OLDI recording	(0.00)				_	(0.00
28 Automatic Safety Monitoring Tool (ASMT)	(0.00)	_	-	_	-	(0.00
29 CPDLC	-	-	-	(0.34)	-	(0.34
30 DER dual genset	-	-	-	(0.08)	-	(0.08
31 Dual TAR UPS	-	_	-	-	-	,
32 Electronic logging software	-	-	-	-	-	
33 FMTP	-	(0.06)	-	-	-	(0.06
34 Garage and storage	-	-	-	-	-	
35 ICT office efficiency software	=	-	-	-	-	
36 ICT remote services	-	-	-	-	-	
37 Installation of PV panels	-	-	-	-	-	
38 New Tx/Rx	(0.07)	-	(0.09)	(0.08)	-	(0.24
39 Project Management software	-	-	-	-	-	,
40 Safety Software Tools	(0.01)	(0.01)	(0.02)	-	-	(0.04
41 SBS UPS	-	(0.04)	-	-	-	(0.04
42 VOR & DME	-	-	(0.65)	_	-	(0.65



INVESTMENTS PER MAIN PROJECT Malta - MATS



In the Performance Plan, Malta planned 42 main projects, out of which 33 were planned to be started till date. However, actual data shows that investments were made only in 27, while 15 projects received no investments.

RP2 to date, the main project planned is "New Control Tower/ACC" with a budget of 15.53M ϵ_{2009} (66% of the total planned CAPEX RP2 to date). However, the actual investment is significantly low, adding up to only 0.12M ϵ_{2009} with significant changes in the start date.

The biggest project, with regard to actual investments is "Enroute PSR + WCL", with a total actual investment of $2.66M \in_{2009}$ (35% of the actual investments). The second major project in terms of actual CAPEX is the "Integrated datalink system", even if not originally included in the Performance Plan. The project received investments of $2.30M \in_{2009}$.

Note that the graph above presents only 15 projects with the most significant actual investments.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Malta - MATS						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
	-	-	-	-	-	_
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
	2015	2010	2017	2010	2017	Nr 2 to date
Funding declaration (Monitoring Report)	-	-	-	-	-	
SDM Payment	-	-	1.06	-	-	1.06

% of SDM Payment in Total CAPEX for RP2 to date



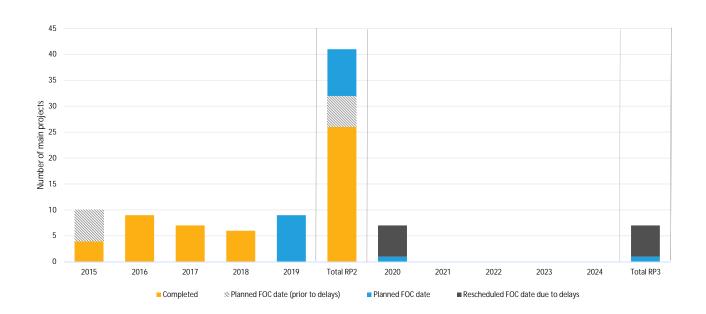
In the Monitoring Report, Malta did not declare any funding received during RP2. However, SDM payments reveal funding of $1.21M \in_{2009}$ in 2017. The mismatch between the monitoring report and SDM Payments could be due to the difference in reporting periods. The total SDM payments to date represent 13% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT Malta - MATS								
# Main Projects	Status in 2018		Ехрє	· KPA	PCP	NO		
			SAF	ENV	CAP	CEF		
1 Enroute PSR + WCL	Completed	2017	Х					
2 Integrated datalink system	Ongoing	2020						
3 MNET	Completed	2017						
4 Redesign of Tower backup power system	Completed	2016	Х			Х		
5 IT Hardware & Software Upgrades	Ongoing	2019						
6 AMHS	Completed	2018	Х			Х		
7 NCSS - Ground Movement	Completed	2017	Х		Х			
8 DME	Completed	2016	Х			Х		
9 Backup VCS	Ongoing	2019	Х			Х		
10 Microwave Comms link	Completed	2016	Х					
11 New Control Tower / ACC	Ongoing	2019	Х			Х		
12 PCs - new and replacement	Ongoing	2019				Х		
13 ADS-B	Completed	2018	Х			Х		
14 Radar Simulator	Ongoing	2019				Х		
15 TAR MSSR antenna	Completed	2016	Х					
16 A/C ops room / equip room	Completed	2016	Х	Х		Х		
17 PBN Tool	Ongoing	2019			Х	Х		1
18 Replacement of vehicles	Ongoing	2019	Х			(-)x		
19 FPL2012 Translator	Completed	2015	Х			()		
20 Dual DER UPS	Completed	2016	Х			Х		
21 New PABX	Completed	2015	Α					
22 AFTN / Server room Airconditioning	Completed	2017				Х		
23 Remote system monitoring	Completed	2017	Х			X		
24 Integrated security system	Completed	2017	X			X		
25 Radar Performance Tools	Completed	2015	X			X		-
26 DER - UPS room airconditioning	Completed	2016	X			^		
27 OLDI recording	Completed	2015	Х			Х		
28 Automatic Safety Monitoring Tool (ASMT)	Delayed	2024	Х			Х		
29 CPDLC	Completed	2018	Х	Х				
30 DER dual genset	Completed	2018	X			Х		
31 Dual TAR UPS	Delayed	2024	Х			Х		
32 Electronic logging software	Delayed	2024				Х		
33 FMTP	Completed	2016	Х			^		<u> </u>
34 Garage and storage	Ongoing	2019				Х		-
35 ICT office efficiency software	Delayed	2024						
36 ICT remote services	Delayed	2024				Х		<u> </u>
37 Installation of PV panels	Ongoing	2019		Х		X		<u> </u>
38 New Tx/Rx	Completed	2018	Х	^		X		<u> </u>
39 Project Management software	Delayed	2010	^			X		
40 Safety Software Tools	Completed	2017	Х			X		
41 SBS UPS	Completed	2017	X			X		_
42 VOR & DME	Completed	2017	X			^		\vdash



EXPECTED BENEFIT PER PROJECT Malta - MATS



Malta planned 42 main projects for RP2: 26 projects have been completed, ten have been started and six have been delayed with no clear indication as to when.

The majority of the projects are expected to improve safety (28 out of 42) and cost-efficiency (26 out of 42), while only a few projects are expected to improve environment and capacity.

No project is linked to the Pilot Common Project or included in the Network Operations Plan.



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Maita - M	IATS					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	1.97	2.79	3.34	3.90	3.94	12.01
- En route	1.30	1.85	2.21	2.58	2.60	7.93
- Terminal	0.67	0.95	1.13	1.33	1.34	4.07
Cost of Capital	0.50	0.76	0.93	1.03	0.96	3.22
- En route	0.44	0.66	0.80	0.89	0.83	2.78
- Terminal	0.06	0.10	0.13	0.15	0.14	0.44
Total	2.47	3.55	4.27	4.94	4.90	15.23
Actual data (NAC	2015A	2016A	2017A	2018A	2019A	DD2 to data
Actual data (M€ ₂₀₀₉)	2015A	2010A	2017A	20 TOA	2019A	RP2 to date
Depreciation	2.11	2.68	2.36	2.64	-	9.78
- En route	1.69	2.15	1.89	2.06	-	7.78
- Terminal	0.42	0.54	0.47	0.58	-	2.01
Cost of Capital	0.79	0.75	0.72	0.73	-	3.00
- En route	0.62	0.61	0.58	0.60	-	2.41
- Terminal	0.17	0.14	0.14	0.13	-	0.59
Total	2.90	3.43	3.08	3.37	-	12.78
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	0.14	(0.11)	(0.98)	(1.27)	-	(2.22)
- En route	0.38	0.30	(0.32)	(0.52)	-	(0.16)
- Terminal	(0.25)	(0.41)	(0.66)	(0.75)	-	(2.06)
Cost of Capital	0.30	(0.01)	(0.21)	(0.30)	-	(0.22)
- En route	0.18	(0.05)	(0.22)	(0.28)	-	(0.37)
- Terminal	0.12	0.04	0.01	(0.02)	-	0.15
Total	0.43	(0.12)	(1.19)	(1.57)	-	(2.44)



Over the first 4 years of RP2, 66% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 2.44M€₂₀₀₉ for investments that have not been materialised RP2 to date.

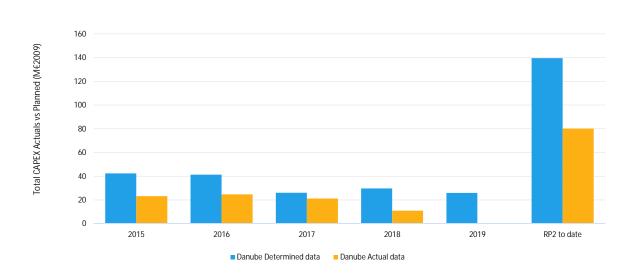
Throughout RP2 to date, the actual depreciation was lower than the determined one by $2.22M \in_{2009}$. This was largely due to the low execution rate of the investments as well as delays in their implementation (particularly a delay in commissioning the new ATM system).

Throughout RP2 to date, the actual cost of capital was $0.22M \in_{2009}$ lower than determined. This was due to the lower fixed asset base compared to the Performance Plan.



4.3 DANUBE FAB

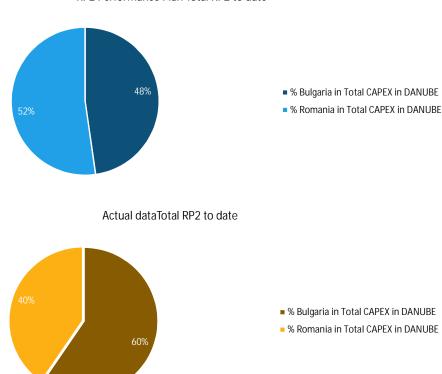
OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	42.37	41.31	26.09	29.69	25.92	139.46
- Main CAPEX	32.08	24.49	12.73	15.44	11.52	84.74
- % Main into Total CAPEX	76%	59%	49%	52%	44%	61%
- Other CAPEX	10.29	16.82	13.36	14.25	14.40	54.72
- % Other into Total CAPEX	24%	41%	51%	48%	56%	39%
- Bulgaria in Total CAPEX in DANUBE	12.65	23.29	11.90	18.73	15.29	66.57
- % Bulgaria in Total CAPEX in DANUBE	30%	56%	46%	63%	59%	48%
- Romania in Total CAPEX in DANUBE	29.73	18.02	14.19	10.96	10.63	72.90
- % Romania in Total CAPEX in DANUBE	70%	44%	54%	37%	41%	52%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	23.21	24.76	21.19	11.01	-	80.17
- Main CAPEX	13.86	14.60	14.85	2.49	-	45.81
- % Main into Total CAPEX	60%	59%	70%	23%	-	57%
- Other CAPEX	9.35	10.17	6.33	8.51	-	34.36
- % Other into Total CAPEX	40%	41%	30%	77%	-	43%
- Bulgaria in Total CAPEX in DANUBE	13.22	15.77	11.41	7.37	-	47.76
- % Bulgaria in Total CAPEX in DANUBE	57%	64%	54%	67%	-	60%
- Romania in Total CAPEX in DANUBE	9.99	9.00	9.78	3.64	-	32.41
- % Romania in Total CAPEX in DANUBE	43%	36%	46%	33%	-	40%
Difference between Actuals and Planned (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(19.16)	(16.55)	(4.90)	(18.69)	- [(59.30)
- Main CAPEX	(18.22)	(9.89)	2.13	(12.95)	-	(38.93)
- Other CAPEX	(0.94)	(6.65)	(7.03)	(5.74)	-	(20.36)
Total CAPEX (%)	-45%	-40%	-19%	-63%	-	-43%
- Main CAPEX (%)	-57%	-40%	17%	-84%	-	-46%
- Other CAPEX (%)	-9%	-40%	-53%	-40%	-	-37%





OVERALL INVESTMENTS DANUBE FAB





During RP2 to date, the total actual investments for the Danube FAB have been lower than determined in the Performance Plan. Actual investments were $80.17M \in_{2009}$, 43% lower than planned, since both Romania and Bulgaria underspent with respect to the Performance Plan. In 2015, the actual CAPEX was $23.21M \in_{2009}$, 45.22% lower than planned. In 2016 and 2017, the actual CAPEX was 40% and 40% lower than planned, respectively. The trend continued through 40%, when the total actual CAPEX was 40% lower than planned.

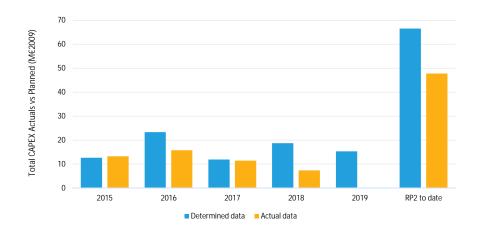
Bulgaria represents 48% of planned expenses and Romania 52%. However, when consideing the actual values, the percentages change to 60% for Bulgaria and 40% for Romania.

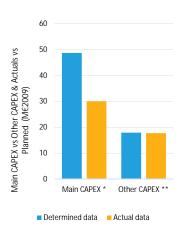


4.3.1 Bulgaria - BULATSA

Throughout the RP2 to date, Bulgaria underspent 18.81M€₂₀₀₉ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-11.69M \in 2009). Bulgaria planned 23 main projects for RP2: 13 projects have been completed and ten have been started, four of which are expected to complete in RP3.

OVED ALL INIVECTS AFAITS						
OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	12.65	23.29	11.90	18.73	15.29	66.57
- Main CAPEX *	11.92	18.13	5.99	12.61	11.52	48.64
- % Main into Total CAPEX	94%	78%	50%	67%	75%	73%
- Other CAPEX **	0.73	5.17	5.91	6.12	3.77	17.93
- % Other into Total CAPEX	6%	22%	50%	33%	25%	27%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	13.22	15.77	11.41	7.37	-	47.76
- Main CAPEX	10.27	11.13	7.03	1.57	-	30.00
- % Main into Total CAPEX	78%	71%	62%	21%	-	63%
- Other CAPEX	2.95	4.64	4.38	5.79	-	17.76
- % Other into Total CAPEX	22%	29%	38%	79%	-	37%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	0.57	(7.53)	(0.49)	(11.37)	- [(18.81)
- Main CAPEX	(1.65)	(7.00)	1.05	(11.04)	-	(18.64)
- Other CAPEX	2.223	(0.526)	(1.53)	(0.33)	-	(0.16)
Total CAPEX (%)	5%	-32%	-4%	-61%	-	-28%
- Main CAPEX (%)	-14%	-39%	17%	-88%	-	-38%
- Other CAPEX (%)	305%	-10%	-26%	-5%	-	-1%





The total capital expenditure to date is $47.76 \text{M} \in_{2009}$. For RP2 to date, Bulgaria spent $18.81 \text{M} \in_{2009}$ (-28%) less CAPEX than originally planned. For RP2 to date, the Main CAPEX is 19% lower than planned and the other CAPEX is 0.16% lower than planned.

In 2015 Bulgaria spent 0.57M€₂₀₀₉ more than originally planned, while for the remaining years, Bulgaria underspent 7.53M€₂₀₀₉ in 2016, 0.49M€₂₀₀₉ in 2017 and 11.37M€₂₀₀₉ in 2018.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

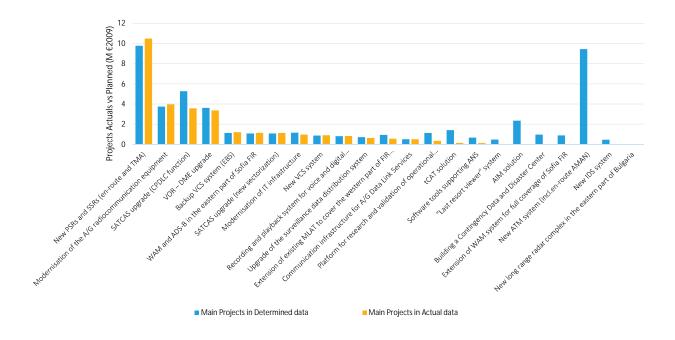
** Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Bulgaria - BULATSA						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 New PSRs and SSRs (en-route and TMA)	3.84	5.94	-	_	- [9.77
2 Modernisation of the A/G radiocommunication equipment	1.10	2.65	-	-	-	3.76
3 SATCAS upgrade (CPDLC function)	3.82	1.46	_	_	-	5.27
4 VOR – DME upgrade	1.58	2.05	_	_	_	3.62
5 Backup VCS system (EBS)	-	1.14	_	-	-	1.14
6 WAM and ADS-B in the eastern part of Sofia FIR	0.18	0.91	-	-	-	1.09
7 SATCAS upgrade (new sectorization)	-	1.10	-	-	-	1.10
8 Modernisation of IT infrastructure	-	0.57	0.60	-	-	1.17
9 New VCS system	0.88	-	-	-	-	0.88
10 Recording and playback system for voice and digital information	-	0.82	-	-	-	0.82
11 Upgrade of the surveillance data distribution system	-	-	0.72	-	-	0.72
12 Extension of existing MLAT to cover the western part of FIR Sofia	-	0.37	0.57	-	-	0.94
13 Communication infrastructure for A/G Data Link Services	0.52	-	-	-	-	0.52
14 Platform for research and validation of operational functionalities	-	-	0.68	0.45	-	1.13
15 tCAT solution	_	_	0.43	0.99	-	1.42
16 Software tools supporting ANS	_	0.22	0.23	0.22	0.22	0.67
17 "Last resort viewer" system	-	-	0.48	-	-	0.48
18 AIM solution	_	0.68	1.67	_	-	2.36
19 Building a Contingency Data and Disaster Center		-	-	0.97	0.66	0.97
20 Extension of WAM system for full coverage of Sofia FIR	_	_	0.36	0.54	0.00	0.90
21 New ATM system (incl.en-route AMAN)		-	0.30	9.43	9.30	9.43
22 New IDS system		0.23	0.24	7.43	7.30	0.47
23 New long range radar complex in the eastern part of Bulgaria		- 0.23	0.24		1.33	0.47
23 New long range radar complex in the eastern part of bulgaria		-		-	1.33	
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 Now DCDs and CCDs (an route and TMA)	2.00	2 22	4 17		i	10.40
1 New PSRs and SSRs (en-route and TMA) 2 Modernisation of the A/G radiocommunication equipment	3.99 1.14	2.33 2.78	4.17 0.05	-	-	10.49 3.97
3 SATCAS upgrade (CPDLC function)	2.07	1.50	- 0.03			3.57
4 VOR – DME upgrade	1.46	1.53	0.38			3.37
5 Backup VCS system (EBS)	1.40	1.22	0.30			1.22
6 WAM and ADS-B in the eastern part of Sofia FIR	0.19	0.40	0.57	-		1.15
7 SATCAS upgrade (new sectorization)	-	1.14	-		_	1.14
8 Modernisation of IT infrastructure		- 1.17	0.75	0.23	_	0.98
9 New VCS system	0.91	_	-	-	-	0.91
10 Recording and playback system for voice and digital information	-	0.23	0.59	-	-	0.83
11 Upgrade of the surveillance data distribution system	_	-	0.28	0.36	-	0.64
12 Extension of existing MLAT to cover the western part of FIR Sofia	_	_	0.20	0.37	-	0.57
13 Communication infrastructure for A/G Data Link Services	0.51	_	-	-	-	0.51
14 Platform for research and validation of operational functionalities	-	-	-	0.35	-	0.35
15 tCAT solution	_	_	_	0.15	-	0.15
16 Software tools supporting ANS	_	_	0.03	0.11	-	0.14
17 "Last resort viewer" system	_	-	-	-	-	
18 AIM solution	-	-	-	-	-	
19 Building a Contingency Data and Disaster Center	_	-	_	-	_	
20 Extension of WAM system for full coverage of Sofia FIR	_					
21 New ATM system (incl.en-route AMAN)	<u> </u>	<u> </u>	<u> </u>	-	-	
22 New IDS system	-					
23 New long range radar complex in the eastern part of Bulgaria	_	_	_	_	_	_



INVESTMENTS PER MAIN PROJECT Bulgaria - BULATSA						
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
1 New PSRs and SSRs (en-route and TMA)	0.15	(3.60)	4.17	-	-	0.72
2 Modernisation of the A/G radiocommunication equipment	0.04	0.13	0.05	-	-	0.21
3 SATCAS upgrade (CPDLC function)	(1.74)	0.04	-	-	-	(1.70)
4 VOR – DME upgrade	(0.12)	(0.52)	0.38	-	-	(0.26)
5 Backup VCS system (EBS)	-	0.07	-	-	-	0.07
6 WAM and ADS-B in the eastern part of Sofia FIR	0.01	(0.51)	0.57	-	-	0.06
7 SATCAS upgrade (new sectorization)	-	0.05	-	-	-	0.05
8 Modernisation of IT infrastructure	=	(0.57)	0.15	0.23	-	(0.19)
9 New VCS system	0.03	-	-	-	-	0.03
10 Recording and playback system for voice and digital information	-	(0.59)	0.59	-	-	0.01
11 Upgrade of the surveillance data distribution system	-	-	(0.43)	0.36	-	(0.08)
12 Extension of existing MLAT to cover the western part of FIR Sofia	-	(0.37)	(0.37)	0.37	-	(0.37)
13 Communication infrastructure for A/G Data Link Services	(0.01)	-	-	-	-	(0.01)
14 Platform for research and validation of operational functionalities	-	-	(0.68)	(0.10)	-	(0.78)
15 tCAT solution	-	-	(0.43)	(0.84)	-	(1.27)
16 Software tools supporting ANS	=	(0.22)	(0.20)	(0.11)	-	(0.52)
17 "Last resort viewer" system	-	-	(0.48)	-	-	(0.48)
18 AIM solution	=	(0.68)	(1.67)	-	-	(2.36)
19 Building a Contingency Data and Disaster Center	-	-	-	(0.97)	-	(0.97)
20 Extension of WAM system for full coverage of Sofia FIR	-	-	(0.36)	(0.54)	-	(0.90)
21 New ATM system (incl.en-route AMAN)	-	-	-	(9.43)	-	(9.43)
22 New IDS system	-	(0.23)	(0.24)	-	-	(0.47)
23 New long range radar complex in the eastern part of Bulgaria	-	-	-	-	-	-



RP2 to date, the major project is "New PSRs and SSRs (en-route and TMA)", which was completed in 2017 and received funding of $10.49M \in_{2009}$. The project exceeded the planned amounts by $0.72M \in_{2009}$. The second largest investment made is the "Modernisation of the A/G radiocommunication equipment" project which was also completed in 2017. The project received a total amount of $3.97M \in_{2009}$, exceeding the initial plan by $0.21M \in_{2009}$.

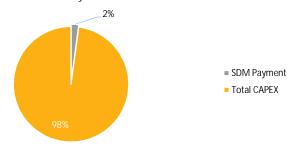


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Bulga	ria - BULATSA					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
15 tCAT solution	-	-	0.00	-	-	0.00
Actual funding declaration vs Payments (M€2009)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	-	0.00	-	- [0.00
SDM Payment	-	0.69	0.33	-	-	1.02

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



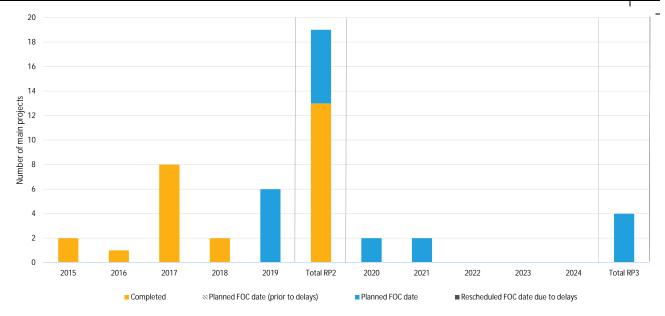
The implementation of "tCAT solution" was funded by CEF/TEN-T, receiving $647\epsilon_{2009}$ in 2017. However, the total SDM Payment is higher than the funding declaration and reveals funding of $1.02M\epsilon_{2009}$, representing 3% of the actual total CAPEX.

No clear information with regard to the source of the funding has been provided.



EXPECTED BENEFIT PER PROJECT Bulgaria - BULATSA

#	Main Projects	ain Projects Status in 2018		Expected benefit per KPA				PCP	NOP
				SAF	ENV	CAP	CEF		
1	New PSRs and SSRs (en-route and TMA)	Completed	2017	Х	Х	Х	Х		
2	Modernisation of the A/G radiocommunication equipment	Completed	2017	Х		Х			
3	SATCAS upgrade (CPDLC function)	Completed	2017	Х		Х	Х	Х	
4	VOR – DME upgrade	Completed	2017	Х			Х		Х
5	Backup VCS system (EBS)	Completed	2017	Х	Х	Х			
6	WAM and ADS-B in the eastern part of Sofia FIR	Completed	2017	Х		Х			
7	SATCAS upgrade (new sectorization)	Completed	2016	Х		Х			Х
8	Modernisation of IT infrastructure	Ongoing	2019	Х		Х		х	х
9	New VCS system	Completed	2015	Х	Х	Х	Х		
10	Recording and playback system for voice and digital information	Completed	2017	Х					
11	Upgrade of the surveillance data distribution system	Ongoing	2019	Х					
12	Extension of existing MLAT to cover the western part of FIR Sofia	Completed	2018	Х		Х			
13	Communication infrastructure for A/G Data Link Services	Completed	2015	Х		Х	Х	Х	
14	Platform for research and validation of operational functionalities	Completed	2018	Х		Х			
15	tCAT solution	Ongoing	2020	Х		Х		Х	
16	Software tools supporting ANS	Ongoing	2019	Х		Х			
17	"Last resort viewer" system	Completed	2017	Х		Х			
18	AIM solution	Ongoing	2019	Х				Х	
19	Building a Contingency Data and Disaster Center	Ongoing	2021	Х					
20	Extension of WAM system for full coverage of Sofia FIR	Ongoing	2019	Х		Х			
21	New ATM system (incl.en-route AMAN)	Ongoing	2021		Х	Х	Х	Х	Х
22	New IDS system	Ongoing	2019	Х					
23	New long range radar complex in the eastern part of Bulgaria	Ongoing	2020	Х	Х	Х			



Bulgaria planned 23 main projects for RP2: 13 projects have been completed and ten have been started, four of which are expected to complete in RP3.

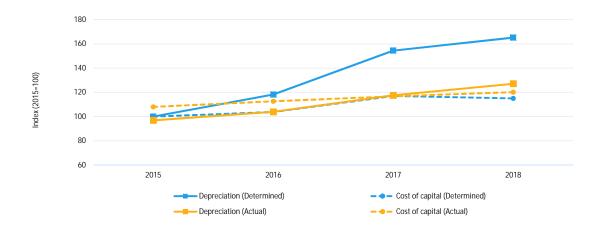
The reported projects are expected to enhance mainly two performance areas: safety (22 projects) and capacity (17 projects).

The actual investment made RP2 to date for the six projects linked to the Pilot Common Project amounts to $5.22M \in_{2009}$. This amount represents 11% of the actual total CAPEX. Four projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Bulgaria - BUL	ATSA					
INVESTIGENTS VS DEL REGIATION AND GOST OF GAT TIAL Building - BOE	NI3N					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	7.88	9.31	12.16	13.01	12.28	42.36
- En route	7.17	8.60	11.42	12.28	11.57	39.48
- Terminal	0.71	0.71	0.74	0.73	0.71	2.88
Cost of Capital	6.88	7.23	8.33	8.18	7.97	30.63
- En route	6.23	6.58	7.65	7.52	7.32	27.98
- Terminal	0.65	0.65	0.69	0.67	0.65	2.66
Total	14.76	16.54	20.50	21.20	20.25	72.99
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	7.64	8.19	9.26	10.01	-	35.09
- En route	7.02	7.56	8.62	9.39	-	32.59
- Terminal	0.61	0.63	0.63	0.63	-	2.51
Cost of Capital	6.11	6.79	6.83	6.47	-	26.21
- En route	5.47	6.16	6.29	6.06	-	23.98
- Terminal	0.65	0.63	0.53	0.42	-	2.22
<u>Total</u>	13.75	14.98	16.09	16.49	-	61.30
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.24)	(1.12)	(2.91)	(3.00)	- [(7.27)
- En route	(0.15)	(1.05)	(2.80)	(2.90)	-	(6.89
- Terminal	(0.10)	(0.07)	(0.11)	(0.10)	-	(0.38
Cost of Capital	(0.77)	(0.44)	(1.50)	(1.71)	-	(4.42
- En route	(0.76)	(0.42)	(1.35)	(1.46)	-	(3.99
- Terminal	(0.00)	(0.02)	(0.15)	(0.25)	-	(0.43)
Total	(1.01)	(1.56)	(4.41)	(4.71)	-	(11.69)



Over the first 4 years of RP2, 28% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 11.69M \in 2009 for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 7.27M \in ₂₀₀₉. This was mainly due to some delay in RP1 in respect of the CAPEX execution. However, some measures have been undertaken to complete CAPEX in line with the Performance Plan as these have already started to provide the desired output. As a result, actual depreciation has increased every year from 2015 to 2018.

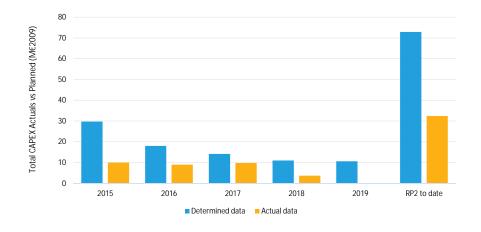
Throughout RP2 to date, the actual cost of capital was 4.42M€₂₀₀₉ lower than determined. This was largely due to decrease in the fixed asset base due to a delay in the implementation of investments (the WACC did not change when comaparing determined to actual terms).

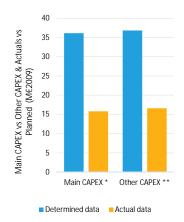


4.3.2 Romania - ROMATSA

Throughout the RP2 to date, Romania underspent $40.49M\epsilon_{2009}$ (-56%) with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-17.90 $M\epsilon_{2009}$). Romania planned 11 main projects for RP2: five projects have been completed, six have been delayed, three of which are expected to be finished by the end of RP2 and three are expected to be finished in RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	29.73	18.02	14.19	10.96	10.63	72.90
- Main CAPEX *	20.16	6.37	6.74	2.83	-	36.10
- % Main into Total CAPEX	68%	35%	48%	26%	0%	50%
- Other CAPEX **	9.56	11.65	7.45	8.13	10.63	36.80
- % Other into Total CAPEX	32%	65%	52%	74%	100%	50%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	9.99	9.00	9.78	3.64	-	32.41
- Main CAPEX	3.60	3.47	7.82	0.92	-	15.81
- % Main into Total CAPEX	36%	39%	80%	25%	-	49%
- Other CAPEX	6.40	5.53	1.96	2.72	-	16.60
- % Other into Total CAPEX	64%	61%	20%	75%	-	51%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(19.73)	(9.02)	(4.41)	(7.32)	- [(40.49)
- Main CAPEX	(16.57)	(2.89)	1.08	(1.91)	-	(20.29)
- Other CAPEX	(3.167)	(6.129)	(5.49)	(5.41)	-	(20.20)
Total CAPEX (%)	-66%	-50%	-31%	-67%	-]	-56%
- Main CAPEX (%)	-82%	-45%	16%	-67%	-	-56%
- Other CAPEX (%)	-33%	-53%	-74%	-67%	-	-55%





The total capital expenditure to date is 32.41M \in_{2009} . For RP2 to date, Romania spent 40.49M \in_{2009} (-56%) less CAPEX than originally planned. For RP2 to date, the main CAPEX is 56% lower than planned, while other CAPEX is 55% lower.

Romania invested less than initially planned, in every year of RP2 to date, $19.73M \in_{2009}$ less in 2015, $9.02M \in_{2009}$ less in 2016, $4.41M \in_{2009}$ less in 2017 and $7.32M \in_{2009}$ less in 2018.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

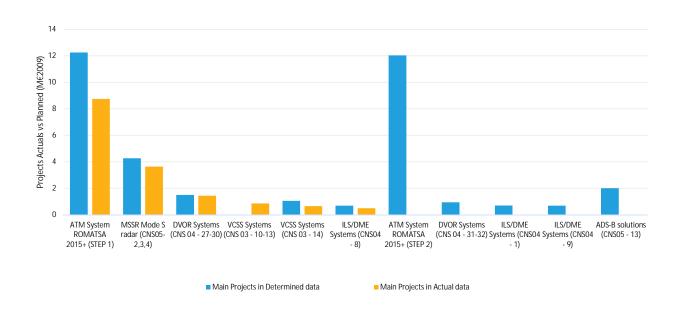
 $^{^{\}star\star} \text{ Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.}$



INVESTMENTS PER MAIN PROJECT Romania - ROMATSA						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 ATM System ROMATSA 2015+ (STEP 1)	12.25	-	-	-	- [12.25
2 MSSR Mode S radar (CNS05-2,3,4)	4.26	-	-	-	-	4.26
3 DVOR Systems (CNS 04 - 27-30)	1.49	-	-	-	-	1.49
4 VCSS Systems (CNS 03 - 10-13)	-	-	-	-	-	-
5 VCSS Systems (CNS 03 - 14)	1.05	-	-	-	-	1.05
6 ILS/DME Systems (CNS04 - 8)	-	0.68	-	-	-	0.68
7 ATM System ROMATSA 2015+ (STEP 2)	-	4.83	4.70	2.50	-	12.03
8 DVOR Systems (CNS 04 - 31-32)	-	-	0.94	-	-	0.94
9 ILS/DME Systems (CNS04 - 1)	0.69	-	-	-	-	0.69
10 ILS/DME Systems (CNS04 - 9)	-	0.04	0.31	0.33	-	0.69
11 ADS-B solutions (CNS05 - 13)	0.41	0.81	0.78	-	-	2.00
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 ATM System ROMATSA 2015+ (STEP 1)	1.04	0.10	7.38	0.23	- [8.75
2 MSSR Mode S radar (CNS05-2,3,4)	1.00	2.64	-	-	-	3.64
3 DVOR Systems (CNS 04 - 27-30)	1.43	-	-	-	-	1.43
4 VCSS Systems (CNS 03 - 10-13)	0.13	0.73	_	-	_	0.86
5 VCSS Systems (CNS 03 - 14)	-	_	_	0.65	-	0.65
6 ILS/DME Systems (CNS04 - 8)	-	-	0.44	0.04	-	0.49
7 ATM System ROMATSA 2015+ (STEP 2)	-	-	-	-	-	-
8 DVOR Systems (CNS 04 - 31-32)		-	-	-	_	-
9 ILS/DME Systems (CNS04 - 1)		_	-	_	_	-
10 ILS/DME Systems (CNS04 - 9)	-	_	_	-	-	_
11 ADS-B solutions (CNS05 - 13)	-	-	-	-	-	-
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015 20	016 2	017 20	018 20	019	RP2 to date
1 ATM System ROMATSA 2015+ (STEP 1)	(11.21)	0.10	7.38	0.23	- [(3.50)
2 MSSR Mode S radar (CNS05-2,3,4)	(3.27)	2.64	-	-	-	(0.63)
3 DVOR Systems (CNS 04 - 27-30)	(0.06)	-	_	-	-	(0.06)
4 VCSS Systems (CNS 03 - 10-13)	0.13	0.73	-	-	-	0.86
5 VCSS Systems (CNS 03 - 14)	(1.05)	-	-	0.65	-	(0.40)
6 ILS/DME Systems (CNS04 - 8)	-	(0.68)	0.44	0.04	-	(0.20)
7 ATM System ROMATSA 2015+ (STEP 2)	-	(4.83)	(4.70)	(2.50)	-	(12.03)
8 DVOR Systems (CNS 04 - 31-32)	-	-	(0.94)	-	-	(0.94)
9 ILS/DME Systems (CNS04 - 1)	(0.69)	-	-	-	-	(0.69)
10 ILS/DME Systems (CNS04 - 9)	-	(0.04)	(0.31)	(0.33)	-	(0.69)
11 ADS-B solutions (CNS05 - 13)	(0.41)	(0.81)	(0.78)	-	-	(2.00)



INVESTMENTS PER MAIN PROJECT Romania - ROMATSA



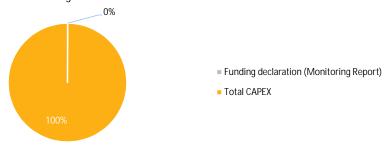
RP2 to date, the largest planned and actual investment is the "ATM System ROMATSA 2015+ (STEP 1)" project. STEP 2 of this project was planned to receive 12.03M \in ₂₀₀₉, however it has not received any funding so far.

The second largest investment is the "MSSR Mode S radar (CNS05-2,3,4)" project, which received an actual investment of 4.26M€₂₀₀₉.

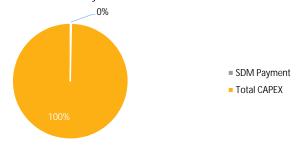


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Rom	ania - ROMATSA					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Pilot Platform WXXM	-	0.03	-	-	- [0.03
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report) SDM Payment	- 0.03	0.03	- 0.01	-	-	0.03 0.10

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



"Pilot platform WXXM" is the only project funded through CEF/TEN-T (co-financed by INEA), receiving 0.03M \in_{2009} in 2016. However, the SDM Payment is higher than the funding declaration and reveals funding of 0.10M \in_{2009} , representing 0.30% of the actual total CAPEX.

No clear information with regard to the source of the funding has been provided.

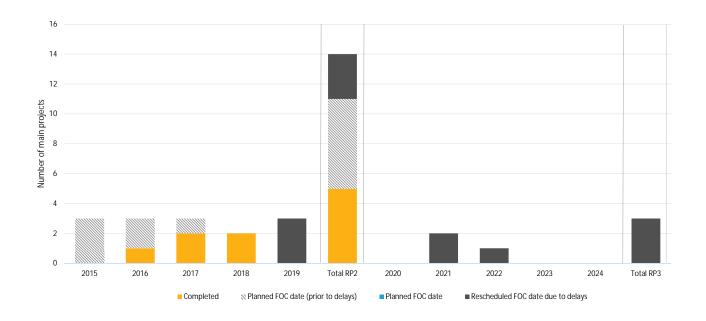


11 ADS-B solutions

EXPECTED BENEFIT PER PROJECT Romania - ROMATSA								
# Main Projects	Status in 2018	FOC date*	Ехре	ected be	nefit pei	r KPA	PCP	NOP
			SAF	ENV	CAP	CEF		
1 ATM System ROMATSA 2015+ (STEP 1)	Delayed	2019	Х	Х	Х	Х	Х	Х
2 MSSR Mode S radar	Completed	2017	Х	Х	Х	Х		
3 DVOR Systems	Completed	2016	Х	Х	Х	Х		
4 VCSS Systems (CNS 03 - 10-13)	Completed	2017	Х		Х	Х		
5 VCSS Systems (CNS 03 - 14)	Completed	2018	Х		Х	Х		
6 ILS/DME Systems	Completed	2018	Х	Х	Х	Х		
7 ATM System ROMATSA 2015+ (STEP 2)	Delayed	2021	Х	Х	Х	Х	Х	Х
8 DVOR Systems	Delayed	2019	Х	Х	Х	Х		
9 ILS/DME Systems (CNS04 - 1)	Delayed	2019	Х	Х	Х	Х		
10 ILS/DME Systems (CNS04 - 9)	Delayed	2020	Х	Х	Х	Х		

Delayed

2020



Romania planned 11 main projects for RP2: five projects have been completed, six have been delayed, three of which are expected to be finished by the end of RP2 and three are expected to be finished in RP3.

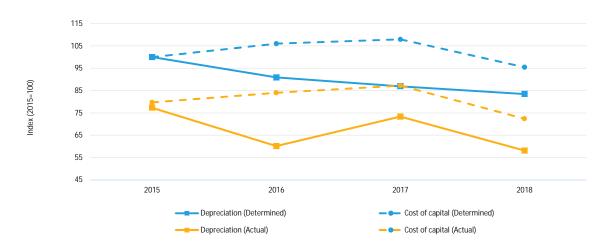
All the projects are expected to improve safety, capacity and cost-efficiency. Nine of these projects are also expected to benefits in environment.

The actual investment made in RP2 to date for the two projects linked to the Pilot Common Project is $8.75M \in_{2009}$. This amount represents 27% of the actual total CAPEX. Two projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Romania -	ROMATSA					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	11.84	10.77	10.29	9.89	30.61	42.79
- En route	11.08	9.85	9.21	9.22	30.14	39.36
- Terminal	0.76	0.92	1.09	0.67	0.47	3.43
Cost of Capital	8.09	8.57	8.73	7.72	7.49	33.11
- En route	7.62	7.86	7.78	6.92	6.71	30.17
- Terminal	0.47	0.71	0.95	0.80	0.77	2.93
Total	19.93	19.34	19.02	17.61	38.09	75.90
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	9.16	7.12	8.69	6.89	-	31.85
- En route	8.70	6.45	7.82	6.04	-	29.01
- Terminal	0.46	0.67	0.87	0.84	-	2.84
Cost of Capital	6.45	6.79	7.05	5.86	-	26.15
- En route	6.11	6.11	6.29	5.12	-	23.63
- Terminal	0.33	0.68	0.77	0.73	-	2.52
Total	15.60	13.92	15.74	12.74	-	58.00
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
<u>b</u>				<i>t</i> =1	1	
Depreciation	(2.69)	(3.64)	(1.61)	(3.00)	-	(10.94)
- En route	(2.38)	(3.40)	(1.39)	(3.18)	-	(10.35)
- Terminal	(0.31)	(0.25)	(0.22)	0.18	-	(0.59)
Cost of Capital	(1.64)	(1.78)	(1.67)	(1.86)	-	(6.95)
- En route	(1.51)	(1.75)	(1.49)	(1.80)	-	(6.55)
- Terminal	(0.13)	(0.03)	(0.18)	(0.06)	-	(0.41)
Total	(4.33)	(5.42)	(3.28)	(4.86)	-	(17.90)



Over the first 4 years of RP2, 56% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 17.90M \in 2009 (or 24%) for investments that have not been materialised RP2 to date.

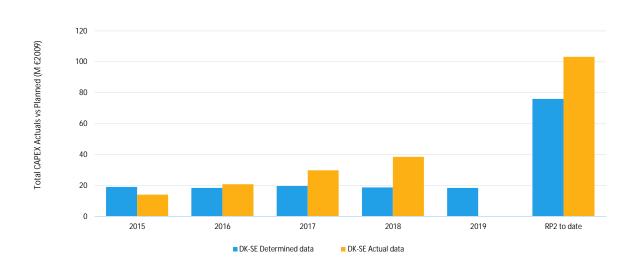
Throughout RP2 to date, the actual depreciation was lower than the determined one by $10.94M \in_{2009}$. This was due to the lower level of investments, resulting in a lower asset base and therefore lower depreciation.

Throughout RP2 to date, the actual cost of capital was $6.95 \text{M} \in_{2009}$ lower than determined. This was because of both a lower than determined fixed asset base due to the lower level of investments and a lower than determined WACC (on average, actual WACC was on average 6.65%, while in the Performance Plan it was set at 7.85%).



4.4 DK-SE FAB

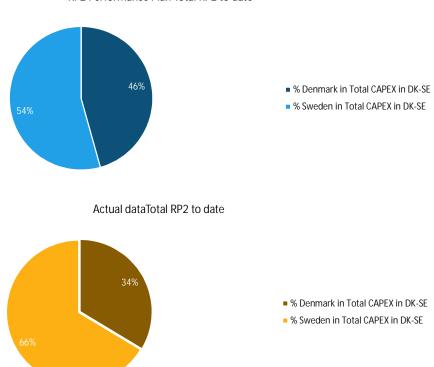
OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D R	P2 to date
Total CAPEX	19.09	18.42	19.65	18.80	18.41	75.96
- Main CAPEX	8.80	1.60	6.29	4.54	4.01	21.24
- % Main into Total CAPEX	46%	9%	32%	24%	22%	28%
- Other CAPEX	10.29	16.82	13.36	14.25	14.40	54.72
- % Other into Total CAPEX	54%	91%	68%	76%	78%	72%
- Denmark in Total CAPEX in DK-SE	8.43	8.01	9.45	8.80	8.61	34.68
- % Denmark in Total CAPEX in DK-SE	44%	43%	48%	47%	47%	46%
- Sweden in Total CAPEX in DK-SE	10.66	10.41	10.20	10.00	9.80	41.28
- % Sweden in Total CAPEX in DK-SE	56%	57%	52%	53%	53%	54%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A R	P2 to date
Total CAPEX	14.07	20.84	29.83	38.49	- [103.23
- Main CAPEX	4.72	10.68	23.50	29.97	-	68.87
- % Main into Total CAPEX	34%	51%	79%	78%	-	67%
- Other CAPEX	9.35	10.17	6.33	8.51	-	34.36
- % Other into Total CAPEX	66%	49%	21%	22%	-	33%
- Denmark in Total CAPEX in DK-SE	4.70	8.74	10.06	11.17	-	34.67
- % Denmark in Total CAPEX in DK-SE	33%	42%	34%	29%	-	34%
- Sweden in Total CAPEX in DK-SE	9.37	12.10	19.77	27.31	-	68.56
- % Sweden in Total CAPEX in DK-SE	67%	58%	66%	71%	-	66%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(5.02)	2.42	10.18	19.69	-	27.27
- Main CAPEX	(4.07)	9.07	17.21	25.43	-	47.64
- Other CAPEX	(0.94)	(6.65)	(7.03)	(5.74)	-	(20.36)
Total CAPEX (%)	-26%	13%	52%	105%	-	36%
- Main CAPEX (%)	-46%	565%	274%	560%	-	224%
- Other CAPEX (%)	-9%	-40%	-53%	-40%	-	-37%





OVERALL INVESTMENTS DK-SE FAB

RP2 Performance Plan Total RP2 to date



The total CAPEX to date in the DK-SE FAB is 103.23M \in 2009, 36% higher than planned, due to Sweden spending more than initially planned. In 2015, the actual CAPEX was 5.02M \in 2009, 26% lower than planned. For 2016, the actual CAPEX was 2.42M \in 2009, 13% more than planned. 2017 also saw an actual CAPEX of 10.18M \in 2009, 52% more than planned. The trend continued through 2018, when the total actual CAPEX was 19.69M \in 2009, 105% more than planned.

In terms of planned expenses, Denmark represented 46%, while Sweden amounting for 54%. The percentages of actual expenses for Denmark and Sweden were 34% and 66%, respectively. This shift in prercentages was due to Sweden, as Denmark's actual CAPEX was similar to the planned one.

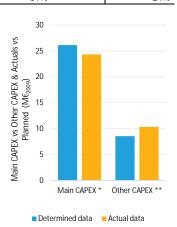


4.4.1 Denmark - Naviair

Throughout the RP2 to date, Denmark spent roughly the same amount with respect to the Performance Plan, $34.67\text{M} \in_{2009}$ ($34.68\text{M} \in_{2009}$ planned). Despite the actual total capital expenditure being similar to the planned one, the actual total depreciation and cost of capital were lower than determined (- $7.08\text{M} \in_{2009}$). Denmark planned two main projects for RP2, both have started.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	8.43	8.01	9.45	8.80	8.61	34.68
- Main CAPEX *	5.66	5.77	7.61	7.10	6.95	26.14
- % Main into Total CAPEX	67%	72%	80%	81%	81%	75%
- Other CAPEX **	2.77	2.24	1.84	1.69	1.66	8.54
- % Other into Total CAPEX	33%	28%	20%	19%	19%	25%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	4.70	8.74	10.06	11.17	- [34.67
- Main CAPEX	2.60	6.30	6.62	8.83	-	24.35
- % Main into Total CAPEX	55%	72%	66%	79%	-	70%
- Other CAPEX	2.10	2.44	3.44	2.35	-	10.33
- % Other into Total CAPEX	45%	28%	34%	21%	-	30%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(3.72)	0.73	0.61	2.38	- [(0.01)
- Main CAPEX	(3.06)	0.53	(0.98)	1.72	-	(1.79)
- Other CAPEX	(0.66)	0.20	1.60	0.65	- 1	1.79
Total CAPEX (%)	-44%	9%	6%	27%	-	0%
- Main CAPEX (%)	-54%	9%	-13%	24%	-	-7%
- Other CAPEX (%)	-24%	9%	87%	39%	-	21%





The total capital expenditure to date is $34.67\text{M} \in 2009$. For RP2 to date, Denmark spent $0.01\text{M} \in 2009$ less than planned. Even though the difference between the planned and actual CAPEX was minimal, the sums allocated throughout the year differed.

In the Performance Plan, an investment named "Other" was listed as main CAPEX. For the purpose of this report, "Other" was considered as other CAPEX.

In 2015, Denmark spent 3.72M \in ₂₀₀₉ less than planned, while for 2016 and 2017, Denmark overspent 0.73M \in ₂₀₀₉ and 0.61M \in ₂₀₀₉, respectively. In 2018, the total CAPEX was 2.38M \in ₂₀₀₉ higher than planned.

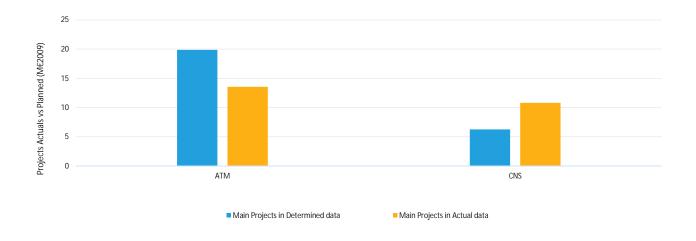
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Denmark - Naviair						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 ATM	4.33	4.24	5.65	5.64	5.52	19.86
2 CNS	1.32	1.53	1.96	1.47	1.43	6.28
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
* Walli Projects in Actual data (WE2009)	2015A	2010A	2017A	20 TOA	2019A	KP2 10 uate
1 ATM	1.49	4.13	3.92	4.01	-	13.55
2 CNS	1.11	2.17	2.71	4.81	-	10.80

# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018 2	2019	RP2 to date
1 ATM	(2.85)	(0.11)	(1.73)	(1.63)	-	(6.31)
2 CNS	(0.21)	0.63	0.75	3.35	-	4.52



For RP2 to date, the largest planned and actual investment is "ATM". Project "ATM" received 6.31M \in _{2009} less than initially planned. On the other hand, "CNS" received 4.52M \in _{2009} more than initially planned.

The difference between planned and actual expenses is due to various shifts in the start date of sub-projects. Another reason for difference is the reallocation of expenses from CAPEX to OPEX.

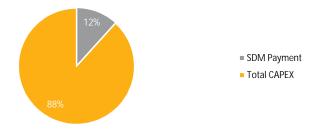


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Denma	rk - Naviair					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total	0.76	5.00	-	-	- [5.76
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.76	5.00	-	-	-	5.76
SDM Payment	0.09	2.49	1.50	-	-	4.07

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date

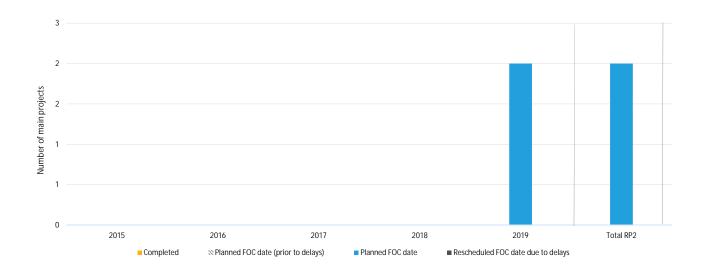


Denmark received funds through 7 different funding schemes . However, with the information provided, the funds granted could not be linked to specific projects.

The total amount granted to Denmark equals 5.76M€₂₀₀₉ representing 17% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT Denmark - Naviair								
# Main Projects	Status in 2018	Status in 2018 FOC* date Expected benefit per KPA						
			SAF	ENV	CAP	CEF		
1 ATM	Ongoing	2019	Х	Х	Х	х	Х	
2 CNS	Ongoing	2010			V		v	



Denmark planned two main projects for RP2, both have started.

There is no clear indication on the completion date of the projects. Therefore, 2019 has been used as a default.

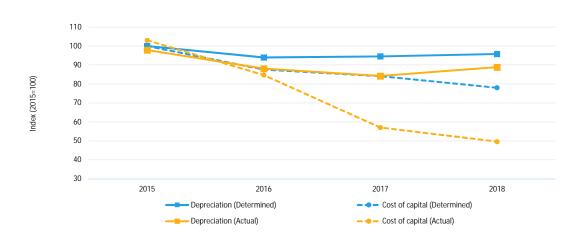
Project "ATM" is expected to benefit all four performance areas, "CNS" is expected to improve capacity.

The actual investment made in RP2 to date for the two projects that were linked to the Pilot Common Project was $24.35M \in_{2009}$. This amount represents 70% of the actual total CAPEX. No project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Denmark -	- Naviair					
THE CONTROL TO BE THE CONTROL OF THE	Navian					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	12.46	11.71	11.78	11.93	11.68	47.87
- En route	10.82	10.17	10.23	10.36	10.14	41.57
- Terminal	1.64	1.54	1.55	1.57	1.54	6.30
Cost of Capital	7.12	6.24	6.00	5.56	5.24	24.91
- En route	5.14	4.46	4.28	3.95	3.74	17.82
- Terminal	1.99	1.78	1.72	1.61	1.50	7.09
Total	19.58	17.95	17.77	17.49	16.92	72.79
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	12.19	10.98	10.49	11.07	-	44.73
- En route	10.42	9.57	9.19	9.66	-	38.84
- Terminal	1.78	1.40	1.31	1.41	-	5.89
Cost of Capital	7.34	6.03	4.06	3.54	-	20.97
- En route	5.29	4.18	2.52	2.10	-	14.09
- Terminal	2.05	1.86	1.54	1.44	-	6.88
Total	19.53	17.01	14.56	14.60	-	65.70
Difference between Actuas and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
Difference between Actuas and Determined (Me2009)	2015	2010	2017	2010	2017	KFZ 10 uate
Depreciation	(0.26)	(0.73)	(1.28)	(0.86)	- [(3.14)
- En route	(0.40)	(0.59)	(1.04)	(0.70)	-	(2.73)
- Terminal	0.13	(0.14)	(0.24)	(0.17)	-	(0.41)
Cost of Capital	0.22	(0.20)	(1.93)	(2.02)	-	(3.94)
- En route	0.15	(0.28)	(1.75)	(1.85)	-	(3.73)
- Terminal	0.06	0.07	(0.18)	(0.17)	-	(0.21)
Total	(0.05)	(0.94)	(3.22)	(2.88)	-	(7.08)



Over the first 4 years of RP2, only 0.02% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 7.08M \in 2009 for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 3.14M€₂₀₀₉. This was mainly due to a lower level of investments than expected at the start of RP2.

Throughout RP2 to date, the actual cost of capital was 3.94M \in ₂₀₀₉ lower than determined. This was due to a combination of a lower than planned fixed asset base and a lower than expected WACC (the actual debt interest rate to the State was lower than in the Performance Plan).

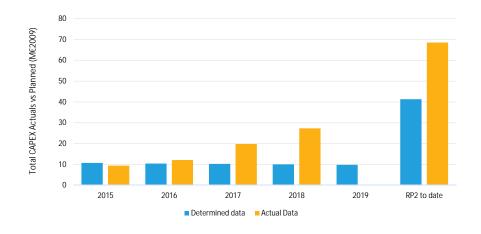


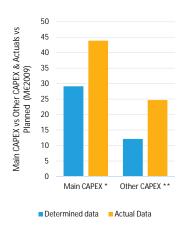
4.4.2 Sweden - LFV

Throughout the RP2 to date, Sweden overspent 27.28M \in_{2009} (+67%) with respect to the Performance Plan. Despite higher than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-3.24M \in_{2009}). Sweden planned seven main projects for RP2: four projects have been completed and three have been started, out of which one is expected to be completed in 2019 and two in RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	10.66	10.41	10.20	10.00	9.80	41.28
- Main CAPEX *	9.78	8.77	5.61	5.00	4.49	29.15
- % Main into Total CAPEX	92%	84%	55%	50%	46%	71%
- Other CAPEX **	0.89	1.65	4.59	5.00	5.31	12.13
- % Other into Total CAPEX	8%	16%	45%	50%	54%	29%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	9.37	12.10	19.77	27.31	-	68.56
- Main CAPEX	4.30	7.94	11.74	19.89	-	43.87
- % Main into Total CAPEX	46%	66%	59%	73%	-	64%
- Other CAPEX	5.07	4.16	8.03	7.43	-	24.68
- % Other into Total CAPEX	54%	34%	41%	27%	-	36%

Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(1.29)	1.69	9.57	17.31	- [27.28
- Main CAPEX	(5.47)	(0.82)	6.13	14.89	-	14.72
- Other CAPEX	4.18	2.51	3.44	2.43	-	12.56
Total CAPEX (%)	-12%	16%	94%	173%	-	66%
- Main CAPEX (%)	-56%	-9%	109%	298%	-	51%
- Other CAPEX (%)	470%	152%	75%	49%	-	204%





The total capital expenditure to date is $68.56M \in_{2009}$. For RP2 to date, Sweden spent $27.28M \in_{2009}$ (+66%) more CAPEX than originally planned. For RP2 to date, the main CAPEX is 51% higher and other CAPEX was more than doubled, 204% higher.

In 2015, Sweden spent 1.29M \in ₂₀₀₉ less than planned, while for 2016 and 2017, Sweden overspent 1.69M \in ₂₀₀₉ and 9.57M \in ₂₀₀₉, respectively. In 2018, actual CAPEX was 17.31M \in 2009 higher than planned (+173%).

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



3 Contingency

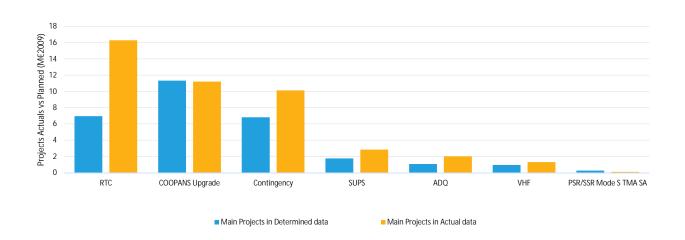
PSR/SSR Mode S TMA SA

4 SUPS

5 ADQ

6 VHF

INVESTMENTS PER MAIN PROJECT Sweden - LFV						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 RTC	4.18	2.78	-	-	-	6.95
2 COOPANS Upgrade	2.40	3.04	2.98	2.92	2.86	11.33
3 Contingency	0.44	2.17	2.13	2.08	1.63	6.82
4 SUPS	1.42	0.17	0.17	-	-	1.77
5 ADQ	1.07	-	-	-	-	1.07
6 VHF	0.27	0.35	0.34	-	-	0.95
7 PSR/SSR Mode S TMA SA	-	0.26	-	-	-	0.26
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 RTC	1.03	3.13	3.23	8.90	-	16.28
2 COOPANS Upgrade	1.90	1.87	2.45	4.97	-	11.20
3 Contingency	0.03	1.73	4.12	4.25	-	10.12
4 SUPS	0.90	0.37	0.96	0.61	-	2.84
5 ADQ	0.02	0.25	0.73	1.02	-	2.02
6 VHF	0.35	0.57	0.26	0.13	-	1.31
7 PSR/SSR Mode S TMA SA	0.07	0.03	-	-	-	0.10
	<u></u>					
# Difference between Actuals and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
1 RTC	(3.15)	0.35	3.23	8.90	-	9.33
2 COOPANS Upgrade	(0.50)	(1.16)	(0.52)	2.06	-	(0.13)



(0.42)

(0.52)

(1.05)

0.09

0.07

(0.44)

0.19

0.25

0.22

(0.23)

1.99

0.79

0.73

(0.08)

2.17

0.61

1.02

0.13

RP2 to date, the largest investment is placed in project "RTC", which received more than double of what was initially planned. That was not the case for the second largest project "COOPANS Upgrade", which received $0.13M \in_{2009}$ less than originally planned.

Projects "Contingency", "SUPS", "ADQ" and "VHF" also received more funds than originally planned.

3.30

1.07

0.95

0.36

(0.16)

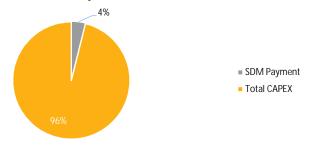


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Sweden - LFV						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	1.88	7.70	0.60	2.70	-	12.88
Actual funding declaration vs Payments (M€ ₂₀₀₀)	2015	2016	2017	2018	2019	RP2 to date
	1.00	7.70	0.40	2.70	ı	12.00
Funding declaration (Monitoring Report) SDM Payment	1.88 0.11	7.70 2.05	0.60 0.51	2.70	-	12.88 2.67

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



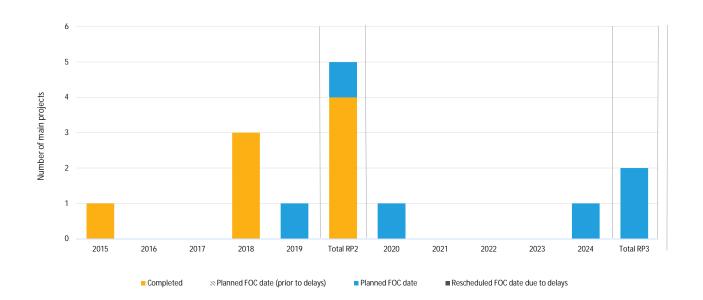
Sweden received funds through 12 different funding schemes. However, with the information provided, the funds granted could not be linked to specific projects.

The total amount granted to Sweden equals 12.88M€₂₀₀₉, representing 19% of the actual total CAPEX.



EVALATED	DENIECIT DED DOG ICATA	
ISYPEMIEN	BENEFIT PER PROJECT Swede	an ₋II-V

# Main Projects	Status in 2018	FOC date*	Ехрє	ected be	PCP	NOP		
			SAF	ENV	CAP	CEF		
1 RTC	Ongoing	2019						
2 COOPANS Upgrade	Ongoing	2024	Х	Х	Х	Х		
3 Contingency	Ongoing	2020	Х	Х	Х	Х		
4 SUPS	Completed	2018		Х		Х		
5 ADQ	Completed	2018	Х	Х	Х			
6 VHF	Completed	2018	Х		Х	Х		
7 PSR/SSR Mode S TMA SA	Completed	2015	Х	Х	Х	Х		



Sweden planned seven main projects for RP2: four projects have been completed and three have been started, out of which one is expected to be completed in 2019 and two in RP3.

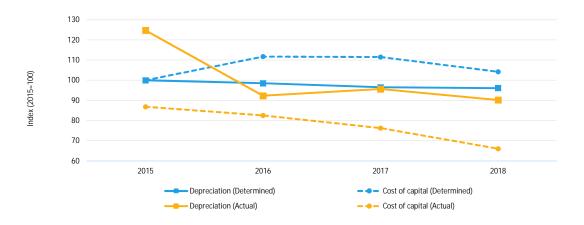
Five projects are expected to benefit each of the four KPAs. The project "RTC" is not expected to benefit any KPA.

None of the projects were linked to the Pilot Common Project or included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Sweden -	LFV					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	15.83	15.60	15.28	15.21	15.03	61.93
- En route	15.20	15.00	14.83	14.75	14.65	59.78
- Terminal	0.63	0.61	0.45	0.46	0.38	2.15
Cost of Capital	4.42	4.94	4.93	4.61	4.49	18.89
- En route	4.16	4.66	4.62	4.29	4.20	17.73
- Terminal	0.26	0.28	0.30	0.31	0.29	1.16
Total	20.25	20.54	20.21	19.82	19.52	80.81
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to dat
Depreciation	19.75	14.62	15.14	14.28	-	63.80
- En route	18.68	13.78	14.73	13.88	-	61.07
- Terminal	1.07	0.84	0.41	0.40	-	2.73
Cost of Capital	3.84	3.65	3.37	2.92	-	13.77
- En route	3.50	3.34	3.05	2.74	-	12.62
- Terminal	0.34	0.31	0.32	0.18	-	1.15
Total	23.59	18.27	18.51	17.20	-	77.58
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	3.92	(0.98)	(0.14)	(0.93)	-	1.88
- En route	3.48	(1.22)	(0.10)	(0.87)	-	1.29
- Terminal	0.44	0.24	(0.03)	(0.06)	-	0.58
Cost of Capital	(0.58)	(1.29)	(1.56)	(1.69)	-	(5.11
- En route	(0.66)	(1.32)	(1.58)	(1.55)	-	(5.10
- Terminal	0.08	0.03	0.02	(0.14)	-	(0.01
Total	3.34	(2.27)	(1.69)	(2.61)	-	(3.24



Over the first 4 years of RP2, the actual CAPEX was 66% higher than determined (overspent). Despite this fact, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 3.24M€₂₀₀₉ for investments that have been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by $1.88M \in_{2009}$. In 2015, higher depreciation was mainly due to scrapping, write-downs in conjunction with stocktaking and review of fixed assets and their book value. In 2016, the depreciation was $0.98M \in_{2009}$ lower than determined, mainly as a result of the extra depreciation made in 2015. The depreciation in 2017 was $0.14M \in_{2009}$ lower than determined, mainly due to a change in the depreciation periods after an inventory. In 2018, the trend of depreciation continued, being $0.93M \in_{2009}$ less than determined, as a result of some assets entering into operation slightly later than planned.

Throughout RP2 to date, the actual cost of capital was 5.11M \in_{2009} lower than determined. This was mainly due to a lower than planned fixed asset base (as a result of the reasons described above) and also due to an actual WACC lower than planned.

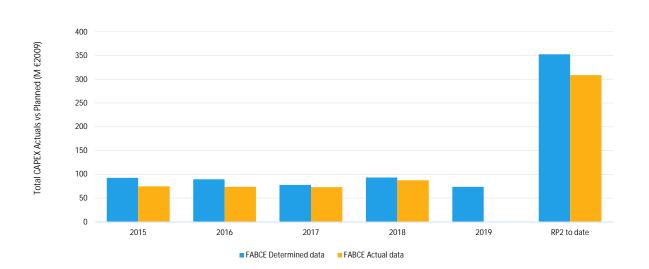


4.5 FAB CE

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to da
Betermined data (Me2009)	20100	20100	20170	20100	20170	N 2 to da
Total CAPEX	92.32	89.37	77.63	93.00	73.55	352.3
- Main CAPEX	70.95	71.72	64.56	80.66	62.67	287.8
- % Main into Total CAPEX	77%	80%	83%	87%	85%	82
- Other CAPEX	21.38	17.65	13.07	12.33	10.88	64.4
- % Other into Total CAPEX	23%	20%	17%	13%	15%	18
Austria in Tatal CAREV in FARCE	22.57	22.02	20.05	21.70	20 55 1	100
- Austria in Total CAPEX in FABCE	23.57	23.92	30.05	31.79	30.55	109.
- % Austria in Total CAPEX in FABCE	26%	27%	39%	34%	42%	3
- Croatia in Total CAPEX in FABCE	11.91	10.56	10.19	9.02	7.91	41.
- % Croatia in Total CAPEX in FABCE	13%	12%	13%	10%	11%	1:
- Czech Republic in Total CAPEX in FABCE	29.71	30.23	16.52	20.02	10.62	96.
- % Czech Republic in Total CAPEX in FABCE	32%	34%	21%	22%	14%	2
- Hungary in Total CAPEX in FABCE	16.89	14.90	5.50	14.51	13.03	51.
- % Hungary in Total CAPEX in FABCE	18%	17%	7%	16%	18%	1
- Slovakia in Total CAPEX in FABCE	8.68	8.31	14.34	14.54	8.30	45.
- % Slovakia in Total CAPEX in FABCE	9%	9%	18%	16%	11%	1
- Slovenia in Total CAPEX in FABCE	1.56	1.45	1.03	3.11	3.14	7.
- % Slovenia in Total CAPEX in FABCE	2%	2%	1%	3%	4%	
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to da
Total CAPEX	74.64	73.73	72.96	87.30	-	308.6
- Main CAPEX	55.40	58.51	47.85	67.56	-	229.
- % Main into Total CAPEX	74%	79%	66%	77%	-	7
- Other CAPEX	19.23	15.21	25.11	19.75	-	79.
- % Other into Total CAPEX	26%	21%	34%	23%	-	2
- Austria in Total CAPEX in FABCE	20.29	22.04	19.11	24.70	ı	86.
- % Austria in Total CAPEX in FABCE	20.29	30%	26%	28%	-	2
- Croatia in Total CAPEX in FABCE	7.25	7.35	10.37	13.55	-	38.
- % Croatia in Total CAPEX IN FABCE	10%	10%	10.37	16%	-	36. 1
- Czech Republic in Total CAPEX in FABCE	17.88	30.71	25.70	33.77	-	108.
- % Czech Republic in Total CAPEX in FABCE	24%	42%	35%	39%	-	3
·		9.79	14.14	9.96	-	3 55.
- Hungary in Total CAPEX in FABCE	21.38				-	
- % Hungary in Total CAPEX in FABCE	29%	13%	19%	11%	-	1
- Slovakia in Total CAPEX in FABCE	6.75	2.68	2.09	3.76	-	15.
- % Slovakia in Total CAPEX in FABCE	9%	4%	3%	4%	-	
- Slovenia in Total CAPEX in FABCE	1.10	1.16	1.55	1.56	-	5.
- % Slovenia in Total CAPEX in FABCE	1%	2%	2%	2%	-	

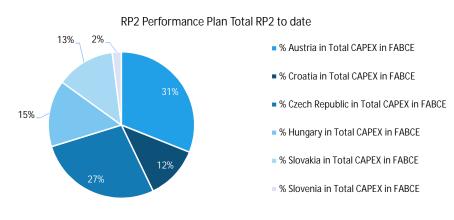


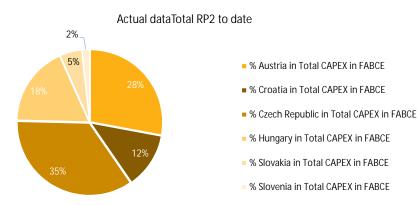
OVERALL INVESTMENTS FAB CE						
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(17.69)	(15.64)	(4.67)	(5.69)	-	(43.69)
- Main CAPEX	(15.54)	(13.21)	(16.71)	(13.11)	-	(58.57)
- Other CAPEX	(2.14)	(2.43)	12.04	7.41	-	14.87
Total CAPEX (%)	-19%	-18%	-6%	-6%	-	-12%
- Main CAPEX (%)	-22%	-18%	-26%	-16%	-	-20%
- Other CAPEX (%)	-10%	-14%	92%	60%	-	23%





OVERALL INVESTMENTS FAB CE





The total capital expenditure to date for FABCE is $308.63M_{£2009}$. For RP2 to date, investments in FABCE are $43.69M_{£2009}$ lower than originally planned. In RP2 to date, the investments were lower than planned in every year of the period. In the FAB, Austria, Croatia, Slovakia and Slovenia underspent, with respect to the Performance Plan, while the Czech Republic and Hungary overspent.

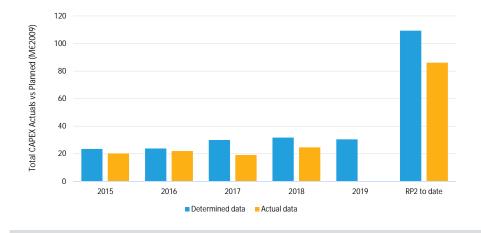
In terms of actual investments to date, Slovenia represents a minimal share of 2% of the actual investments, Slovakia represents 5% (down from 13% in determined data, due to underspending), Hungary represents 18% due to a small overspending, the Czech Republic represents the largest share, with 35% due to overspending, Croatia represents 12% and Austria represents 28% of the actual investments to date.

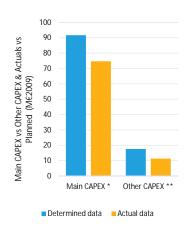


4.5.1 Austria - Austro Control

Throughout the RP2 to date, Austria underspent 23.19M \in_{2009} with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-5.16M \in_{2009}). Austria planned seven main projects for RP2, all of which have been started and are expected to be completed in RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	23.57	23.92	30.05	31.79	30.55	109.34
- Main CAPEX *	20.25	17.81	25.83	27.79	27.23	91.68
- % Main into Total CAPEX	86%	74%	86%	87%	89%	84%
- Other CAPEX **	3.32	6.11	4.23	3.99	3.31	17.65
- % Other into Total CAPEX	14%	26%	14%	13%	11%	16%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	20.29	22.04	19.11	24.70	-	86.15
- Main CAPEX	16.97	19.33	16.55	21.86	-	74.72
- % Main into Total CAPEX	84%	88%	87%	89%	-	87%
- Other CAPEX	3.32	2.71	2.56	2.84	-	11.43
- % Other into Total CAPEX	16%	12%	13%	11%	-	13%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(3.28)	(1.88)	(10.94)	(7.09)	- [(23.19)
- Main CAPEX	(3.29)	1.52	(9.27)	(5.93)	-	(16.97)
- Other CAPEX	0.00	(3.40)	(1.67)	(1.15)	-	(6.22)
Total CAPEX (%)	-14%	-8%	-36%	-22%	-	-21%
- Main CAPEX (%)	-16%	9%	-36%	-21%	-	-19%
- Other CAPEX (%)	0%	-56%	-39%	-29%	_	-35%





The total capital expenditure to date is $86.15M \in_{2009}$. For RP2 to date, Austria spent $23.19M \in_{2009}$ (-21%) less CAPEX than originally planned. For RP2 to date, the main CAPEX is 19% lower than planned, while other CAPEX is 35% lower.

Austria invested less than initially planned, in every year of RP2 to date, 3.28M€₂₀₀₉ less in 2015, 1.88M€₂₀₀₉ less in 2016, 10.94M€₂₀₀₉ less in 2017 and 7.09M€₂₀₀₉ less in 2018.

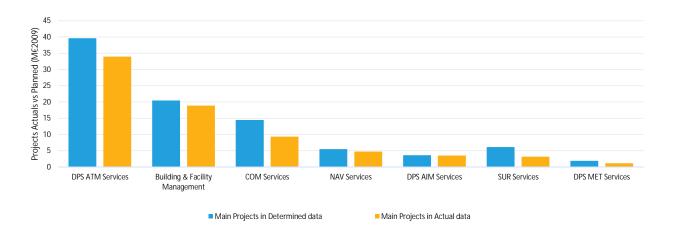
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Austria - Austro Control						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 DPS ATM Services	8.44	7.11	11.93	12.12	11.19	39.60
2 Building & Facility Management	5.57	3.76	6.78	4.35	2.73	20.46
3 COM Services	3.32	3.22	3.17	4.75	5.53	14.46
4 NAV Services	1.53	0.73	1.27	1.99	4.00	5.51
5 DPS AIM Services	1.02	0.91	0.87	0.82	0.79	3.62
6 SUR Services	0.04	1.72	0.85	3.54	2.66	6.14
7 DPS MET Services	0.33	0.36	0.96	0.24	0.34	1.88
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 DPS ATM Services	8.37	8.03	5.58	11.96	-	33.95
2 Building & Facility Management	3.56	5.74	5.57	4.01	-	18.88
3 COM Services	3.14	3.05	1.66	1.46	-	9.31
4 NAV Services	0.37	0.44	2.07	1.85	-	4.74
5 DPS AIM Services	0.59	0.84	1.06	1.03	-	3.51
6 SUR Services	0.66	0.76	0.43	1.32	-	3.17
7 DPS MET Services	0.28	0.47	0.18	0.22	-	1.15

#	Difference between Actuals and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
1	DPS ATM Services	(0.07)	0.92	(6.35)	(0.16)	-	(5.66)
2	Building & Facility Management	(2.02)	1.99	(1.21)	(0.33)	-	(1.58)
3	COM Services	(0.19)	(0.17)	(1.51)	(3.28)	-	(5.15)
4	NAV Services	(1.16)	(0.29)	0.81	(0.14)	-	(0.77)
5	DPS AIM Services	(0.43)	(0.08)	0.19	0.21	-	(0.11)
6	SUR Services	0.63	(0.96)	(0.41)	(2.22)	-	(2.97)
7	DPS MET Services	(0.05)	0.11	(0.78)	(0.01)	-	(0.74)



RP2 to date, the main project is the "DPS ATM Services" with a total actual investment of $33.95M \in_{2009}$; however the amount spent is $5.66M \in_{2009}$ less than initially planned. The second largest project is "Building and Facility Management" which received $18.88M \in_{2009}$, $1.58M \in_{2009}$ less compared to the determined.

For all 7 main projects the actual investment is lower than planned.

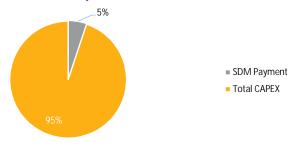


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Austri	a - Austro Control					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	0.48	5.07	0.93	0.26	-	6.73
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.48	5.07	0.93	0.26	-	6.73
SDM Payment	0.81	2.41	1.20	-	-	4.41

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



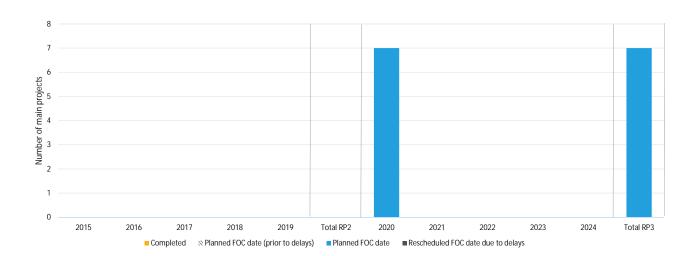
Austria received funds from CEF in the years of 2014, 2015 and 2016. The projects which received funding are "COM Services", "NAV Services", "DPS ATM Services", "DPS AIM Services" and "DPS MET Services". However, with the information provided, the individual amount of funding per project could not be linked.

The total amount granted to Austria was 6.73M \in 2009, representing 8% of the actual total CAPEX.



EXPECTED RENI	EFIT PER PROJECT	Austria - Austro (Control
		AUSUI (C. AUSUI (C.)	oon a or

# Main Projects	Status in 2018	FOC date*	Expected benefit per KPA			PCP	NOP	
			SAF	ENV	CAP	CEF		
1 DPS ATM Services	Ongoing	2020	Х	Х	Х	Х	Х	
2 Building & Facility Management	Ongoing	2020	Х	Х		Х		
3 COM Services	Ongoing	2020	Х	Х	Х	Х	Х	
4 NAV Services	Ongoing	2020	Х		Х	Х	Х	
5 DPS AIM Services	Ongoing	2020	Х		Х	Х	Х	
6 SUR Services	Ongoing	2020	Х		Х	Х	Х	
7 DPS MET Services	Ongoing	2020	Х		Х	Х	Х	



Austria planned seven main projects for RP2, all of which have been started and are expected to be completed in RP3.

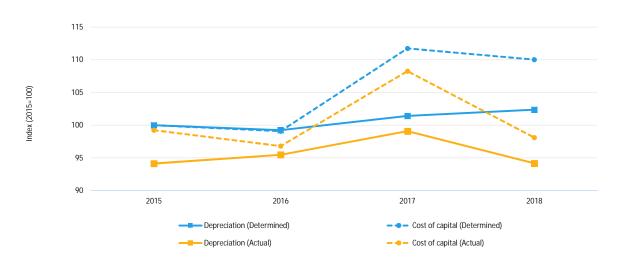
Austria invested in safety, capacity and cost efficiency (six out of seven projects) as priorities. Three out of seven projects are expected to bring benefits for the environment.

The actual investment made in RP2 to date for the six projects that were linked to the Pilot Common Project is $51.1M \in_{2009}$. This amount represents 59% of the actual Main CAPEX. No project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



	·					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	21.31	21.14	21.61	21.81	21.68	85.87
- En route	16.00	16.16	16.68	16.96	16.93	65.80
- Terminal	5.30	4.98	4.92	4.86	4.75	20.00
Cost of Capital	4.74	4.70	5.30	5.22	5.13	19.9
- En route	4.06	4.03	3.99	3.93	3.87	16.02
- Terminal	0.68	0.67	1.31	1.29	1.27	3.94
Total	26.05	25.84	26.90	27.03	26.82	105.83
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to dat
Depreciation	20.06	20.34	21.11	20.06	-	81.58
- En route	15.97	16.35	16.19	15.58	-	64.0
- Terminal	4.09	4.00	4.92	4.49	-	17.4
Cost of Capital	4.71	4.59	5.13	4.65	-	19.09
- En route	4.18	4.08	3.97	3.66	-	15.8
- Terminal	0.53	0.51	1.16	1.00	-	3.2
Total	24.76	24.93	26.25	24.72	-	100.6
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to dat
Depreciation	(1.25)	(0.80)	(0.49)	(1.75)	- [(4.29
- En route	(0.03)	0.19	(0.49)	(1.38)	-	(1.7
- Terminal	(1.22)	(0.99)	(0.00)	(0.37)	-	(2.5
Cost of Capital	(0.04)	(0.11)	(0.16)	(0.57)	-	(0.8
- En route	0.11	0.05	(0.02)	(0.28)	-	(0.13
- Terminal	(0.15)	(0.16)	(0.15)	(0.29)	-	(0.74
Total	(1.29)	(0.91)	(0.66)	(2.31)	-	(5.16



Over the first 4 years of RP2, 21% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 5.16M€₂₀₀₉ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 4.29M€₂₀₀₉. This was mainly due to delayed investments in 2017/2018 (e.g. VCS, ASR Vienna).

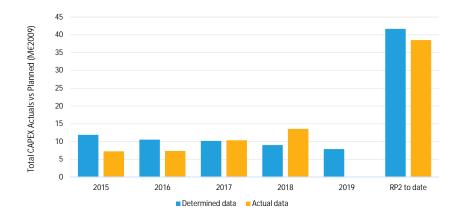
Throughout RP2 to date, the actual cost of capital was lower than the determined one by $0.87M \in_{2009}$. This was mainly due to a lower than determined fixed asset base as a result of the delays in investments (the actual WACC was in line with the Performance Plan).

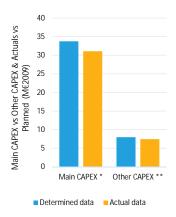


4.5.2 Croatia - Croatia Control

Throughout the RP2 to date, Croatia underspent $3.16M \in_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-9.79M \in_{2009}). Croatia planned seven projects for RP2: all have been started, one is expected to be completed in 2019, while the remaining six are expected to continue through RP3.

OVERALL INVESTMENTS						
OAFICHER HAFDHAFAID						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	11.91	10.56	10.19	9.02	7.91	41.68
- Main CAPEX *	9.45	8.56	8.21	7.51	6.55	33.73
- % Main into Total CAPEX	79%	81%	81%	83%	83%	81%
- Other CAPEX **	2.45	2.01	1.98	1.51	1.36	7.95
- % Other into Total CAPEX	21%	19%	19%	17%	17%	19%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	7.25	7.35	10.37	13.55	-	38.52
- Main CAPEX	5.17	5.68	8.57	11.66	-	31.08
- % Main into Total CAPEX	71%	77%	83%	86%	-	81%
- Other CAPEX	2.08	1.67	1.80	1.89	-	7.43
- % Other into Total CAPEX	29%	23%	17%	14%	-	19%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(4.66)	(3.22)	0.19	4.53	- [(3.16)
- Main CAPEX	(4.28)	(2.88)	0.36	4.15	-	(2.65)
- Other CAPEX	(0.38)	(0.34)	(0.17)	0.37	- [(0.52)
Total CAPEX (%)	-39%	-30%	2%	50%	-	-8%
- Main CAPEX (%)	-45%	-34%	4%	55%	-	-8%
- Other CAPEX (%)	-15%	-17%	-9%	25%	-	-7%





The total capital expenditure to date is $38.52\text{M} \in 2009$. For RP2 to date, Croatia spent $3.16\text{M} \in 2009$ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 8% lower than planned, while other CAPEX is 7% lower.

For 2015 and 2016, Croatia underspent $4.66M \in_{2009}$ and $3.22M \in_{2009}$, respectively. For 2017 and 2018, Croatia overspent $0.19M \in_{2009}$ and $4.53M \in_{2009}$, respectively.

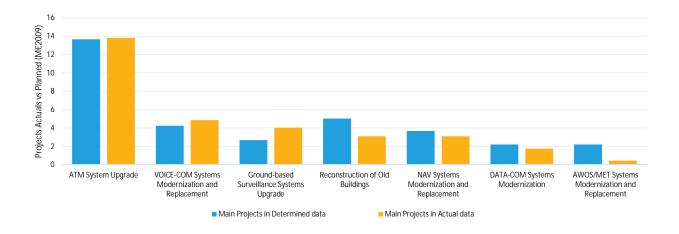
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Croatia - Croatia Control						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 ATM System Upgrade	5.03	2.94	2.89	2.82	2.75	13.68
2 VOICE-COM Systems Modernization and Replacement	0.33	1.68	1.29	0.95	0.82	4.25
3 Ground-based Surveillance Systems Upgrade	1.10	0.68	0.67	0.24	0.23	2.68
4 Reconstruction of Old Buildings	1.25	0.90	1.46	1.42	1.39	5.03
5 NAV Systems Modernization and Replacement	0.87	1.11	0.97	0.71	0.93	3.67
6 DATA-COM Systems Modernization	0.82	0.36	0.32	0.71	0.34	2.21
7 AWOS/MET Systems Modernization and Replacement	0.05	0.89	0.61	0.65	0.09	2.20
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 ATM System Upgrade	2.58	2.72	3.24	5.28	-	13.83
2 VOICE-COM Systems Modernization and Replacement	0.29	0.29	0.50	3.78	-	4.86
3 Ground-based Surveillance Systems Upgrade	1.12	0.08	1.96	0.88	-	4.03
4 Reconstruction of Old Buildings	0.13	0.84	1.27	0.85	-	3.09
5 NAV Systems Modernization and Replacement	0.75	0.96	0.76	0.61	-	3.09
6 DATA-COM Systems Modernization	0.09	0.77	0.74	0.16	-	1.75
7 AWOS/MET Systems Modernization and Replacement	0.21	0.03	0.09	0.10	-	0.43

#	Difference between Actuals and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
							1
1_	ATM System Upgrade	(2.45)	(0.21)	0.35	2.46	-	0.15
2	VOICE-COM Systems Modernization and Replacement	(0.04)	(1.39)	(0.79)	2.83	-	0.61
3	Ground-based Surveillance Systems Upgrade	0.02	(0.60)	1.29	0.64	-	1.35
4	Reconstruction of Old Buildings	(1.12)	(0.06)	(0.19)	(0.57)	-	(1.94)
5	NAV Systems Modernization and Replacement	(0.12)	(0.15)	(0.21)	(0.10)	-	(0.58)
6	DATA-COM Systems Modernization	(0.73)	0.41	0.42	(0.55)	-	(0.46)
7	AWOS/MET Systems Modernization and Replacement	0.16	(0.86)	(0.51)	(0.56)	-	(1.77)



RP2 to date, Croatia's main project is the "ATM System Upgrade" with a total actual investment of 13.83M€₂₀₀₉, 0.15M€₂₀₀₉ more than initially planned.

The second largest project is the "VOICE_COM Systems Modernization and Replacement Project" with a total investment of $4.86M \in_{2009}$. For this project, Croatia spent $0.61M \in_{2009}$ more than planned.

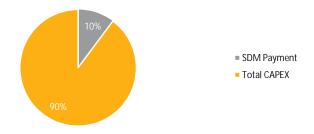


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Croat	ia - Croatia Control					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	0.47	2.39	3.85	0.33	-	7.04
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.47	2.39	3.85	0.33	- [7.04
SDM Payment	0.00	3.06	0.87	-	-	3.93

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



Croatia received grants from different CEF funds for the years 2014, 2015 and 2016 (i.e. "CEF 2015 VARP", "CEF 2015 A-SMGCS", "CEF 2014 COOPANS", "CEF 2016 VCS", "CEF 2015 CODACAS 1B", 'CEF 2014 FAB CE" and "CEF 2016 DLS PATH 1").

The projects "DATA-COM Systems Modernization Project", "VOICE-COM Systems Modernization and Replacement Project", "Ground-based Surveillance

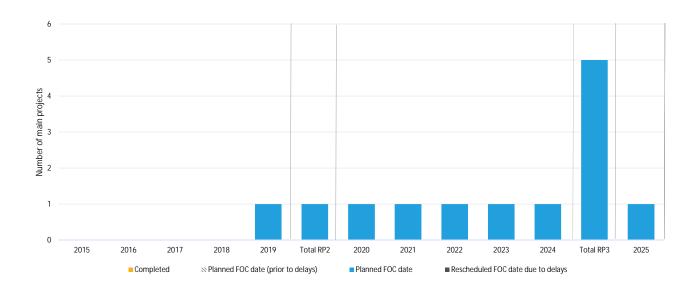
The projects "DATA-COM Systems Modernization Project", "VOICE-COM Systems Modernization and Replacement Project", "Ground-based Surveillance Systems Upgrade" and "ATM System Upgrade" received funding from the CEF/ TEN-T fund; however, with the information provided, the individual amount of funding per project could not be linked.

The total amount granted to Croatia in RP2 is 7.04M€₂₀₀₉, representing 18% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT	Croatia - Croatia Control
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# Main Projects	Status in 2018	FOC date*	Expected benefit per KPA		PCP	NOP		
			SAF	ENV	CAP	CEF		
1 ATM System Upgrade	Ongoing	2024	Х		Х	Х	Х	х
2 VOICE-COM Systems Modernization and Replacement	Ongoing	2020	Х		Х		Х	
3 Ground-based Surveillance Systems Upgrade	Ongoing	2022	Х		Х		Х	
4 Reconstruction of Old Buildings	Ongoing	2025			Х			
5 NAV Systems Modernization and Replacement	Ongoing	2021	Х	Х	Х	Х	Х	
6 DATA-COM Systems Modernization	Ongoing	2019	Х		Х	Х	Х	
7 AWOS/MET Systems Modernization and Replacement	Ongoing	2023	Х		Х	Х	Х	



Croatia planned seven projects for RP2: all have been started, one is expected to be completed in 2019, while the remaining six are expected to continue through RP3.

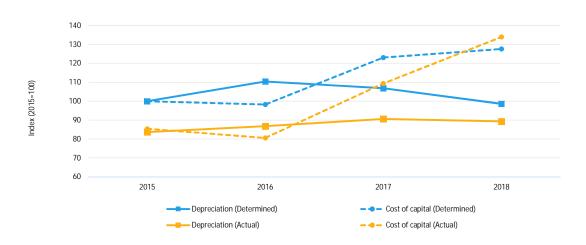
The main priority of the projects is capacity, with all projects expected to bring benefits. Six out of seven projects are expected to have a positive impact on safety, while four out of seven projects are expected to improve cost-efficiency. There is only one project that is expected to bring benefits to the environment.

The actual investment made in RP2 to date for the 6 projects that were linked to the Pilot Common Project is $27M \in_{2009}$. This amount represents 73% of the actual total CAPEX. No project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Croatia - C	roatia Control					
THE STATE OF THE S	round borni or					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	13.75	15.19	14.69	13.56	11.87	57.19
- En route	13.26	14.69	14.17	13.03	11.36	55.15
- Terminal	0.49	0.50	0.51	0.53	0.50	2.04
Cost of Capital	2.02	1.98	2.48	2.57	2.56	9.05
- En route	1.96	1.92	2.43	2.52	2.51	8.83
- Terminal	0.06	0.06	0.05	0.05	0.04	0.22
Total	15.77	17.17	17.17	16.13	14.42	66.24
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	11.51	11.94	12.46	12.29	-	48.20
- En route	11.28	11.68	12.19	12.00	-	47.15
- Terminal	0.23	0.26	0.27	0.29	-	1.04
Cost of Capital	1.72	1.62	2.20	2.70	-	8.25
- En route	1.64	1.52	2.08	2.45	-	7.68
- Terminal	0.08	0.11	0.13	0.25	-	0.57
Total	13.23	13.56	14.67	14.99	-	56.45
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(2.24)	(3.25)	(2.22)	(1.27)	- [(8.99)
- En route	(1.98)	(3.01)	(1.98)	(1.03)	-	(8.00)
- Terminal	(0.26)	(0.24)	(0.25)	(0.25)	-	(0.99)
Cost of Capital	(0.29)	(0.36)	(0.28)	0.13	-	(0.80)
- En route	(0.32)	(0.41)	(0.35)	(0.08)	-	(1.15)
- Terminal	0.02	0.05	0.07	0.20	-	0.35
Total	(2.54)	(3.61)	(2.50)	(1.15)	-	(9.79)
	• • •					<i></i> _



Over the first 4 years of RP2, 8% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 9.79M€₂₀₀₉ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by $8.99M \in_{2009}$. This was mainly due to a change in purchasing policy of equipment that slowed down the implementation of projects; a CAPEX gap coming from RP1; and a low completion rate of projects (the majority of the projects are foreseen to be completed in RP3).

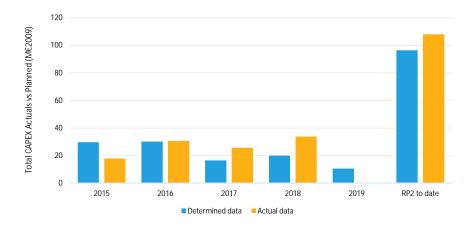
Throughout RP2 to date, cost of capital was 0.8M€₂₀₀₉ lower than determined. This was due to a lower than determined value of the fixed assets base and a lower than determined WACC for both en-route and terminal.

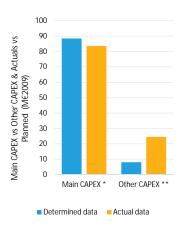


4.5.3 Czech Republic - ANS Czech Republic

Throughout the RP2 to date, the Czech Republic overspent 11.58M \in ₂₀₀₉ with respect to the Performance Plan. Despite higher than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-8.82M \in ₂₀₀₉). The Czech Republic planned 11 main projects for RP2: one project has been completed, while the remaining ten have been started and are expected to be completed in 2019.

OVEDALL INVESTMENTS						
OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	29.71	30.23	16.52	20.02	10.62	96.48
- Main CAPEX *	27.78	28.18	14.71	17.79	8.99	88.46
- % Main into Total CAPEX	94%	93%	89%	89%	85%	92%
- Other CAPEX **	1.93	2.05	1.82	2.23	1.63	8.02
- % Other into Total CAPEX	6%	7%	11%	11%	15%	8%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	17.88	30.71	25.70	33.77	-	108.05
- Main CAPEX	16.11	28.32	13.55	25.57	-	83.56
- % Main into Total CAPEX	90%	92%	53%	76%	-	77%
- Other CAPEX	1.76	2.39	12.15	8.19	-	24.50
- % Other into Total CAPEX	10%	8%	47%	24%	-	23%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(11.83)	0.48	9.17	13.75	-	11.58
- Main CAPEX	(11.67)	0.14	(1.16)	7.78	-	(4.90)
- Other CAPEX	(0.16)	0.34	10.33	5.97	-	16.48
Total CAPEX (%)	-40%	2%	56%	69%	-	12%
- Main CAPEX (%)	-42%	0%	-8%	44%	-	-6%
- Other CAPEX (%)	92%	117%	668%	368%	-	305%





The total capital expenditure to date is 108.05M ϵ_{2009} . For RP2 to date, the Czech Republic spent 11.58M ϵ_{2009} more CAPEX than originally planned. For RP2 to date, the main CAPEX is 12% higher than planned, while other CAPEX is 305% higher.

In 2015, the Czech Republic spent 11.83M \in_{2009} less than planned, while in 2016, the Czech Republic spent 0.48M \in_{2009} more than planned. For 2017 and 2018, the Czech republic overspent 9.17M \in_{2009} and 13.75M \in_{2009} respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

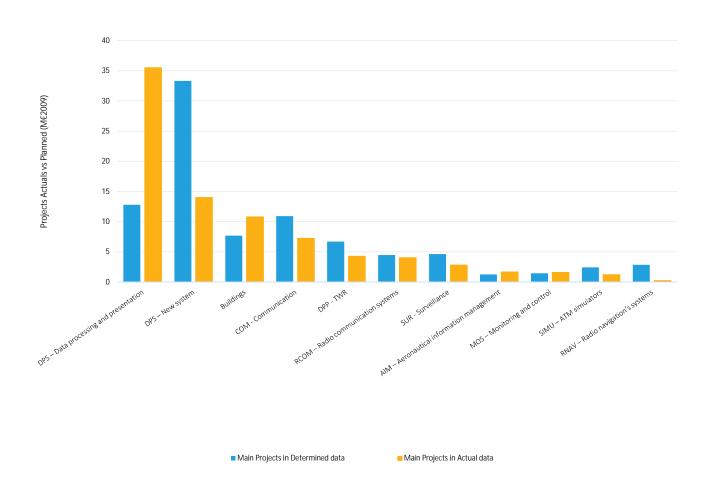
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Czech Republic - ANS Czech Republic						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
DPS – Data processing and presentation	6.54	3.03	2.04	1.18	0.97	12.79
2 DPS – New system	7.95	14.02	3.05	8.32	3.75	33.34
3 Buildings	2.28	2.35	1.95	1.08	0.63	7.67
4 COM - Communication	1.94	4.76	2.12	2.08	0.90	10.90
5 DPP - TWR	3.44	0.25	1.42	1.58	0.40	6.70
6 RCOM – Radio communication systems	2.38	1.73	0.34	-	-	4.46
7 SUR - Surveillance	1.41	0.73	0.89	1.58	-	4.62
8 AIM – Aeronautical information management	0.30	0.27	0.33	0.37	0.35	1.26
9 MOS – Monitoring and control	0.18	0.61	0.34	0.33	0.30	1.45
10 SIMU – ATM simulators	1.15	0.43	0.42	0.43	0.39	2.42
11 RNAV – Radio navigation's systems	0.22	-	1.80	0.83	1.30	2.85
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
DPS – Data processing and presentation	7.13	12.68	6.64	9.08	- 1	35.53
2 DPS – New system	7.13	5.57	-	8.45	-	14.03
3 Buildings	4.79	2.76	1.99	1.27	_	10.81
4 COM - Communication	0.15	1.91	1.53	3.65	-	7.24
5 DPP - TWR	0.13	1.30	0.96	1.51	-	
					-	4.29
6 RCOM – Radio communication systems 7 SUR - Surveillance	2.31 0.69	1.45 0.43	0.04 1.12	0.23 0.59	-	4.04
					-	2.83
8 AIM – Aeronautical information management	0.08	1.03	0.36	0.22	-	1.69
9 MOS – Monitoring and control	0.20	0.39	0.76	0.26	-	1.61
10 SIMU – ATM simulators 11 RNAV – Radio navigation's systems	0.26	0.54 0.26	0.13	0.30	-	1.23 0.26
	<u> </u>	0.20	<u> </u>	<u> </u>	-	0.20
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 R	P2 to date
1 DPS – Data processing and presentation	0.60	9.65	4.60	7.90	_	22.75
2 DPS – New system	(7.95)	(8.45)	(3.05)	0.14	-	(19.31
3 Buildings	2.51	0.41	0.04	0.19	-	3.14
4 COM - Communication	(1.79)	(2.85)	(0.59)	1.57	-	(3.66
5 DPP - TWR	(2.93)	1.05	(0.46)	(0.07)	-	(2.41
6 RCOM – Radio communication systems	(0.08)	(0.28)	(0.30)	0.23	-	(0.42
7 SUR - Surveillance	(0.72)	(0.30)	0.24	(1.00)	-	(1.79
8 AIM – Aeronautical information management	(0.22)	0.76	0.03	(0.14)	-	0.43
9 MOS – Monitoring and control	0.02	(0.22)	0.42	(0.07)	-	0.16
10 SIMU – ATM simulators	(0.89)	0.11	(0.29)	(0.12)	-	(1.19
11 RNAV – Radio navigation's systems	(0.22)	0.26	(1.80)	(0.83)	-	(2.59)
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INVESTMENTS PER MAIN PROJECT Czech Republic - ANS Czech Republic



RP2 to date, the main project in terms of planned investment is "DPS – New system", which was planned to receive $33.34M \in_{2009}$; however, the project has received $19.31M \in_{2009}$ less than planned.

The project "DPS – Data processing and presentation" received the largest amount of investment (35.53M \in ₂₀₀₉), exceeding the initial plan by 22.75M \in ₂₀₀₉. Projects "Buildings" and "Communication" were set to receive a significant share; however, reallocation of investments led to an overspending of 3.14M \in ₂₀₀₉ in "Buildings" and underspending of 3.66M \in ₂₀₀₉ in "Communication".



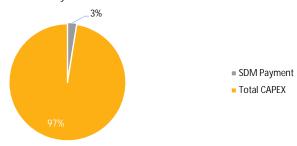
Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to d
Free Route Airspace from the Black Forest to the Black Sea	-	0.03	0.01	_	-	0.
AMAN LOWW initial	-	-	0.00	-	-	0
Extended AMAN in Czech airspace	-	-	0.10	-	-	0
Flexible ASM and Free Route	-	-	0.20	=	-	0
Free Route Implementation into ATM system of ANS CR	-	-	1.30	-	-	1
Traffic Complexity Tools	-	-	0.55	-	-	C
NewPENS Stakeholders procurement and deployment	-	-	0.03	-	-	C
Aeronautical Information Distribution Service	-	-	0.23	-	-	C
AIM Deployment Toolkit	-	-	0.05	-	-	C
Meteorological Information Exchange Service	-	-	0.03	-	-	C
Harmonised and interoperable high Performance European Surveillance	-	0.06	=	0.02	-	C
FAB CE wide Study of DAM and STAM	-	-	0.00	-	-	C
SWIM implementation into ATS INFO/ARO system of ANS CR	-	-	0.07	-	-	C
AIMSIL - AIM Systems Integration Layer	-	-	0.09	-	-	C

Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	0.09	2.67	0.02	-	2.78
SDM Payment	0.01	2.58	0.18	-	-	2.77

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



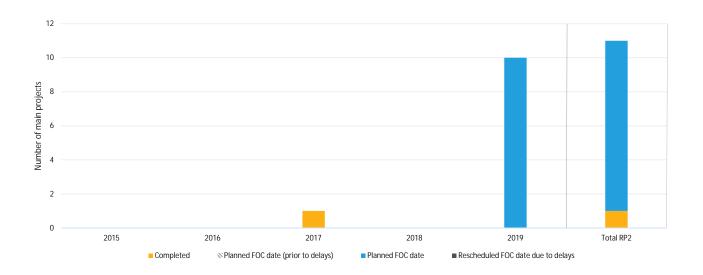
The Czech Republic received a total funding of 2.78M€2009 during the first 4 years of RP2 for 14 projects listed as "other CAPEX investments". This amount represents 3% of the actual total CAPEX.

Most of the funding has been received in 2017. The project "Free Route implementation into ATM system" received almost half of the funds, 1.30M€₂₀₀₉.



EXPECTED BENEFIT DED DOOLECT CO	zech Republic - ANS Czech Republic
LAFLUILD DLINLI II FLK FRUJLUI UZ	zecii kepublic - Alvo ozecii kepublic

# Main Projects	Status in 2018	us in 2018 FOC date* Expected benefit per KP	Expected benefit per KPA			PCP	NOP	
			SAF	ENV	CAP	CEF		
1 DPS – Data processing and presentation	Ongoing	2019	Х	Х	Х	Х	Х	
2 DPS – New system	Ongoing	2019	Х	Х	Х	Х	Х	
3 Buildings	Ongoing	2019						
4 COM - Communication	Ongoing	2019	Х		Х		Х	
5 DPP - TWR	Ongoing	2019	Х	Х	Х		Х	
6 RCOM – Radio communication systems	Completed	2017	Х		Х			
7 SUR - Surveillance	Ongoing	2019	Х		Х	Х	Х	
8 AIM – Aeronautical information management	Ongoing	2019					Х	
9 MOS – Monitoring and control	Ongoing	2019	Х					
10 SIMU – ATM simulators	Ongoing	2019	Х		Х			
11 RNAV – Radio navigation's systems	Ongoing	2019	Х		Х			



The Czech Republic planned 11 main projects for RP2: one project has been completed, while the remaining ten have been started and are expected to be completed in 2019.

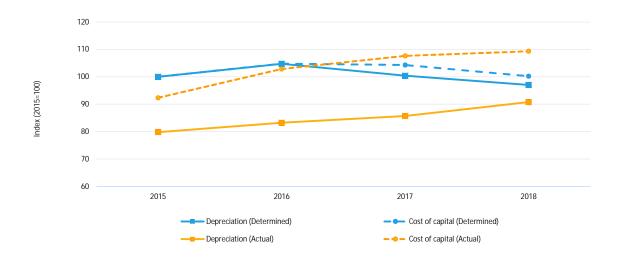
The majority of the projects will have a positive influence on both safety (9 out of 11) and capacity (8 out of 11); however, only three projects are expected to bring benefits to the environment and cost-efficiency.

The actual investment made in RP2 to date for the six projects that were linked to the Pilot Common Project is $65.62M \in_{2009}$. This amount represents 61% of the actual total CAPEX. None of the projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Czech Re	public - ANS Czech Repu	blic				
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to da
Depreciation	20.15	21.11	20.23	19.56	18.30	81.0
- En route	16.86	17.61	16.59	15.85	14.44	66.9
- Terminal	3.29	3.49	3.64	3.71	3.86	14.1
Cost of Capital	6.68	7.00	6.96	6.69	6.42	27.3
- En route	6.68	7.00	6.96	6.69	6.42	27.3
- Terminal	-	-	-	-	-	
Total	26.83	28.10	27.20	26.25	24.72	108.3
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to da
Depreciation	16.09	16.77	17.27	18.30	-	68.4
- En route	13.24	13.76	13.93	14.84	-	55.7
- Terminal	2.85	3.01	3.34	3.46	-	12.6
Cost of Capital	6.17	6.87	7.19	7.30	-	27.5
- En route	6.17	6.87	7.19	7.30	-	27.5
- Terminal	-	-	-	-	-	
Total	22.25	23.64	24.46	25.60	-	95.9
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to da
Depreciation	(4.07)	(4.34)	(2.97)	(1.26)	-1	(12.6
- En route	(3.62)	(3.85)	(2.66)	(1.01)	-	(11.1
- Terminal	(0.44)	(0.48)	(0.30)	(0.25)	-	(1.4
Cost of Capital	(0.51)	(0.13)	0.22	0.61	-	0.1
- En route	(0.51)	(0.13)	0.22	0.61	-	0.1
- Terminal	-	-	-	-	-	
Total	(4.58)	(4.47)	(2.74)	(0.65)	-	(12.4



Over the first 4 years of RP2, the actual CAPEX is 12% higher than determined (overspent). Despite this fact, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 12.44M€₂₀₀₉ for investments that have been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 12.63M \in _{2009</sub>. This was mainly due to projects implementation delays as a result of delays in public procurement processes, in particular by repetition of some tenders.

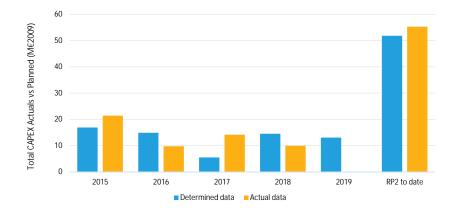
Throughout RP2 to date, cost of capital was 0.19M \in 2009 higher than determined. This was mainly due to an increase in the value of the fixed asset base.

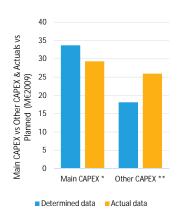


4.5.4 Hungary - HungaroControl

Throughout the RP2 to date, Hungary overspent $3.47M \in_{2009}$ with respect to the Performance Plan. Despite higher than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-5.95M \in_{2009}). Hungary planned ten main projects for RP2: four projects have been completed, three have been delayed and three have been started. All projects are expected to be completed in RP2.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	16.89	14.90	5.50	14.51	13.03	51.81
- Main CAPEX *	8.52	10.52	2.50	12.14	11.00	33.69
- % Main into Total CAPEX	50%	71%	45%	84%	84%	65%
- Other CAPEX **	8.37	4.37	3.00	2.37	2.03	18.12
- % Other into Total CAPEX	50%	29%	55%	16%	16%	35%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	21.38	9.79	14.14	9.96	-	55.27
- Main CAPEX	13.94	3.39	7.83	4.17	-	29.33
- % Main into Total CAPEX	65%	35%	55%	42%	-	53%
- Other CAPEX	7.44	6.40	6.31	5.78	-	25.94
- % Other into Total CAPEX	35%	65%	45%	58%	-	47%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	4.49	(5.11)	8.64	(4.55)	-	3.47
- Main CAPEX	5.42	(7.13)	5.33	(7.97)	-	(4.35)
- Other CAPEX	(0.93)	2.03	3.31	3.42	-	7.82
Total CAPEX (%)	27%	-34%	157%	-31%	-	7%
- Main CAPEX (%)	64%	-68%	213%	-66%	-	-13%
- Other CAPEX (%)	-11%	46%	110%	144%	-	43%





The total capital expenditure to date is $55.27M \in_{2009}$. For RP2 to date, Hungary spent $3.47M \in_{2009}$ more CAPEX than originally planned. For RP2 to date, the main CAPEX is 13% lower than planned, while other CAPEX is 43% higher.

In 2015 and 2017, Hungary overspent $4.49M \in_{2009}$ and $8.64M \in_{2009}$ (+157%) respectively. For 2016 and 2018, actual CAPEX is lower with $5.11M \in_{2009}$ and $4.55M \in_{2009}$ respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

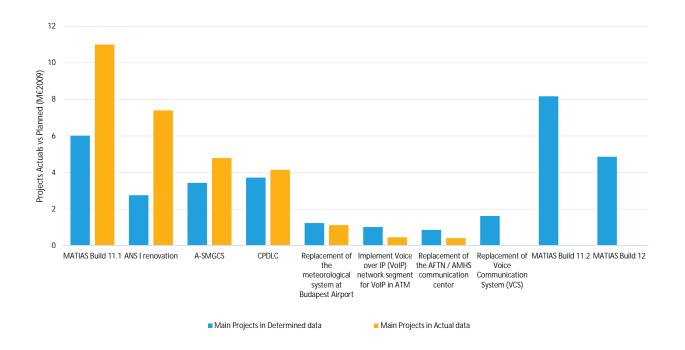
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Hungary - HungaroControl						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 MATIAS Build 11.1		/ O1			1	<i>(</i> 01
1 MATIAS Build 11.1 2 ANS I renovation	2.54	6.01 0.22	-	-	-	6.01 2.76
	2.34	3.43	-	-	-	3.43
3 A-SMGCS			-	-	-	
4 CPDLC	3.72	-	-	-	-	3.72
5 Replacement of the meteorological system at Budapest Airport 6 Implement Voice over IP (VoIP) network segment for VoIP in ATM	1.24 1.02	-	-	-	-	1.24 1.02
- implement voice over if (voil) network segment for voil in this			-	-	-	0.86
7 Replacement of the AFTN / AMHS communication center	-	0.86	-	1.62	1.62	1.62
8 Replacement of Voice Communication System (VCS)					1.02	
9 MATIAS Build 11.2	-	-	2.50	5.67	-	8.17
10 MATIAS Build 12	-	-	-	4.86	11.00	4.86
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 MATIAS Build 11.1	-	-	7.22	3.77	- 1	11.00
2 ANS I renovation	6.19	1.21	_		_	7.40
3 A-SMGCS	3.60	1.20	_	_	_	4.79
4 CPDLC	4.15	-	_	_	_	4.15
5 Replacement of the meteorological system at Budapest Airport	0.00	0.56	0.54	0.02	_	1.12
6 Implement Voice over IP (VoIP) network segment for VoIP in ATM	-	0.43	0.00	0.03	_	0.46
7 Replacement of the AFTN / AMHS communication center			0.07	0.34	-	0.40
8 Replacement of Voice Communication System (VCS)			-	0.34	-	0.41
9 MATIAS Build 11.2		<u> </u>		-	-	- 0.01
10 MATIAS Build 12		-	-	-	-	<u> </u>
	0045	2011			0010.5	
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 F	RP2 to date
1 MATIAS Build 11.1	_	(6.01)	7.22	3.77	- 1	4.98
2 ANS I renovation	3.65	0.99	-	-	-	4.64
3 A-SMGCS	3.60	(2.24)	-	-	-	1.36
4 CPDLC	0.43	-		-	-	0.43
5 Replacement of the meteorological system at Budapest Airport	(1.24)	0.56	0.54	0.02	_	(0.12
6 Implement Voice over IP (VoIP) network segment for VoIP in ATM	(1.02)	0.43	0.00	0.03	_	(0.56
7 Replacement of the AFTN / AMHS communication center	- (1.02)	(0.86)	0.07	0.34	_	(0.45
8 Replacement of Voice Communication System (VCS)	-	- (0.00)	-	(1.61)	_	(1.61)
9 MATIAS Build 11.2	-	_	(2.50)	(5.67)	_	(8.17)
10 MATIAS Build 12		_	- (2.30)	(4.86)	_	(4.86)
10 1111110 2010 12				(4.00)		(7.00



INVESTMENTS PER MAIN PROJECT Hungary - HungaroControl



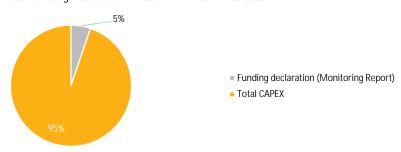
RP2 to date, Hungary's main project is the "MATIAS Build 11.1" with a total actual investment of $11M \in_{2009}$, which is $4.98M \in_{2009}$ more than planned. The second largest investment of $7.40M \in_{2009}$ was made in the project "ANS I renovation", an amount that exceeds the initial estimations by $4.64M \in_{2009}$. Projects "A-SMGCS" and "CPDLC" have also received actual investments higher than originally planned. The projects "MATIAS Build 11.2" and "MATIAS Build 12" received no actual investments.

For the remaining four projects, the actual investment is below the amount planned for RP2.

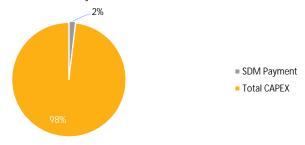


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Hunga	ry - HungaroControl					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	0.37	0.69	1.51	0.34	-	2.90
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.37	0.69	1.51	0.34	-	2.90
SDM Payment	0.02	1.00	0.04	-	-	1.05

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



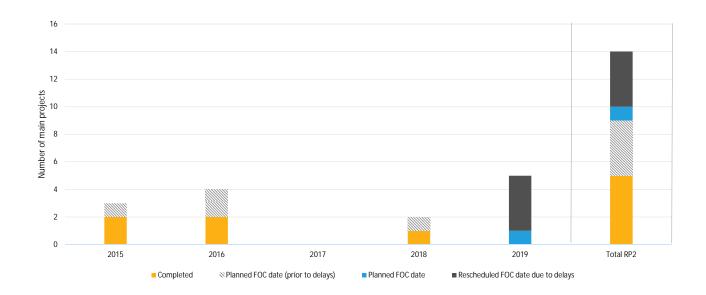
Throughout the period, Hungary received grants from 14 different funds, however, with the information provided, the projects could not be linked to any specific fund.

The total grants received by Hungary amount to 2.90M€₂₀₀₉, which represent 5% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT Hung	gary - HungaroControl
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#	Main Projects	Status in 2018	FOC date*	Expected benefit per KPA		PCP	NOP		
				SAF	ENV	CAP	CEF		
1	MATIAS Build 11.1	Delayed	2019	Х	Х	Х	Х	Х	
2	ANS I renovation	Completed	2016	Х			Х		
3	A-SMGCS	Completed	2016	Х	Х	Х	Х	Х	
4	CPDLC	Completed	2015	Х	Х	Х	Х		Х
5	Replacement of the meteorological system at Budapest Airport	Delayed	2019	Х		Х			
6	Voice over IP (VoIP) network segment for VoIP in ATM	Completed	2015	Х		Х			
7	Replacement of the AFTN / AMHS communication center	Delayed	2019	Х					
8	Replacement of Voice Communication System (VCS)	Completed	2018	Х		Х			
9	MATIAS Build 11.2	Delayed	2019	Х	Х	Х	Х	Х	
10	MATIAS Build 12	Ongoing	2019	Х	Х	Х	Х	Х	



Hungary planned ten main projects for RP2: four projects have been completed, three have been delayed and three have been started. All projects are expected to be completed in RP2.

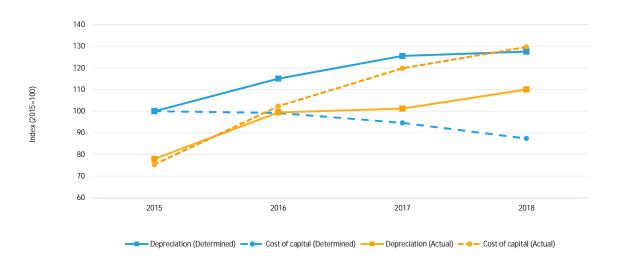
All projects are expected to have a positive impact on safety. Eight projects will also improve capacity, six are expected to enhance cost-efficiency, while five out of ten projects are expected to benefit the environment.

The actual investment made in RP2 to date for the four projects that were linked to the Pilot Common Project is $15.79M \in_{2009}$. This amount represents 29% of the actual total CAPEX. One of the projects was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Hungary -	HungaroControl					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	11.23	12.93	14.10	14.33	14.14	52.59
- En route	8.71	10.01	10.53	10.78	10.66	40.03
- Terminal	2.53	2.92	3.57	3.55	3.48	12.56
Cost of Capital	6.47	6.42	6.13	5.66	5.29	24.67
- En route	5.10	5.09	4.92	4.69	4.34	19.80
- Terminal	1.37	1.33	1.20	0.97	0.95	4.87
Total	17.71	19.34	20.22	19.99	19.44	77.26
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to dat
Depreciation	8.76	11.17	11.37	12.36	-	43.66
- En route	7.67	9.42	9.32	10.14	-	36.55
- Terminal	1.09	1.75	2.05	2.23	-	7.12
Cost of Capital	4.88	6.62	7.76	8.39	-	27.64
- En route	4.35	5.78	6.64	7.24	-	24.01
- Terminal	0.53	0.84	1.11	1.16	-	3.63
Total	13.64	17.79	19.12	20.76	-	71.31
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(2.47)	(1.75)	(2.73)	(1.96)	- [(8.92
- En route	(1.04)	(0.59)	(1.21)	(0.64)	-	(3.48
- Terminal	(1.44)	(1.17)	(1.52)	(1.32)	-	(5.45
Cost of Capital	(1.59)	0.20	1.63	2.74	-	2.97
- En route	(0.75)	0.69	1.72	2.55	-	4.21
- Terminal	(0.84)	(0.49)	(0.09)	0.19	-	(1.24
Total	(4.07)	(1.55)	(1.10)	0.77	-	(5.95



Over the first 4 years of RP2, the actual CAPEX is 7% higher than determined (overspent). Despite this fact, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 5.95M \in 2009 for investments that have been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by $8.92M \in_{2009}$. This was mainly due to project delays in RP1 and the use of different mixture of assets/CAPEX leading to differences in project lifetime and valuation.

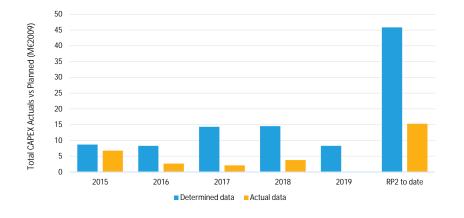
Throughout RP2 to date, the actual cost of capital was $2.97M \in_{2009}$ higher than determined. This was due to a higher than planned value of the fixed asset base.

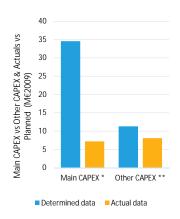


4.5.5 Slovakia - LPS

Throughout the RP2 to date, Slovakia underspent 30.59M€₂₀₀₉ (-67%) with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-4.21M€₂₀₀₉). Slovakia planned 11 main projects for RP2: one project has been completed, two have been delayed and eight have been started. All projects are expected to be completed in RP2.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	8.68	8.31	14.34	14.54	8.30	45.87
- Main CAPEX *	3.64	5.56	12.46	12.90	6.42	34.56
- % Main into Total CAPEX	42%	67%	87%	89%	77%	75%
- Other CAPEX **	5.04	2.75	1.88	1.65	1.88	11.31
- % Other into Total CAPEX	58%	33%	13%	11%	23%	25%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	6.75	2.68	2.09	3.76	- [15.28
- Main CAPEX	2.38	1.34	0.38	3.10	-	7.20
- % Main into Total CAPEX	35%	50%	18%	82%	-	47%
- Other CAPEX	4.37	1.34	1.71	0.66	-	8.08
- % Other into Total CAPEX	65%	50%	82%	18%	-	53%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(1.93)	(5.63)	(12.25)	(10.78)	- [(30.59)
- Main CAPEX	(1.26)	(4.22)	(12.08)	(9.80)	-	(27.36)
- Other CAPEX	(0.67)	(1.41)	(0.17)	(0.98)	-	(3.23)
Total CAPEX (%)	-22%	-68%	-85%	-74%	-	-67%
- Main CAPEX (%)	-35%	-76%	-97%	-76%	-	-79%
- Other CAPEX (%)	-13%	-51%	-9%	-60%	-	-29%





The total capital expenditure to date is 15.28M€₂₀₀₉. For RP2 to date, Slovakia spent 30.59M€₂₀₀₉ (-67%) less CAPEX than originally planned. For RP2 to date, the main CAPEX is 79% lower, while other CAPEX is 29% lower.

Slovakia invested less than initially planned, in every year of RP2 to date, 1.93M€ $_{2009}$ less in 2015, 5.63M€ $_{2009}$ less in 2016, 12.25M€ $_{2009}$ less (-85%) in 2017 and 10.78M€₂₀₀₉ less in 2018.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

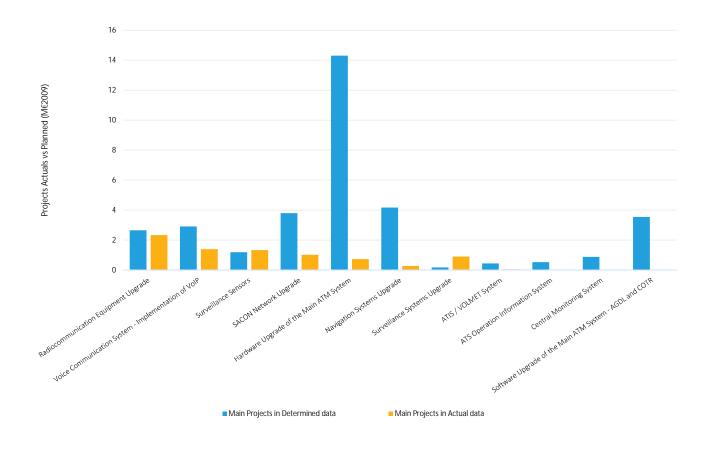
** Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Slovakia - LPS						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 Radiocommunication Equipment Upgrade	0.16	1.78	0.69	0.02	- [2.65
Voice Communication System - Implementation of VoIP	0.85	0.05	0.88	1.12	1.02	2.91
3 Surveillance Sensors	1.18	-	-	-	-	1.18
4 SACON Network Upgrade	0.36	0.45	2.37	0.60	0.59	3.79
5 Hardware Upgrade of the Main ATM System	0.36	1.79	3.52	8.64	3.39	14.30
6 Navigation Systems Upgrade	0.36	0.38	1.70	1.74	1.25	4.17
7 Surveillance Systems Upgrade	-	-	-	0.17	-	0.17
8 ATIS / VOLMET System	-	0.22	0.22	-	-	0.44
9 ATS Operation Information System	-	0.09	0.26	0.17	0.17	0.53
10 Central Monitoring System	-	0.09	0.35	0.43	-	0.87
11 Software Upgrade of the Main ATM System - AGDL and COTR	0.36	0.72	2.46	-	-	3.54
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 Radiocommunication Equipment Upgrade	0.16	0.00	0.22	1.95	-	2.33
2 Voice Communication System - Implementation of VoIP	0.46	0.56	-	0.37	-	1.39
3 Surveillance Sensors	1.16	0.10	-	0.08	-	1.33
4 SACON Network Upgrade	0.25	0.55	0.10	0.11	-	1.01
5 Hardware Upgrade of the Main ATM System	0.35	-	-	0.38	-	0.73
6 Navigation Systems Upgrade		0.13	0.03	0.11	_	0.27
7 Surveillance Systems Upgrade	-	-	-	0.90	-	0.90
8 ATIS / VOLMET System	-	-	0.04	0.00	-	0.04
9 ATS Operation Information System	-			_	_	
10 Central Monitoring System	-	-	_	-	-	_
11 Software Upgrade of the Main ATM System - AGDL and COTR	-	-	-	-	-	-
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 F	RP2 to date
1 Radiocommunication Equipment Upgrade	0.00	(1.78)	(0.48)	1.94	-	(0.32)
Voice Communication System - Implementation of VoIP	(0.39)	0.50	(0.88)	(0.75)	-	(1.52)
3 Surveillance Sensors	(0.03)	0.10	-	0.08	-	0.15
4 SACON Network Upgrade	(0.11)	0.10	(2.28)	(0.49)	-	(2.78)
5 Hardware Upgrade of the Main ATM System	(0.01)	(1.79)	(3.52)	(8.26)	-	(13.57)
6 Navigation Systems Upgrade	(0.36)	(0.24)	(1.66)	(1.63)	-	(3.90)
7 Surveillance Systems Upgrade	-	-	-	0.73	-	0.73
8 ATIS / VOLMET System	-	(0.22)	(0.18)	0.00	-	(0.40)
9 ATS Operation Information System	-	(0.09)	(0.26)	(0.17)	-	(0.53)
10 Central Monitoring System	=	(0.09)	(0.35)	(0.43)	-	(0.87)
11 Software Upgrade of the Main ATM System - AGDL and COTR	(0.36)	(0.72)	(2.46)	-	-	(3.54)



INVESTMENTS PER MAIN PROJECT Slovakia - LPS



RP2 to date, Slovakia's main project is the "Radiocommunication Equipment Upgrade" with a total actual investment of $2.33M \in_{2009}$, which was less than determined by $0.32M \in_{2009}$. The second largest project in terms of investment is the "Voice Communication System - Implementation of VoIP" with a total actual investment of $1.39M \in_{2009}$, which was also lower than planned.

3 projects received no investments, namely "Software Upgrade of the Main ATM System - AGDL and COTR", "ATS Operation Information System" and "Central Monitoring System". The remaining 4 projects received investments lower than determined for RP2.

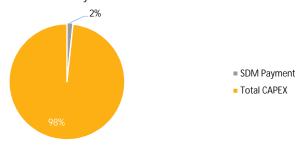


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Slovakia - LPS						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	0.01	0.03	0.00	-	-	0.04
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.01	0.03	0.00	_	-1	0.04
SDM Payment	0.01	0.03	0.04		-	0.28

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



Slovakia received grants from "INEA/CEF/TRAN/M2014/1037259 Free route airspace from the Black Forest to the Black Sea" for RP2. However, there was no information on which projects received the funds.

The amount granted to Slovakia is $0.04M \in_{2009}$, representing 0.22% of the actual total CAPEX. According to the information provided, the SDM Payment amounts to $0.28M \in_{2009}$, which is higher than the Funding Declaration.



8 ATIS / VOLMET System

10 Central Monitoring System

9 ATS Operation Information System

11 Software Upgrade of the Main ATM System - AGDL and COTR

EXPECTED BENEFIT PER PROJECT Slovakia - LPS									
# Main Projects	Status in 2018	Status in 2018 FOC date* Expected	in 2018 FOC date* Expected benefit per KPA			Expected benefit per KPA			NOP
			SAF	ENV	CAP	CEF			
1 Radiocommunication Equipment Upgrade	Delayed	2019	Х	х	Х	Х			
2 Voice Communication System - Implementation of VoIP	Ongoing	2019	Х			Х			
3 Surveillance Sensors	Completed	2018	Х	Х	Х	Х			
4 SACON Network Upgrade	Completed	2018	Х		Х	Х			
5 Hardware Upgrade of the Main ATM System	Ongoing	2019	Х	Х	Х	Х		Х	
6 Navigation Systems Upgrade	Ongoing	2019	Х	Х	Х	Х			
7 Surveillance Systems Ungrade	Delayed	2019	¥	×	Х	¥			

Completed

Ongoing

Delayed

Delayed

2018

2019

2019

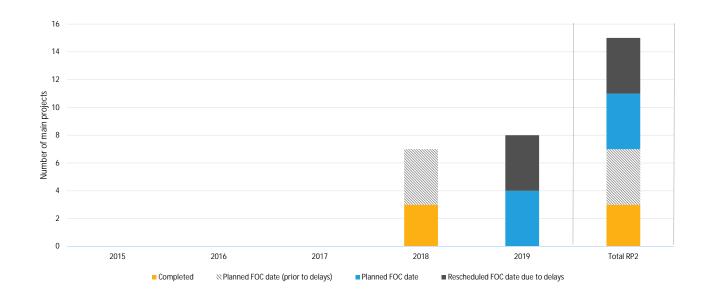
2019

Х

Х

Х

Х



Slovakia planned 11 main projects for RP2: one project has been completed, two have been delayed and eight have been started. All projects are expected to be completed in RP2.

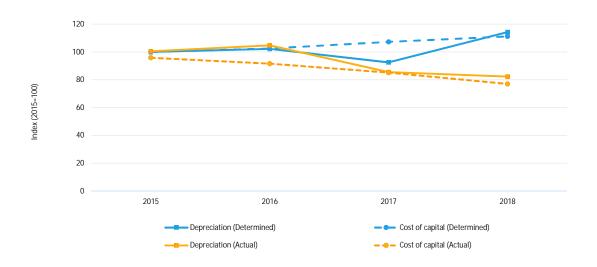
Slovakia invested in safety (11 out of 11 projects) and cost efficiency (10 out of 11 projects) as priorities. Seven out of 11 projects are expected to benefit capacity and environment.

From the total of 11 projects in which Slovakia invested none was linked to the Pilot Common Project. One of the projects was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



Determined data (M€₂₀₀₀) 2015D 2016D 2017D 2018D 2019D RP2 to date Depreciation 6.50 6.64 6.01 7.42 7.26 26.57 - En route 6.28 6.42 5.81 7.18 7.02 25.68 - Terminal 0.22 0.22 0.20 0.25 0.24 0.89 - En route 2.54 2.60 2.72 2.82 2.67 10.68 - Terminal 0.09 0.09 0.09 0.10 0.09 0.37 Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€₂₀₀₀) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - En route 6.34 6.64 5.40 5.15 - 23.54 - En	INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Slovakia -	I PS					
Depreciation 6.50 6.64 6.01 7.42 7.26 26.57 - En route 6.28 6.42 5.81 7.18 7.02 25.68 - Terminal 0.22 0.22 0.20 0.25 0.24 0.89 Cost of Capital 2.63 2.69 2.82 2.92 2.76 11.05 - En route 2.54 2.60 2.72 2.82 2.67 10.68 - Terminal 0.09 0.09 0.09 0.10 0.09 0.37 Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 2.35 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital	INVESTIGATION OF THE CONTINUE						
- En route 6.28 6.42 5.81 7.18 7.02 25.68 - Terminal 0.22 0.22 0.20 0.25 0.24 0.89 - Cost of Capital 2.63 2.69 2.82 2.92 2.76 11.05 - En route 2.54 2.60 2.72 2.82 2.67 10.68 - Terminal 0.09 0.09 0.09 0.10 0.09 0.37 - Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€2000) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreclation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.904 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€2000) 2015 2016 2017 2018 2019 RP2 to date Depreclation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - En route 0.06 0.29 (0.58) (0.90) - (1.87) - En route 0.07 (0.09) (0.58) (0.90) - (1.87) - En route 0.01 (0.09) (0.58) (0.90) - (1.87) - En route 0.01 (0.09) (0.58) (0.90) - (1.87) - En route 0.01 (0.09) (0.58) (0.90) - (1.87) - En route 0.01 (0.09) (0.05) (0.06) - (0.00) - Terminal 0.01 (0.01) (0.00) (0.01) - (0.00)	Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
- Terminal 0.22 0.22 0.20 0.25 0.24 0.89 Cost of Capital 2.63 2.69 2.82 2.92 2.76 11.05 - En route 2.54 2.60 2.72 2.82 2.67 10.68 - Terminal 0.09 0.09 0.09 0.10 0.09 0.37 Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0	Depreciation	6.50	6.64	6.01	7.42	7.26	26.57
Cost of Capital 2.63 2.69 2.82 2.92 2.76 11.05 - En route 2.54 2.60 2.72 2.82 2.67 10.68 - Terminal 0.09 0.09 0.09 0.10 0.09 0.37 Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04	- En route	6.28	6.42	5.81	7.18	7.02	25.68
En route 2.54 2.60 2.72 2.82 2.67 10.68 - Terminal 0.09 0.09 0.09 0.10 0.09 0.37 Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 24.23 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€ ₂₀	- Terminal	0.22	0.22	0.20	0.25	0.24	0.89
- Terminal 0.09 0.09 0.09 0.10 0.09 0.37 Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - In route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€ ₂₀₀₉) 2015 2016 2017 2018 2019 RP2 to date <t< td=""><td>Cost of Capital</td><td>2.63</td><td>2.69</td><td>2.82</td><td>2.92</td><td>2.76</td><td>11.05</td></t<>	Cost of Capital	2.63	2.69	2.82	2.92	2.76	11.05
Total 9.12 9.33 8.82 10.34 10.02 37.62 Actual data (M€₂₀₀₀) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€₂₀₀₀⟩ 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) <	- En route	2.54	2.60	2.72	2.82	2.67	10.68
Actual data (M€₂₀₀₀) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€₂₀₀₀) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14)	- Terminal	0.09	0.09	0.09	0.10	0.09	
Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€ ₂₀₀₉) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost	Total	9.12	9.33	8.82	10.34	10.02	37.62
Depreciation 6.52 6.80 5.56 5.35 - 24.23 - En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€ ₂₀₀₉) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost				20.45			
- En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€ ₂₀₀₉) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - (0.20)	Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
- En route 6.34 6.64 5.40 5.15 - 23.54 - Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€ ₂₀₀₉) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - (0.20)	Democription	<i>(</i> F2	. 00	F F/	E 25	ı	24.22
- Terminal 0.18 0.16 0.15 0.19 - 0.69 Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02 <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td>						-	
Cost of Capital 2.52 2.40 2.24 2.02 - 9.18 - En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02						-	
- En route 2.42 2.31 2.14 1.91 - 8.78 - Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02						-	
- Terminal 0.10 0.10 0.09 0.11 - 0.39 Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02	·					-	
Total 9.04 9.21 7.79 7.37 - 33.41 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02						-	
Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02						-	
Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02	Total	9.04	9.21	7.79	7.37	-	33.41
Depreciation 0.03 0.16 (0.45) (2.08) - (2.34) - En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02	Difference between Astrol and Determined (AAC	2015	2014	2017	2010	2010	DD2 to data
- En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02	Difference between Actual and Determined (ME ₂₀₀₉)	2015	2010	2017	2018	2019	RPZ to date
- En route 0.06 0.23 (0.41) (2.02) - (2.14) - Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02	Depreciation	0.03	0.16	(0.45)	(2.08)	-	(2.34)
- Terminal (0.03) (0.06) (0.05) (0.06) - (0.20) Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02	- En route	0.06	0.23	(0.41)	(2.02)	-	(2.14)
Cost of Capital (0.11) (0.29) (0.58) (0.90) - (1.87) - En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 0.01 (0.00) 0.01 - 0.02	- Terminal	(0.03)	(0.06)	(0.05)	. ,	-	
- En route (0.12) (0.29) (0.58) (0.91) - (1.90) - Terminal 0.01 (0.00) 0.01 - 0.02		\ /	_ ,	. ,	. ,	-	
- Terminal 0.01 0.01 (0.00) 0.01 - 0.02		(0.12)				-	(1.90)
Total (0.08) (0.12) (1.03) (2.97) - (4.21)	- Terminal	0.01	0.01		0.01	-	
	Total	(0.08)	(0.12)	(1.03)	(2.97)	-	(4.21)



Over the first 4 years of RP2, 67% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed $4.21M \epsilon_{2009}$ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 2.34M€₂₀₀₉. This was mainly due to delays in project implementation in RP1 because of procedural constraints during contract signing and complexity in administrative processes and procurement.

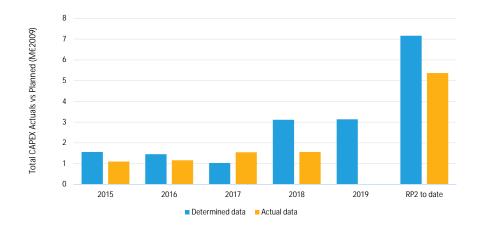
Throughout RP2 to date, the actual cost of capital was $1.87M \in_{2009}$ lower than determined. This was mainly due to a decrease in the value of the fixed asset base as a result of the delayed investments.

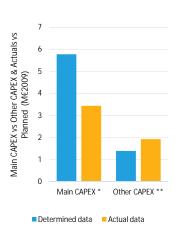


4.5.6 Slovenia - Slovenia Control

Throughout the RP2 to date, Slovenia underspent $1.8M \epsilon_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-0.25M ϵ_{2009}). Slovenia planned seven main projects for RP2: two projects have been delayed, two have been completed and three have been started. One project is expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	1.56	1.45	1.03	3.11	3.14	7.16
- Main CAPEX *	1.30	1.09	0.86	2.53	2.48	5.77
- % Main into Total CAPEX	83%	75%	83%	81%	79%	81%
- Other CAPEX **	0.27	0.36	0.17	0.59	0.66	1.39
- % Other into Total CAPEX	17%	25%	17%	19%	21%	19%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	1.10	1.16	1.55	1.56	-	5.37
- Main CAPEX	0.83	0.45	0.96	1.19	-	3.44
- % Main into Total CAPEX	76%	39%	62%	76%	-	64%
- Other CAPEX	0.27	0.71	0.58	0.38	-	1.93
- % Other into Total CAPEX	24%	61%	38%	24%	-	36%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(0.47)	(0.29)	0.52	(1.55)	-	(1.80)
- Main CAPEX	(0.46)	(0.64)	0.11	(1.34)	-	(2.34)
- Other CAPEX	(0.00)	0.35	0.41	(0.21)	-	0.54
Total CAPEX (%)	-30%	-20%	50%	-50%	-	-25%
- Main CAPEX (%)	-36%	-59%	12%	-53%	-	-40%
- Other CAPEX (%)	-1%	97%	238%	-36%	_	39%





The total capital expenditure to date is 5.37M€₂₀₀₉. Throughout the RP2 to date, Slovenia spent 1.8M€₂₀₀₉ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 40% lower than planned, while other CAPEX is 39% lower.

In 2015 and 2016, Slovenia underspent $0.47M \in_{2009}$ and $0.29M \in_{2009}$, respectively. In 2017, Slovenia spent $0.52M \in_{2009}$ more than planned, while in 2018, actual CAPEX is $1.55M \in_{2009}$ lower than planned.

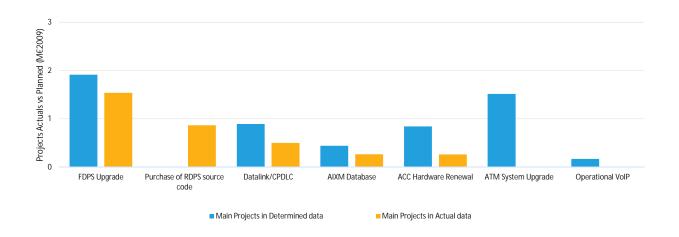
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Slovenia - Slovenia Control						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 FDPS Upgrade	0.18	0.87	0.86	-	- 1	1.91
2 Purchase of RDPS source code	-	-	-	-	-	-
3 Datalink/CPDLC	0.89	-	-	-	-	0.89
4 AIXM Database	0.22	0.22	-	-	-	0.44
5 ACC Hardware Renewal	-	-	-	0.84		0.84
6 ATM System Upgrade	-	-	-	1.52	2.31	1.52
7 Operational VoIP	-	-	-	0.17	0.17	0.17
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 FDPS Upgrade	0.55	0.34	0.45	0.18	-	1.54
2 Purchase of RDPS source code	0.28	-	0.04	0.55	-	0.87
3 Datalink/CPDLC	-	-	0.15	0.35	-	0.50
4 AIXM Database	-	0.11	0.16	-	-	0.27
5 ACC Hardware Renewal	-	-	0.16	0.10	-	0.26
6 ATM System Upgrade	-	-	-	-	-	-
7 Operational VoIP	-	-	-	-	-	-

#	Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
_1	FDPS Upgrade	0.38	(0.53)	(0.40)	0.18	-	(0.37)
2	Purchase of RDPS source code	0.28	-	0.04	0.55	-	0.87
3	Datalink/CPDLC	(0.89)	-	0.15	0.35	-	(0.39)
4	AIXM Database	(0.22)	(0.11)	0.16	-	-	(0.18)
5	ACC Hardware Renewal	-	-	0.16	(0.74)	-	(0.58)
6	ATM System Upgrade	-	-	-	(1.52)	-	(1.52)
7	Operational VoIP	-	-	-	(0.17)	-	(0.17)



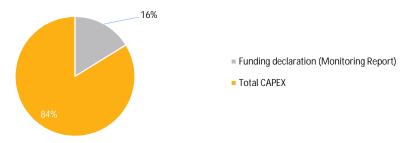
In the Performance Plan, Slovenia planned six projects to receive investments during RP2. All projects received investments, except for "ATM System Upgrade".

For RP2 to date, Slovenia's main project is "FDPS Upgrade" with a total actual investment of $1.54M \in_{2009}$, which is $0.37M \in_{2009}$ less than determined. The second largest project "Purchase of RDPS source code" was not originally planned for RP2, but it received a total actual investment of $0.87M \in_{2009}$. Projects "Datalink/CPDLC", "AIXM Database", "ACC Hardware Renewal" and "Operational VolP" received lower investments than originally planned.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Slovenia - Slovenia Control										
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date				
Total ANSP	0.11	0.05	0.59	0.12	-	0.87				
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date				
Funding declaration (Monitoring Report) SDM Payment	0.11	0.05	0.59	0.12	-	0.87				

% of Funding Declaration in Total CAPEX for RP2 to date



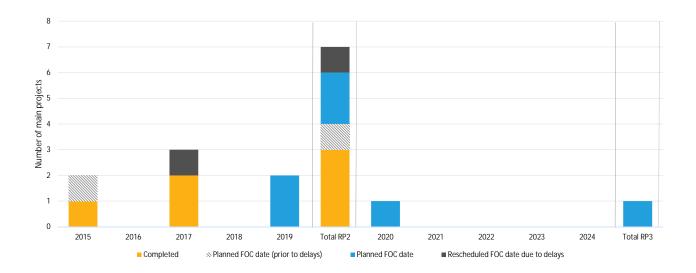
Slovenia received grants from four funds throughout the RP2, which are: the "INEA/CEF/TRAN/M2014/1026723; Project N° CEF 2014 N° EU -TM-0032-S", the "INEA/CEF/TRAN/M2014/1037259; Project N° CEF-2014-EU-TM-0136-M", 'the INEA/CEF/TRAN/M2015/1132363; Project N° CEF 2015 N° EU-TM-0196-M" and the "INEA/CEF/TRAN/M2016/1349619 Project N° CEF 2016-EU-TM-0117-M". Only 1 project "FDPS Upgrade" reported a direct link between fund and investments; however, information on the specific fund was not available.

The total funds received by Slovenia amount to 0.87M€₂₀₀₉, representing 16% of the actual CAPEX. No SDM Payment was reported.



EXPECTED BENEFIT PER PROJECT Slov	venia - Slovenia Control
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# Main Projects	Status in 2018	FOC date*	Expected benefit per KPA		PCP	NOP		
			SAF	ENV	CAP	CEF		
1 FDPS Upgrade	Completed	2017	Х		Х	Х	х	
2 Purchase of RDPS source code	Completed	2015	Х		Х	Х	Х	
3 Datalink/CPDLC	Delayed	2019	Х		Х	Х	Х	Х
4 AIXM Database	Completed	2017	Х		Х	Х	Х	
5 ACC Hardware Renewal	Ongoing	2019	Х			Х		
6 ATM System Upgrade	Ongoing	2020	Х		Х	Х	Х	
7 Operational VoIP	Ongoing	2019	Х		Х	Х	Х	



Slovenia planned seven main projects for RP2: two projects have been delayed, two have been completed and three have been started. One project is expected to continue through RP3.

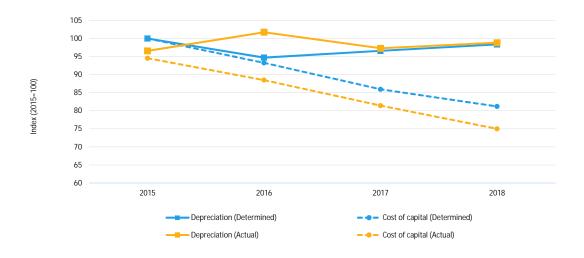
All projects are expected to have a ppositive impact on safety and cost-efficiency. Five out six projects are also expected to improve capacity. None of the projects are expected to bring benefits to the environment.

The actual investment in RP2 to date for the six projects that were linked to the Pilot Common Project is $3.17M \in_{2009}$. This amount represents 59% of the actual total CAPEX. One project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Slovenia -	Slovenia Control					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	3.20	3.03	3.09	3.15	3.22	12.46
- En route	3.05	2.88	2.94	3.00	3.08	11.88
- Terminal	0.15	0.14	0.15	0.14	0.14	0.59
Cost of Capital	1.94	1.80	1.66	1.57	1.54	6.98
- En route	1.87	1.74	1.61	1.52	1.50	6.74
- Terminal	0.07	0.06	0.06	0.05	0.04	0.23
Total	5.13	4.83	4.75	4.72	4.76	19.44
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	3.09	3.25	3.11	3.16	-	12.62
- En route	2.93	3.10	2.97	3.01	-	12.02
- Terminal	0.15	0.15	0.14	0.15	-	0.59
Cost of Capital	1.83	1.71	1.58	1.45	-	6.57
- En route	1.74	1.63	1.50	1.38	-	6.26
- Terminal	0.09	0.08	0.07	0.07	-	0.31
Total	4.92	4.97	4.69	4.61	-	19.19
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.11)	0.22	0.02	0.02	-	0.15
- En route	(0.11)	0.22	0.03	0.01	-	0.15
- Terminal	0.00	0.01	(0.01)	0.00	-	0.01
Cost of Capital	(0.11)	(0.09)	(0.09)	(0.12)	-	(0.41)
- En route	(0.13)	(0.11)	(0.10)	(0.14)	-	(0.48)
- Terminal	0.02	0.02	0.02	0.02	-	0.08
Total	(0.22)	0.13	(0.07)	(0.10)	-	(0.25)



Over the first 4 years of RP2, 25% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed $0.25M\epsilon_{2009}$ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, actual depreciation was higher than the determined one by $0.15M \in_{2009}$. This was due to the postponement of some investments from RP1, which were implemented at the beginning of RP2.

Throughout RP2 to date, cost of capital was $0.41M \in_{2009}$ lower than determined. This was mainly due to the lower level of the net fixed assets base as a result of the delays in the implementation of some investments.

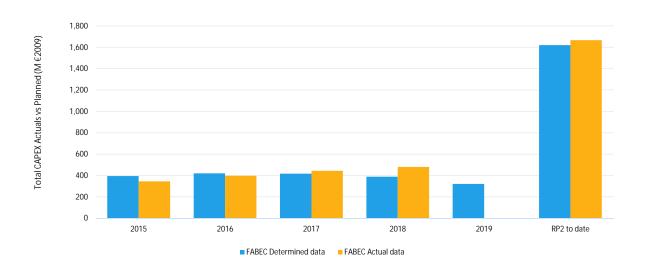


4.6 FABEC

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	394.16	419.95	417.68	389.06	320.99	1,620.85
- Main CAPEX	289.54	311.94	291.88	244.79	183.25	1,138.15
- % Main into Total CAPEX	73%	74%	70%	63%	57%	70%
- Other CAPEX	104.63	108.01	125.79	144.27	137.74	482.70
- % Other into Total CAPEX	27%	26%	30%	37%	43%	30%
- Belgium in Total CAPEX in FABEC	18.54	19.72	11.39	13.70	14.15	63.35
- % Belgium in Total CAPEX in FABEC	5%	5%	3%	4%	4%	4%
- France in Total CAPEX in FABEC	163.80	178.04	185.83	169.51	138.84	697.18
- % France in Total CAPEX in FABEC	42%	42%	44%	44%	43%	43%
- Germany in Total CAPEX in FABEC	122.55	121.45	129.98	130.83	103.82	504.80
- % Germany in Total CAPEX in FABEC	31%	29%	31%	34%	32%	31%
- Luxembourg in Total CAPEX in FABEC	2.48	3.84	4.65	2.39	1.00	13.36
- % Luxembourg in Total CAPEX in FABEC	1%	1%	1%	1%	0%	1%
- MUAC in Total CAPEX in FABEC	13.25	14.43	13.82	14.04	13.80	55.53
- % MUAC in Total CAPEX in FABEC	3%	3%	3%	4%	4%	3%
- Netherlands in Total CAPEX in FABEC	33.42	42.36	32.08	19.06	10.25	126.92
- % Netherlands in Total CAPEX in FABEC	8%	10%	8%	5%	3%	8%
- Switzerland in Total CAPEX in FABEC	40.13	40.13	39.93	39.53	39.14	159.71
- % Switzerland in Total CAPEX in FABEC	10%	10%	10%	10%	12%	10%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	344.83	398.18	443.65	479.48	-	1,666.15
- Main CAPEX	268.61	318.38	352.42	382.74	-	1,322.15
- % Main into Total CAPEX	78%	80%	79%	80%	-	79%
- Other CAPEX	76.23	79.80	91.23	96.75	-	344.01
- % Other into Total CAPEX	22%	20%	21%	20%	-	21%
- Belgium in Total CAPEX in FABEC	5.07	4.80	18.01	17.46	-	45.35
- % Belgium in Total CAPEX in FABEC	1%	1%	4%	4%	-	3%
- France in Total CAPEX in FABEC	212.13	242.23	246.65	266.26	-	967.28
- % France in Total CAPEX in FABEC	62%	61%	56%	56%	-	58%
- Germany in Total CAPEX in FABEC	71.85	75.02	101.23	89.49	-	337.59
- % Germany in Total CAPEX in FABEC	21%	19%	23%	19%	-	20%
- Luxembourg in Total CAPEX in FABEC	1.71	0.63	3.97	5.30	-	11.60
- % Luxembourg in Total CAPEX in FABEC	0%	0%	1%	1%	-	1%
- MUAC in Total CAPEX in FABEC	4.87	3.49	4.34	5.92	-	18.62
- % MUAC in Total CAPEX in FABEC	1%	1%	1%	1%	-	1%
- Netherlands in Total CAPEX in FABEC	12.62	26.79	18.88	49.48	-	107.77
- % Netherlands in Total CAPEX in FABEC	4%	7%	4%	10%	-	6%
- Switzerland in Total CAPEX in FABEC	36.59	45.21	50.57	45.57	-	177.94
- % Switzerland in Total CAPEX in FABEC	11%	11%	11%	10%	-	11%



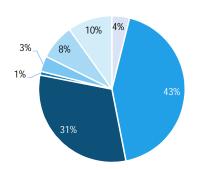
OVERALL INVESTMENTS FABEC						
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(49.33)	(21.77)	25.98	90.43	-	45.30
- Main CAPEX	(20.93)	6.44	60.54	137.95	-	184.00
- Other CAPEX	(28.40)	(28.21)	(34.56)	(47.52)	-	(138.69)
Total CAPEX (%)	-13%	-5%	6%	23%	-	3%
- Main CAPEX (%)	-7%	2%	21%	56%	-	16%
- Other CAPEX (%)	-27%	-26%	-27%	-33%	-	-29%





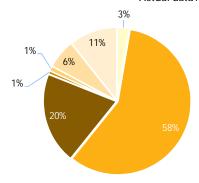
OVERALL INVESTMENTS FABEC

RP2 Performance Plan Total RP2 to date



- % Belgium in Total CAPEX in FABEC
- % France in Total CAPEX in FABEC
- % Germany in Total CAPEX in FABEC
- % Luxembourg in Total CAPEX in FABEC
- MUAC in Total CAPEX in FABEC
- % Netherlands in Total CAPEX in FABEC
- % Switzerland in Total CAPEX in FABEC

Actual dataTotal RP2 to date



- % Belgium in Total CAPEX in FABEC
- % France in Total CAPEX in FABEC
- % Germany in Total CAPEX in FABEC
- % Luxembourg in Total CAPEX in FABEC
- MUAC in Total CAPEX in FABEC
- % Netherlands in Total CAPEX in FABEC
- % Switzerland in Total CAPEX in FABEC

During RP2 the total actual investments in CAPEX for the FABEC have been higher than determined in the performance plan. Actual investments were made for a total amount of 1666.15M \in _2009, while in the performance plan they were set out to be worth 1620.85M \in _2009, a difference of 45.30M \in _2009 or 3%. In the first two years of RP2, the actual registered investments were lower than planned, but in 2017 and 2018, the investments were higher than planned, resulting in a total actual CAPEX higher than planned.

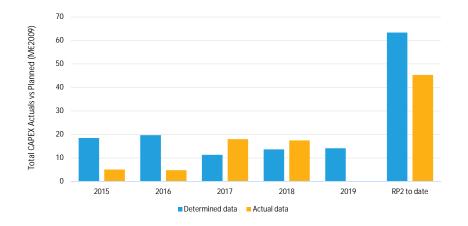
Luxembourg and MUAC have a minimal share in the total investments made with 1% each. France has the largest percent both in planned and actual investments, with 43% and 58% respectively. This high increase in percentage is a result of France overspending 270.10M \in 2009 with respect to what was initially planned and of Germany going from representing 31% of the planned investments to 20% by underspending a total amount of 167.21M \in 2009.

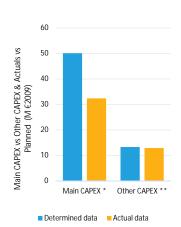


4.6.1 Belgium - Skeyes

Throughout the RP2 to date, Belgium underspent $18M \in_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-14.63M€₂₀₀₉). Belgium planned 17 main projects for RP2: ten projects have been completed and seven have been started. Three of the projects will continue through RP3 and one is expected to be completed in 2027.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	18.54	19.72	11.39	13.70	14.15	63.35
- Main CAPEX *	14.37	17.10	8.72	9.88	8.66	50.08
- % Main into Total CAPEX	78%	87%	77%	72%	61%	79%
- Other CAPEX **	4.16	2.62	2.67	3.82	5.49	13.28
- % Other into Total CAPEX	22%	13%	23%	28%	39%	21%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	5.07	4.80	18.01	17.46	-	45.35
- Main CAPEX	2.97	1.98	14.54	12.92	-	32.41
- % Main into Total CAPEX	58%	41%	81%	74%	-	71%
- Other CAPEX	2.11	2.82	3.47	4.54	-	12.95
- % Other into Total CAPEX	42%	59%	19%	26%	-	29%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(13.46)	(14.92)	6.62	3.76	- [(18.00)
- Main CAPEX	(11.41)	(15.12)	5.82	3.04	-	(17.67)
- Other CAPEX	(2.055)	0.199	0.80	0.72	-	(0.33)
Total CAPEX (%)	-73%	-76%	58%	27%	-	-28%
- Main CAPEX (%)	-79%	-88%	67%	31%	-	-35%
- Other CAPEX (%)	-49%	8%	30%	19%	-	-2%





The total capital expenditure to date is 45.35M€₂₀₀₉. Throughout RP2 to date, Belgium spent 32.41M€₂₀₀₉ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 35% lower than planned, while other CAPEX is 2% lower.

In 2015 and 2016, Belgium underspent 13.46M€₂₀₀₉ (-73%) and 14.92M€₂₀₀₉ (-76%), respectively. In 2017 and 2018, Belgium overspent 6.62M€₂₀₀₉ and 3.76M€₂₀₀₉, respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

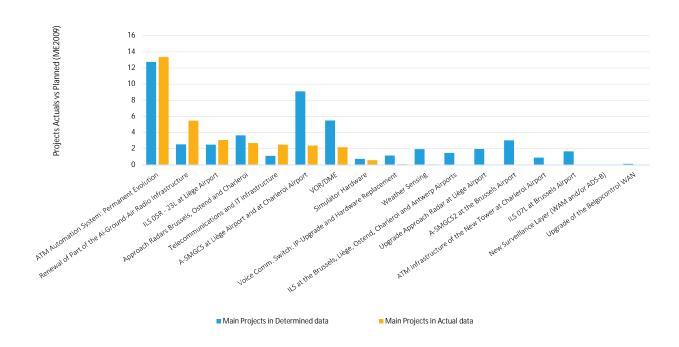
** Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Belglum - Skeyes						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 ATM Automation System: Permanent Evolution	2.28	2.12	4.34	4.02	1.70	12.76
2 Renewal of Part of the Ai-Ground-Air Radio Infrastructure	1.47	0.19	0.69	0.19	0.47	2.54
3 ILS 05R - 23L at Liège Airport	1.14	1.06	0.31	-	-	2.50
4 Approach Radars Brussels, Ostend and Charleroi	3.11	0.29	-	0.26	0.26	3.65
5 Telecommunications and IT infrastructure	0.48	0.31	0.17	0.14	0.21	1.10
6 A-SMGCS at Liège Airport and at Charleroi Airport	2.69	6.24	0.09	0.09	0.09	9.10
7 VOR/DME	0.93	2.03	1.27	1.26	-	5.48
8 Simulator Hardware	0.34	0.20	0.20	-		0.73
9 Voice Comm. Switch: IP-Upgrade and Hardware Replacement	-	0.89	-	0.26	0.60	1.14
10 Weather Sensing	0.11	0.96	0.87	-	0.09	1.94
11 ILS at the Brussels, Liège, Ostend, Charleroi and Antwerp Airports	-	- 4.75	-	1.47	1.45	1.47
12 Upgrade Approach Radar at Liège Airport	0.20	1.75	- 0.70	- 2.20	1 (0	1.95
13 A-SMGCS2 at the Brussels Airport	-	0.05	0.79	2.20	1.69	3.04
14 ATM Infrastructure of the New Tower at Charleroi Airport	- 1.50	0.89	-	-	-	0.89
15 ILS 07L at Brussels Airport 16 New Surveillance Layer (WAM and/or ADS-B)	1.53	0.14	-	-	2 1 2	1.67
17 Upgrade of the Belgocontrol WAN	0.12	-	-	-	2.13	0.12
17 Opgrade of the Belgocontrol WAIN	0.12	-	-	-	-	0.12
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 ATM Automation System: Permanent Evolution	1.18	0.35	6.16	5.66	_	13.36
2 Renewal of Part of the Ai-Ground-Air Radio Infrastructure	0.01	-	1.83	3.64	-	5.47
3 ILS 05R - 23L at Liège Airport	0.63	0.88	1.20	0.36	_	3.07
4 Approach Radars Brussels, Ostend and Charleroi	0.38	0.10	2.22	-	-	2.70
5 Telecommunications and IT infrastructure	0.31	0.19	1.11	0.88	-	2.49
6 A-SMGCS at Liège Airport and at Charleroi Airport	-	-	0.91	1.47	-	2.38
7 VOR/DME	0.30	-	1.00	0.89	-	2.19
8 Simulator Hardware	0.16	0.38	0.04	-	-	0.58
9 Voice Comm. Switch: IP-Upgrade and Hardware Replacement	-	-	0.06	0.02	-	0.08
10 Weather Sensing	-	0.04	0.01	0.01	-	0.06
11 ILS at the Brussels, Liège, Ostend, Charleroi and Antwerp Airports	- 0.01	0.03	-	-	-	0.03
12 Upgrade Approach Radar at Liège Airport 13 A-SMGCS2 at the Brussels Airport	0.01			-	-	
14 ATM Infrastructure of the New Tower at Charleroi Airport						-
15 ILS 07L at Brussels Airport						
16 New Surveillance Layer (WAM and/or ADS-B)	_	_	_	_	_	-
17 Upgrade of the Belgocontrol WAN	-	_	_	_		
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015 2	2016	2017	2018	2019	RP2 to date
1 ATM Automation System: Permanent Evolution	(1.10)	(1.77)	1.82	1.64	-	0.59
2 Renewal of Part of the Ai-Ground-Air Radio Infrastructure	(1.46)	(0.19)	1.14	3.45	-	2.93
3 ILS 05R - 23L at Liège Airport	(0.51)	(0.18)	0.90	0.36	-	0.57
4 Approach Radars Brussels, Ostend and Charleroi	(2.73)	(0.18)	2.22	(0.26)	-	(0.96)
5 Telecommunications and IT infrastructure	(0.17)	(0.11)	0.94	0.73	-	1.39
6 A-SMGCS at Liège Airport and at Charleroi Airport	(2.69)	(6.24)	0.83	1.38	-	(6.72)
7 VOR/DME 8 Simulator Hardware	(0.63)	(2.03)	(0.27)	(0.37)	-	(3.30)
Voice Comm. Switch: IP-Upgrade and Hardware Replacement	(0.18)	0.18 (0.89)	(0.16) 0.06	(0.24)		(0.16)
10 Weather Sensing	(0.11)	(0.89)	(0.86)	0.24)		(1.87)
11 ILS at the Brussels, Liège, Ostend, Charleroi and Antwerp Airports	(0.11)	0.03	(0.00)	(1.47)	-	(1.44)
12 Upgrade Approach Radar at Liège Airport	(0.19)	(1.75)		(1.47)	<u>-</u>	(1.44)
13 A-SMGCS2 at the Brussels Airport	(0.19)	(0.05)	(0.79)	(2.20)		(3.04)
14 ATM Infrastructure of the New Tower at Charleroi Airport		(0.89)	(0.77)	(2.20)		(0.89)
15 ILS 07L at Brussels Airport	(1.53)	(0.14)		-		(1.67)
16 New Surveillance Layer (WAM and/or ADS-B)	- (- (51)	-	-	-	- (
17 Upgrade of the Belgocontrol WAN	(0.12)	-	-	-	-	(0.12)
-	· /					· · · ·



INVESTMENTS PER MAIN PROJECT Belgium - Skeyes



RP2 to date, Belgium's major project is the "ATM Automation System: Permanent Evolution", which received 13.36M \in ₂₀₀₉. Actual investments received for the projects "Renewal of Part of the Ai-Ground-Air Radio Infrastructure" and "ILS 05R - 23L at Liège Airport" were 2.93M \in ₂₀₀₉ and 0.57M \in ₂₀₀₉, respectively, higher than planned.

There are 5 projects, namely "A-SMGCS2 at the Brussels Airport", "ATM Infrastructure of the New Tower at Charleroi Airport", "ILS 07L at Brussels Airport", "New Surveillance Layer (WAM and/or ADS-B)" and "Upgrade of the Belgocontrol WAN" that received no investments.

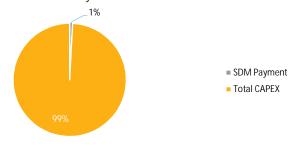


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Belg	ium - Skeyes					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	0.18	0.23	0.10	0.00	- [0.52
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.18	0.23	0.10	0.00	-	0.52
SDM Payment	0.11	0.16	0.11	-	-	0.39

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



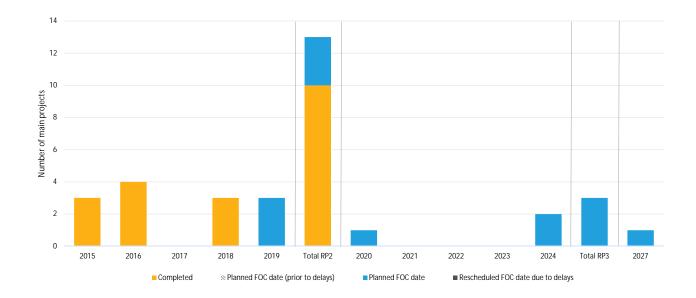
Belgium received funding throughout the period from 7 funding schemes for a total amount of 0.52M€₂₀₀₉, which represents 1% of the actual total CAPEX.

However, with the information provided, none of the funds could be linked to a specific project.



EXPECTED	BENEFIT PER PROJ	ECT Belgium - Skeye	s

# Main Projects	Status in 2018	FOC date*	Expected benefit per KPA		PCP	NOP		
			SAF	ENV	CAP	CEF		
1 ATM Automation System: Permanent Evolution	Ongoing	2024					Х	
2 Renewal of Part of the Ai-Ground-Air Radio Infrastructure	Ongoing	2019						
3 ILS 05R - 23L at Liège Airport	Completed	2016			Х			
4 Approach Radars Brussels, Ostend and Charleroi	Completed	2015	Х		Х	Х		
5 Telecommunications and IT infrastructure	Ongoing	2024	Х					
6 A-SMGCS at Liège Airport and at Charleroi Airport	Completed	2016	Х		Х			
7 VOR/DME	Completed	2018				Х		
8 Simulator Hardware	Completed	2018						
9 Voice Comm. Switch: IP-Upgrade and Hardware Replacement	Ongoing	2019						
10 Weather Sensing	Completed	2018	Х					
11 ILS at the Brussels, Liège, Ostend, Charleroi and Antwerp Airports	Ongoing	2027						
12 Upgrade Approach Radar at Liège Airport	Completed	2016	Х		Х			
13 A-SMGCS2 at the Brussels Airport	Ongoing	2019						
14 ATM Infrastructure of the New Tower at Charleroi Airport	Completed	2016	Х		Х		Х	
15 ILS 07L at Brussels Airport	Completed	2015	Х		Х			
16 New Surveillance Layer (WAM and/or ADS-B)	Not started	2020						
17 Upgrade of the Belgocontrol WAN	Completed	2015					Х	



Belgium planned 17 main projects for RP2: ten projects have been completed and seven have been started. Three of the projects will continue through RP3 and one is expected to be completed in 2027.

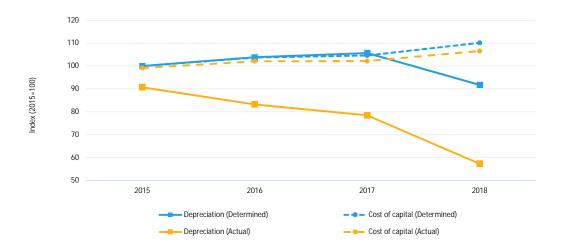
Seven projects out of 17 are expected to have a positive impact on safety and six on capacity. There are four projects that are not expected to benefit any performance area. None of the projects are expected to have an impact on the environment.

The actual investment made in RP2 to date for the three projects linked to the Pilot Common Project is 13.36M€₂₀₀₉. This amount represents 29% of the actual total CAPEX. No project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Belgium -	Skeyes					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	15.63	16.24	16.53	14.35	14.09	62.75
- En route	9.62	9.61	9.77	8.26	7.96	37.26
- Terminal	6.02	6.63	6.76	6.09	6.14	25.49
Cost of Capital	3.92	4.06	4.10	4.32	3.68	16.40
- En route	2.87	2.98	3.00	3.18	2.53	12.03
- Terminal	1.05	1.09	1.10	1.14	1.15	4.38
Total	19.56	20.30	20.63	18.67	17.78	79.15
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	14.19	13.02	12.27	8.97	-	48.45
- En route	9.12	8.43	7.99	5.94	-	31.49
- Terminal	5.07	4.59	4.28	3.02	-	16.96
Cost of Capital	3.89	4.00	4.01	4.18	-	16.07
- En route	2.85	2.94	2.93	3.08	-	11.81
- Terminal	1.03	1.07	1.07	1.10	-	4.27
Total	18.08	17.02	16.27	13.15	-	64.52
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(1.44)	(3.22)	(4.26)	(5.38)	-	(14.30)
- En route	(0.49)	(1.17)	(1.78)	(2.32)	-	(5.77)
- Terminal	(0.95)	(2.05)	(2.48)	(3.06)	-	(8.54)
Cost of Capital	(0.03)	(0.06)	(0.10)	(0.14)	-	(0.33)
- En route	(0.02)	(0.04)	(0.06)	(0.10)	-	(0.22)
- Terminal	(0.01)	(0.02)	(0.03)	(0.04)	-	(0.11)
Total	(1.48)	(3.28)	(4.35)	(5.52)	-	(14.63)



Over the first 4 years of RP2, 28% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 14.63M€₂₀₀₉ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by $14.30M \in_{2009}$. This was mainly due to delays in the implementation of foreseen investments.

Throughout RP2 to date, the actual cost of capital was $0.33M \in_{2009}$ lower than determined. This was mainly due to a lower than planned fixed asset base (actual WACC did not change compared to the determined).



4.6.2 France - DSNA

2015

Throughout the RP2 to date, France underspent 13.22M€₂₀₀₉ with respect to the Performance Plan (not including OPEX related to CAPEX). Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-50.53M€₂₀₀₉). France planned 14 main projects for RP2: three projects have been completed and 11 have been started. Out of the started projects, four are expected to be completed in RP2 and the remaining seven in RP3 or later.

	L INVESTMENTS (including Opera	ating Costs related to CAPEX)	2015D	2016D	2017D	2018D	20100	DD2 to det
Determil	ned data (M€ ₂₀₀₉)		2015D	20100	20170	20180	2019D	RP2 to dat
Total CA	PEX		163.80	178.04	185.83	169.51	138.84	697.18
	Main CAPEX *		118.57	121.48	127.20	118.34	97.24	485.60
- 9	% Main into Total CAPEX		72%	68%	68%	70%	70%	70%
- (Other CAPEX **		45.24	56.55	58.63	51.16	41.60	211.58
- %	% Other into Total CAPEX		28%	32%	32%	30%	30%	30%
Actual d	ata (M€ ₂₀₀₉)		2015A	2016A	2017A	2018A	2019A	RP2 to dat
Total CA	PEX		212.13	242.23	246.65	266.26	-	967.28
- N	Main CAPEX		186.85	213.12	210.13	232.19	-	842.29
- 9	% Main into Total CAPEX		88%	88%	85%	87%	-	87%
	Other CAPEX		25.28	29.12	36.52	34.07	-	124.99
- 9	% Other into Total CAPEX		12%	12%	15%	13%	-	13%
Differen	ce between Actuals and Determ	ined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to dat
Total CA	PEX		48.33	64.20	60.82	96.76	-	270.10
	Main CAPEX		68.29	91.63	82.92	113.85	-	356.69
	Other CAPEX		(19.96)	(27.44)	(22.11)	(17.09)	-	(86.60
Total CA			30% 58%	36% 75%	33% 65%	57% 96%	-	399 739
	Main CAPEX (%) Other CAPEX (%)		-44%	-49%	-38%	-33%	-	-419
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Total CAPEX Actuals vs Planned (M€2009)	200					<u> </u>		
<u> </u>	0					Mai	1ain CAPEX *	Other CAPEX **

In the case of France, to have an accurate vision of the investment costs, DSNA have considered the sum of investments costs as well as some operating costs which are directly associated to their investments (referred to as "T3 Tech"). In order to take into account the "T3 Tech" costs, they have used the "unplanned CAPEX" line to include them in the total CAPEX in the Monitoring Tables.

2019

RP2 to date

2018

Actual investments made in RP2 to date under these "T3 Tech" costs added up to a value of 283.41M€2009, which is roughly 29% of the total CAPEX and 34% of the main CAPEX. For this reason, the investments for France in sections 1, 2 and 3 of this report include these "T3 Tech" costs, resulting in an total CAPEX overspent of 39% RP2 to date (see calculations above). However, the following section of the factsheet of France – DSNA strictly analysis investment costs, thus the operating costs directly associated to DSNA investments (i.e. "T3 Tech" costs) are excluded from the scope. This results in a total CAPEX underspent of 2% RP2 to date.

2016

2017

■ Determined data ■ Actual data

■ Determined data ■ Actual data

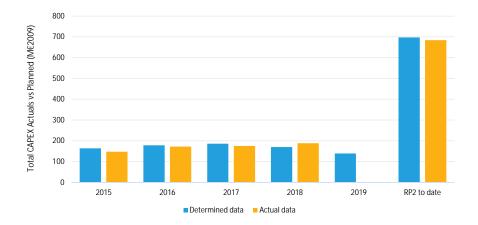
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

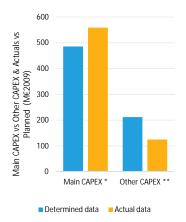
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



OVERALL INVESTMENTS France - DSNA (excluding Operation	ing Costs related to CAPEX)					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	163.80	178.04	185.83	169.51	138.84	697.18
- Main CAPEX *	118.57	121.48	127.20	118.34	97.24	485.60
- % Main into Total CAPEX	72%	68%	68%	70%	70%	70%
- Other CAPEX **	45.24	56.55	58.63	51.16	41.60	211.58
- % Other into Total CAPEX	28%	32%	32%	30%	30%	30%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	147.76	172.21	175.61	188.29	-	683.86
- Main CAPEX	122.48	143.09	139.08	154.22	-	558.88
- % Main into Total CAPEX	83%	83%	79%	82%	-	82%
- Other CAPEX	25.28	29.12	36.52	34.07	-	124.99
- % Other into Total CAPEX	17%	17%	21%	18%	-	18%

Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(16.05)	(5.83)	(10.23)	18.79	-1	(13.32)
- Main CAPEX	3.91	21.61	11.88	35.88	-	73.28
- Other CAPEX	(19.96)	(27.44)	(22.11)	(17.09)	-	(86.60)
Total CAPEX (%)	-10%	-3%	-6%	11%	-	-2%
- Main CAPEX (%)	3%	18%	9%	30%	-	15%
- Other CAPEX (%)	-44%	-49%	-38%	-33%	-	-41%





The total capital expenditure to date is $683.86 \text{M} \in_{2009}$. For RP2 to date, France spent $13.32 \text{M} \in_{2009}$ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 15% higher than planned, while other CAPEX is 41% lower.

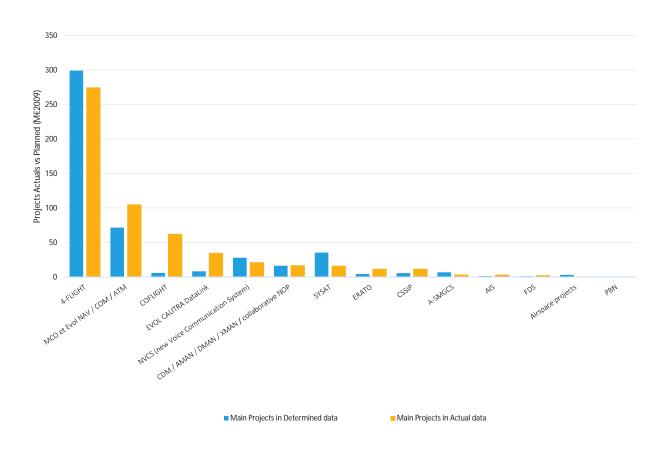
In 2015, 2016 and 2017, France underspent $16.05M \in_{2009}$, $5.83M \in_{2009}$ and $10.23M \in_{2009}$, respectively. In 2018, actual CAPEX is $18.79M \in_{2009}$ higher than planned.



INVESTMENTS PER MAIN PROJECT France - DSNA						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 4-FLIGHT	72.77	78.60	77.02	70.66	44.42	299.06
2 MCO et Evol NAV / COM / ATM	14.95	18.90	19.29	18.29	18.05	71.43
3 COFLIGHT	5.82	-	-	-	-	5.82
4 EVOL CAUTRA DataLink	3.51	2.02	1.99	0.58	0.58	8.10
5 NVCS (new Voice Communication System)	4.15	8.20	8.68	6.81	9.03	27.85
6 CDM / AMAN / DMAN / XMAN / collaborative NOP	3.18	3.67	4.35	4.95	6.27	16.15
7 SYSAT	2.81	5.87	13.05	13.56	14.76	35.29
8 ERATO	4.16	-	-	-	-	4.16
9 CSSIP	4.22	1.16	0.18	-	-	5.56
10 A-SMGCS	1.40	1.75	1.34	2.21	2.87	6.69
11 AIS	0.28	0.29	0.27	0.27	0.27	1.11
12 FDS	0.44	0.16	0.16	0.16	0.16	0.92
13 Airspace projects	0.74	0.73	0.73	0.72	0.71	2.91
14 PBN	0.14	0.14	0.14	0.13	0.13	0.55
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 4-FLIGHT	72.87	66.75	64.71	69.89	-	274.23
2 MCO et Evol NAV / COM / ATM	16.13	31.23	25.05	32.24	-	104.65
3 COFLIGHT	4.81	18.98	18.49	19.72	-	61.99
4 EVOL CAUTRA DataLink	4.41	6.73	11.84	11.24	-	34.22
5 NVCS (new Voice Communication System)	4.19	2.03	7.47	7.20	-	20.88
6 CDM / AMAN / DMAN / XMAN / collaborative NOP	4.14	4.92	3.68	3.63	-	16.37
7 SYSAT	2.23	3.26	3.86	6.41	-	15.77
8 ERATO	6.33	5.07	-	-	-	11.40
9 CSSIP	4.57	2.95	1.91	1.96	-	11.39
10 A-SMGCS	1.09	0.53	1.16	0.18	-	2.95
11 AIS	0.46	0.28	0.55	1.40	-	2.69
12 FDS	1.13	0.37	0.18	0.31	-	1.99
13 Airspace projects	0.09	-	0.09	0.04	-	0.23
14 PBN	0.04	-	0.09	-	-	0.13
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015 20	016 20	017 20	018 20)19 R	RP2 to date
1 4-FLIGHT	0.10	(11.85)	(12.31)	(0.78)	-	(24.83)
2 MCO et Evol NAV / COM / ATM	1.18	12.34	5.76	13.95	-	33.22
3 COFLIGHT	(1.02)	18.98	18.49	19.72	-	56.17
4 EVOL CAUTRA DataLink	0.90	4.71	9.85	10.66	-	26.11
5 NVCS (new Voice Communication System)	0.04	(6.17)	(1.21)	0.38	-	(6.97)
6 CDM / AMAN / DMAN / XMAN / collaborative NOP	0.96	1.25	(0.67)	(1.32)	-	0.23
7 SYSAT	(0.58)	(2.60)	(9.19)	(7.14)	-	(19.52)
8 ERATO	2.17	5.07	1 70	4.07	-	7.24
9 CSSIP	0.34	1.79	1.73	1.96	-	5.83
10 A-SMGCS	(0.31)	(1.22)	(0.18)	(2.03)	-	(3.74)
11 AIS 12 FDS	0.18	(0.02) 0.21	0.27	1.13 0.15	-	1.57
13 Airspace projects	(0.65)	(0.73)	(0.63)	(0.67)	-	(2.60)
14 PBN	(0.00)	(0.73)	(0.03)	(0.67)	-	(2.69)
17 1 1011	(0.10)	(0.14)	(0.04)	(0.13)	-	(0.42)



INVESTMENTS PER MAIN PROJECT France - DSNA



RP2 to date, the biggest investment, both in the Performance Plan and the actual data, is the "4-flight" project, amounting up to 49% of the total actual investment, but still lower than originally planned by $24.83M \in_{2009}$. The second largest investment is project "MCO et Evol NAV / COM / ATM". The investment for this project is higher than originally planned by $33.22M \in_{2009}$.

All of the projects have received investments, although not always in proportion to their planned investments. For example, the project "Coflight" has already received a tenfold of investments than determined. Others, like "Airspace projects" are not at the level of investments planned.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) France -	· DSNA					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 4-FLIGHT	-	19.81	19.07	5.87	-	44.75
3 COFLIGHT	-	2.90	3.65	0.86	-	7.41
5 NVCS (new Voice Communication System)	-	2.37	0.33	-	-	2.71
6 CDM / AMAN / DMAN / XMAN / collaborative NOP	-	-	0.84	-	-	0.84
7 SYSAT	-	5.04	-	1.50	-	6.54
8 ERATO in Brest dans Bordeaux ACCs	-	-	9.01	-	-	9.01
9 CSSIP	-	-	0.12	-	-	0.12
12 FDS	-	0.18	0.44	0.05	-	0.68
14 PBN	-	0.06	-	0.02	-	0.08
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	30.36	33.46	8.30	-	72.12
SDM Payment	16.19	12.08	35.91	-	-	64.19

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



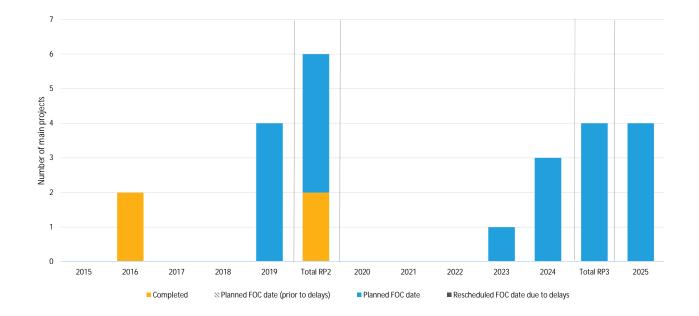
During RP2, France received funding for 9 out of 15 projects with a total value of 72.12M \in ₂₀₀₉, 89% of which was via SDM Payment. The total funding received amounts to 7% of the actual total CAPEX (including "OPEX related to CAPEX" investment).

The biggest share of the funds, i.e. 62% was allocated to the project "4-flight". 18% of the investments for this project were financed with public funding. Projects "Coflight", "Sysat" and "ERATO" also received substantial share of funding.



EXPECTED BENEFIT	I PER PROJECI	France - DSNA

# Main Projects	Status in 2018	FOC date*	Ехрє	ected be	nefit peı	r KPA	PCP	NOP
			SAF	ENV	CAP	CEF		
1 4-FLIGHT	Ongoing	2025	Х	Х	Х	Х	х	х
2 MCO et Evol NAV / COM / ATM	Ongoing	2025	Х		Х	Х	Х	
3 COFLIGHT	Ongoing	2025	Х		Х	Х	Х	
4 EVOL CAUTRA DataLink	Ongoing	2025	Х		Х	Х	Х	Х
5 NVCS (new Voice Communication System)	Ongoing	2024	Х		Х	Х	Х	
6 CDM / AMAN / DMAN / XMAN / collaborative NOP	Ongoing	2019	Х	Х	Х	Х	Х	
7 SYSAT	Ongoing	2023	Х		Х	Х	Х	
8 ERATO	Completed	2016	Х	Х	Х	Х	Х	Х
9 CSSIP	Ongoing	2019	Х		Х	Х	Х	
10 A-SMGCS	Ongoing	2019	Х	Х	Х	Х	Х	
11 AIS	Ongoing	2019	Х	Х	Х	Х	Х	
12 FDS	Ongoing	2024	Х		Х	Х	Х	
13 Airspace projects	Ongoing	2024	Х	Х	Х	Х	Х	Х
14 PBN	Completed	2016	Х		Х	Х	Х	



France planned 14 main projects for RP2: three projects have been completed and 11 have been started. Out of the started projects, four are expected to be completed in RP2 and the remaining seven in RP3 or later.

All of the projects were linked to the Pilot Common Project. Furthermore, they all have a positive effect on safety, cost-efficiency and all but one on capacity as well. Five out of the 14 projects have a positive effect on the environment.

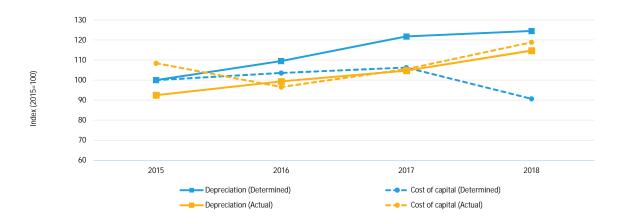
For projects started in RP1 with no clear starting date, 2010 was used as default starting date.

The actual investments made in RP2 to date for the 14 projects that were linked to the Pilot Common Project is 558.88M ϵ_{2009} . This amount represents 58% of the actual total CAPEX (including OPEX related to CAPEX). Four projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL France - I	OSNA					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	136.10	149.02	165.71	169.44	158.80	620.28
- En route	109.30	121.72	136.95	141.19	131.96	509.16
- Terminal	26.80	27.30	28.77	28.25	26.85	111.12
Cost of Capital	34.73	35.96	36.91	31.50	30.77	139.10
- En route	27.92	28.91	29.36	24.58	23.37	110.76
- Terminal	6.81	7.05	7.55	6.92	7.40	28.34
Total	170.83	184.98	202.62	200.94	189.58	759.38
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	125.91	135.16	142.53	156.14	-	559.73
- En route	104.53	114.43	121.12	134.71	-	474.78
- Terminal	21.38	20.73	21.41	21.43	-	84.95
Cost of Capital	37.66	33.54	36.64	41.28	-	149.12
- En route	31.80	28.64	31.61	35.68	-	127.73
- Terminal	5.86	4.90	5.03	5.60	-	21.39
Total	163.57	168.69	179.17	197.41	-	708.85
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(10.20)	(13.86)	(23.18)	(13.31)	- [(60.55)
- En route	(4.77)	(7.29)	(15.83)	(6.49)	-	(34.37)
- Terminal	(5.42)	(6.58)	(7.35)	(6.82)	-	(26.17
Cost of Capital	2.93	(2.42)	(0.27)	9.78	-	10.02
- En route	3.89	(0.27)	2.25	11.10	-	16.97
- Terminal	(0.95)	(2.16)	(2.52)	(1.32)	-	(6.95
Total	(7.26)	(16.29)	(23.45)	(3.53)	-	(50.53)



Over the first 4 years of RP2, 2% of planned CAPEX has not been materialised (not including OPEX related to CAPEX). However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 50.53M ϵ_{2009} for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than the determined one by 60.55M ϵ_{2009} . This was due to some assets being put in operation with delay during the year, shifting the depreciation costs to the next periods, and the fact that, in France, specific public accounting rules do not allow the depreciation of certain investment expenses and record them as operating expenses instead. As a result, depreciation was lower than foreseen and costs were reported in 'other operating costs'.

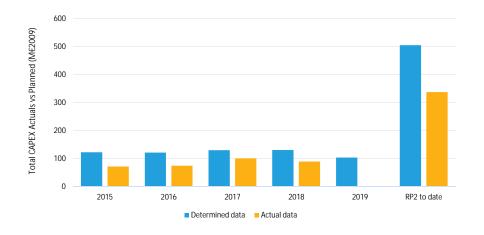
Throughout RP2 to date, the actual cost of capital was 10.02M€₂₀₀₉ higher than determined. This was mainly due to an increase in the net value of the fixed asset base and also a higher than determined WACC.

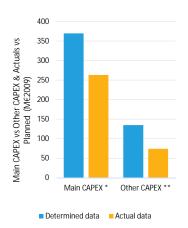


4.6.3 Germany - DFS

Throughout the RP2 to date, Germany underspent 167.21M€2009 with respect to the Performance Plan. Despite lower than planned capital expenditure, the actual total depreciation and cost of capital were higher than determined (+1.36M€2009). Germany planned 41 main projects for RP2: ten projects have been completed, 27 have been started and four are set to start in 2019. 26 projects will continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	122.55	121.45	129.98	130.83	103.82	504.80
- Main CAPEX *	99.66	100.32	95.78	74.01	52.41	369.77
- % Main into Total CAPEX	81%	83%	74%	57%	50%	73%
- Other CAPEX **	22.89	21.13	34.20	56.82	51.41	135.03
- % Other into Total CAPEX	19%	17%	26%	43%	50%	27%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	71.85	75.02	101.23	89.49	- [337.59
- Main CAPEX	52.34	61.16	87.22	62.32	-	263.04
- % Main into Total CAPEX	73%	82%	86%	70%	-	78%
- Other CAPEX	19.51	13.86	14.01	27.17	-	74.55
- % Other into Total CAPEX	27%	18%	14%	30%	-	22%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(50.70)	(46.42)	(28.75)	(41.34)	- [(167.21)
- Main CAPEX	(47.32)	(39.16)	(8.56)	(11.69)	-	(106.73)
- Other CAPEX	(3.38)	(7.27)	(20.18)	(29.65)	-	(60.48)
Total CAPEX (%)	-41%	-38%	-22%	-32%	-	-33%
- Main CAPEX (%)	-47%	-39%	-9%	-16%	-	-29%
- Other CAPEX (%)	-15%	-34%	-59%	-52%	-	-45%





The total capital expenditure to date is 337.59M€₂₀₀₉. For RP2 to date, Germany spent 167.21M€₂₀₀₉ (-33%) less CAPEX than originally planned. For RP2 to date, the main CAPEX is 29% lower than planned, while other CAPEX is 45% lower.

Germany invested less than initially planned, in every year of RP2 to date, 50.70M€₂₀₀₉ less in 2015, 46.42M€₂₀₀₉ less in 2016, 28.75M€₂₀₀₉ less in 2017 and 41.34M€₂₀₀₉ less in 2018.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Germany - DFS						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
1 iCAS programme (iTEC Centre Automation System)	41.15	45.21	45.09	43.43	14.97	174.88
2 RASUM 8.33 (Radio Site Upgrade and Modernisation)	10.27	10.26	6.32	3.56	3.50	30.42
3 Digital networks	1.72	2.68	2.42	2.38	2.34	9.20
4 ILS (Instrument Landing System)	2.78	5.48	2.85	5.61	4.16	16.72
5 Value added network services in data communication	1.75	1.72	1.69	1.66	1.63	6.82
6 Product management iCAS (iTEC Centre Automation System)	-	3.13	6.51	6.41	7.15	16.05
7 VAFORIT	4.59	3.37	1.85	-	-	9.8
8 BRISE	-	-	-	-	-	
9 BaBola	4.13	3.55	2.91	1.11	-	11.68
10 Remote Tower Control (RTC)	3.68	0.03	1.77	-	-	5.49
11 Overhaul academy	3.89	6.31	4.58	-	-	14.78
12 Transmitters, receivers, antennas	2.00	1.36	1.32	1.30	1.28	5.9
13 Intercom system 2 (GS2)	1.86	2.61	1.31	0.30	-	6.08
14 Sum of other unplanned investments with capex < 1M€3009 in RP2	-	-	-	-	-	
15 Technical centre on the campus in Langen	7.28	1.54	-	-	-	8.82
16 Modernisation VOR/DME systems	-	-	-	-	-	
17 Reconstruction of the operating media on the campus in Langen	-	-	-	-	-	
18 Control centre simulators	1.65	1.27	1.15	1.31	1.32	5.38
19 ErNoCen	0.90	1.23	0.83	-	-	2.97
20 Programme P2	4.46	1.60	0.65	1.12	-	7.82
21 RAPNET NG (New Generation)	0.73	0.85	0.84	0.82	0.81	3.24
22 MaRS	2.37	1.97	6.09	1.23	13.10	11.65
23 TOPAS 2016	0.04	3.26	1.60	-	-	4.90
24 SWIM Node 1 (VAN-NG)	-	-	-	-	-	
25 Power station	-	-	-	-	-	
26 En-route navigation (without VOR/DME)	2.50	2.28	2.20	2.23	2.13	9.22
27 EASI	1.03	-	-	-	-	1.03
28 ADQ	0.87	-	-	-	-	0.8
29 DLS Implementation Project - Path 1 "Ground" stakeholders	-	-	-	-	-	
30 S-ATM Robusto (Sectorless Air-Traffic-Management Step I "Robusto	-	-	-	-	-	
31 TAVO (Tower advanced voice operation)	-	-	-	-	-	
32 Realignment of the logistic-building	-	-	-	-	-	
33 Startup airport BER 2017+	-	-	-	-	-	
34 Renovation of the headquarters in Langen	-	-	-	-	-	
35 Deployment of an Automated Support Tool for Traffic Complexity A	-	-	-	-	-	
36 A-SMGCS	-	0.58	3.79	1.51	-	5.88
37 STANLY ACOS	-	0.02	0.02	0.02	0.02	0.0
38 AMAN DUS bzw. neu AMAN NRW und AMAN BER	-	-	-	-	-	
39 XMAN	0.01	-	-	-	-	0.0
40 Free Route Airspace	-	-	-	-	-	
41 Met Gate	-	-	-	-	-	
42 Renovation of the operating room in Langen	-	-	-	-	-	
43 RNP based Operations	-	-	-	-	-	
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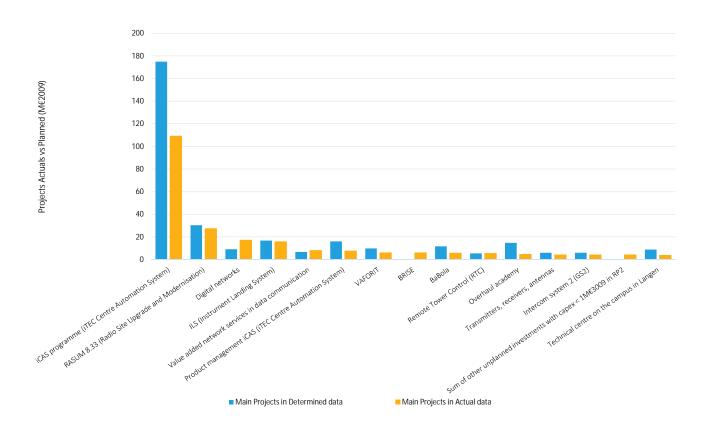
INVESTMENTS PER MAIN PROJECT Germany - DFS						
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 iCAS programme (iTEC Centre Automation System)	24.21	25.23	43.11	16.55	-	109.10
2 RASUM 8.33 (Radio Site Upgrade and Modernisation)	5.79	4.83	5.36	11.41	-	27.38
3 Digital networks	3.72	4.34	3.91	5.20	-	17.17
4 ILS (Instrument Landing System)	1.37	4.73	4.43	5.21	-	15.74
5 Value added network services in data communication	1.98	1.91	2.70	1.44	-	8.03
6 Product management iCAS (iTEC Centre Automation System)	-	-	2.58	5.07	-	7.65
7 VAFORIT	2.58	2.17	1.32	-	-	6.07
8 BRISE	-	3.84	2.02	0.17	-	6.04
9 BaBola	0.13	0.64	2.42	2.51	-	5.70
10 Remote Tower Control (RTC)	0.39	0.65	2.92	1.46	-	5.43
11 Overhaul academy	0.22	1.88	1.76	0.75	-	4.61
12 Transmitters, receivers, antennas	1.01	0.42	0.96	1.87	-	4.26
13 Intercom system 2 (GS2)	0.51	0.73	2.14	0.83	-	4.21
14 Sum of other unplanned investments with capex < 1M€3009 in RP2	0.29	0.50	0.62	2.73	-	4.14
15 Technical centre on the campus in Langen	3.02	0.13	0.57	-	-	3.73
16 Modernisation VOR/DME systems	-	0.08	1.31	1.81	-	3.21
17 Reconstruction of the operating media on the campus in Langen	-	1.61	1.20	0.30	-	3.11
18 Control centre simulators	0.89	1.16	0.57	0.40	-	3.02
19 ErNoCen	0.73	0.87	0.77	0.45	-	2.83
20 Programme P2	2.01	0.58	0.10	0.07	-	2.76
21 RAPNET NG (New Generation)	0.04	1.67	0.89	0.03	-	2.64
22 MaRS	0.95	1.04	0.54	0.07	-	2.60
23 TOPAS 2016	-	1.07	0.60	0.38	-	2.05
24 SWIM Node 1 (VAN-NG)	-	_	0.98	0.84	-	1.82
25 Power station	0.40	0.61	0.29	0.34	-	1.64
26 En-route navigation (without VOR/DME)	0.89	0.22	0.26	0.08	-	1.45
27 EASI	0.02	-	1.19	0.09	-	1.30
28 ADQ	1.08	0.05	0.12	-	-	1.25
29 DLS Implementation Project - Path 1 "Ground" stakeholders	-	-	0.70	0.24	-	0.94
30 S-ATM Robusto (Sectorless Air-Traffic-Management Step I "Robusto")	-	-	0.33	0.43	-	0.76
31 TAVO (Tower advanced voice operation)	-	-	0.01	0.70	-	0.71
32 Realignment of the logistic-building	-	0.01	0.12	0.41	-	0.53
33 Startup airport BER 2017+	-	0.07	0.12	0.28	-	0.47
34 Renovation of the headquarters in Langen	-	0.11	0.22	0.01	-	0.34
35 Deployment of an Automated Support Tool for Traffic Complexity Assess	-	-	-	0.19	-	0.19
36 A-SMGCS	0.03	0.00	0.06	-	-	0.09
37 STANLY ACOS	0.06	-	-	-	-	0.06
38 AMAN DUS bzw. neu AMAN NRW und AMAN BER	0.00	0.01	0.00	-	-	0.01
39 XMAN	-	0.00	-	0.00	-	0.00
40 Free Route Airspace	-	0.00	-	-	-	0.00
41 Met Gate	-	-	-	-	-	0.00
42 Renovation of the operating room in Langen	-	-	-	-	-	0.00
43 RNP based Operations	-	-	-	-	-	0.00



# Difference between Actuals and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
-2007/						
1 iCAS programme (iTEC Centre Automation System)	(16.94)	(19.98)	(1.98)	(26.88)	-	(65.78)
2 RASUM 8.33 (Radio Site Upgrade and Modernisation)	(4.48)	(5.44)	(0.97)	7.85	-	(3.04)
3 Digital networks	2.00	1.66	1.49	2.82	-	7.97
4 ILS (Instrument Landing System)	(1.42)	(0.75)	1.59	(0.40)	-	(0.98)
5 Value added network services in data communication	0.23	0.19	1.01	(0.22)	-	1.22
6 Product management iCAS (iTEC Centre Automation System)	- (2.01)	(3.13)	(3.94)	(1.33)	-	(8.40)
7 VAFORIT 8 BRISE	(2.01)	(1.19) 3.84	(0.54)	0.17	-	(3.74)
9 BaBola						
	(3.99)	(2.91)	(0.48)	1.40	-	(5.98)
10 Remote Tower Control (RTC)	(3.29)	0.62	1.15	1.46	-	(0.05)
11 Overhaul academy 12 Transmitters, receivers, antennas	(3.67)	(4.43)	(2.82)	0.75 0.57	-	(10.17)
13 Intercom system 2 (GS2)	(1.36)	(1.88)	0.83	0.57	-	(1.71) (1.87)
	, ,	, ,				
14 Sum of other unplanned investments with capex < 1M€3009 in RP2	0.29	0.50	0.62	2.73	-	4.14
15 Technical centre on the campus in Langen	(4.26)	(1.41)	0.57	- 1.01	-	(5.10)
16 Modernisation VOR/DME systems	-	0.08	1.31	1.81	-	3.21
17 Reconstruction of the operating media on the campus in Langen	- (0.7.1)	1.61	1.20	0.30	-	3.11
18 Control centre simulators	(0.76)	(0.11)	(0.58)	(0.91)	-	(2.36)
19 ErNoCen	(0.17)	(0.36)	(0.06)	0.45	-	(0.14)
20 Programme P2	(2.45)	(1.02)	(0.54)	(1.04)	-	(5.06)
21 RAPNET NG (New Generation)	(86.0)	0.82	0.05	(0.79)	-	(0.60)
22 MaRS	(1.41)	(0.93)	(5.54)	(1.17)	-	(9.06)
23 TOPAS 2016	(0.04)	(2.19)	(1.01)	0.38	-	(2.85)
24 SWIM Node 1 (VAN-NG)	-	-	0.98	0.84	-	1.82
25 Power station	0.40	0.61	0.29	0.34	-	1.64
26 En-route navigation (without VOR/DME)	(1.61)	(2.07)	(1.94)	(2.15)	-	(7.77)
27 EASI	(1.01)	-	1.19	0.09	-	0.27
28 ADQ 29 DLS Implementation Project - Path 1 "Ground" stakeholders	0.21	0.05	0.12 0.70	0.24	-	0.39 0.94
30 S-ATM Robusto (Sectorless Air-Traffic-Management Step I "Robusto	-	<u>-</u>			-	
31 TAVO (Tower advanced voice operation)	<u> </u>	-	0.33	0.43		0.76 0.71
32 Realignment of the logistic-building	<u> </u>	0.01	0.01	0.70		0.71
33 Startup airport BER 2017+		0.07	0.12	0.41		0.33
34 Renovation of the headquarters in Langen			0.12			
35 Deployment of an Automated Support Tool for Traffic Complexity A	-	0.11		0.01	-	0.34
36 A-SMGCS	0.03	(O E O)	(2.72)	0.19 (1.51)	-	0.19
36 A-SWIGCS 37 STANLY ACOS		(0.58)	(3.73)	, ,	-	(5.79)
38 AMAN DUS bzw. neu AMAN NRW und AMAN BER	0.06	(0.02) 0.01	(0.02) 0.00	(0.02)	-	(0.01)
38 AMAN DOS DZW. NEU AMAN NRW UND AMAN BER 39 XMAN		0.00	0.00	0.00		(0.01)
40 Free Route Airspace	(0.01)	0.00		0.00		0.00
40 Free Route Airspace 41 Met Gate	-	0.00	-	-	-	0.00
41 Met Gate 42 Renovation of the operating room in Langen						-
43 RNP based Operations	-			<u> </u>		-
43 Mili basca Operations	-			-		-



INVESTMENTS PER MAIN PROJECT Germany - DFS



The flagship project for Germany is "iCAS programme (iTEC Centre Automation System)", representing 31% of the total actual investments planned. The planned investments for this project are $174.88M\epsilon_{2009}$, with the actual investments to date being $109.10M\epsilon_{2009}$.

Other projects that received substantial investments are "RASUM 8.33 (Radio Site Upgrade and Modernisation", "Digital Networks" and "ILS (Instrument Landing System)". Projects "MaRS" and "Overhaul Academy" received low investments compared to the planned ones.

Projects "Free Route Airspace" and "Met Gate" have not received any investments.



	20164	2016A	20174	2018A	2019A	RP2 to da
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2010A	2017A	2010A	2019A	KFZ to us
1 iCAS programme	_	7.42	25.10	12.03	- [44.
8 BRISE	-	1.17	0.71	0.08	-	1.
9 BaBola DUS	0.17	0.53	0.67	0.18	-	1.
10 Remote Tower Control (RTC)	-	0.88	1.79	0.88	-	3.
16 Modernisation VOR/DME systems	-	-	0.98	1.39	-	2
19 ErNoCen	-	0.36	0.38	0.25	-	1
21 RAPNET NG (New Generation)	-	1.04	1.61	0.13	-	2
22 MaRS (Modernisation and Replacement of Surveillance Infrastructure)	-	0.95	0.96	0.93	-	2
24 SWIM Node 1	-	0.09	0.24	0.20	-	0
27 EASI	0.54	0.44	0.92	0.37	-	2
28 ADQ	1.58	0.67	0.55	-	-	2
30 S-ATM Robusto	-	-	-	0.96	-	0
35 Deployment of an Automated Support Tool for Traffic Complexity Assess	-	-	0.17	0.27	-	0
37 STANLY ACOS	-	0.02	0.00	-	-	0
38 AMAN DUS bzw. neu AMAN NRW und AMAN BER	-	0.54	0.39	0.11	-	1
39 XMAN	-	0.30	0.34	0.35	-	0
40 Free Route Airspace	-	0.28	0.32	0.48	-	1
41 Met Gate	-	0.01	0.01	0.01	-	0
43 RNP based Operations	-	0.02	0.05	0.06		0
A-CDM	0.04	-	-	-	_	0
IOP	0.58	_	0.03	_	_	0
CS PENS & DLS	0.14		-			
IDP ANSPs Interim Deployment Programme Implementation	0.62					0
TANGE (Tower ATS Next Generation) Phase 1	-		0.08	0.15	-	0
DLS Path I		-	0.30	0.13	_	0
DLS Path II			0.03	0.02		C
SWIM Governance			0.05	0.02		C
Initial AOP DUS	_	_	-		_	
CSIS	-	-	-	0.12	-	0
TANGe TWR-ATS Next Generation Phase 1+ & ZAAS Planungsphase	_	-	-	0.22		0
Common SWIM PKI and Cyber-security	-	-	-	0.00	-	0
IP1 - DLS European Target Solution assessment	-	-	-	0.02	-	0
tual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to
	3.67	14.71	35.72	19.40		73
unding declaration (Monitoring Report)						

% of Funding Declaration in Total CAPEX for RP2 to date

% of SDM Payment in Total CAPEX for RP2 to date



Germany received funds from 36 different funding schemes. For some projects, like their flagship "iCAS" project, funds were received from multiple funding schemes. The total amount of funding received RP2 to date is $73.50M \in_{2009}$, representing 22% of the actual total CAPEX.



41 Renovation of the operating room in Langen

42 RNP based Operations

EXPECTED BENEFIT PER PROJECT Germany - DFS Status in 2018 FOC date* Expected benefit per KPA PCP NOP # Main Projects SAF ENV CAP CEF 1 iCAS programme (iTEC Centre Automation System) Ongoing 2027 2 RASUM 8.33 (Radio Site Upgrade and Modernisation) Ongoing 2021 Х Х 3 Digital networks Ongoing 2019 Х 4 ILS (Instrument Landing System) Ongoing 2024 5 Value added network services in data communication Ongoing 2019 Χ 6 Product management iCAS (iTEC Centre Automation System) Ongoing 2021 Χ Х VAFORIT Completed 2017 Х 8 BRISE Ongoing 2023 Х 9 BaBola 2022 Ongoing (-)x Х Х 10 Remote Tower Control (RTC) 2022 Ongoing 11 Overhaul academy Completed 2017 (-)x 12 Transmitters, receivers, antennas Ongoing 2020 13 Intercom system 2 (GS2) 2022 Ongoing (-)x 14 Technical centre on the campus in Langen Completed 2017 15 Modernisation VOR/DME systems Ongoing 2024 (-)x Χ 16 Reconstruction of the operating media on the campus in Langen Completed 2018 17 Control centre simulators 2019 (-)x Ongoing 18 ErNoCen Completed 2018 (-)x Х 19 Programme P2 Completed 2018 (-)x 20 RAPNET NG (New Generation) Ongoing 2019 Х Х 21 MaRS 2023 (-)x Ongoing Х 22 TOPAS 2016 Ongoing 2019 23 SWIM Node 1 (VAN-NG) 2023 Ongoing Х Х 24 Power station 2021 Ongoing 25 En-route navigation (without VOR/DME) Ongoing 2020 26 EASI Completed 2018 Χ 27 ADQ Completed 2017 (-)x Х 28 DLS Implementation Project - Path 1 "Ground" stakeholders Completed 2018 Х Х Х Χ 29 S-ATM Robusto (Sectorless Air-Traffic-Management "Robusto") Ongoing 2019 30 TAVO (Tower advanced voice operation) 2023 Ongoing Х 31 Realignment of the logistic-building 2021 Ongoing Х 32 Startup airport BER 2017+ Ongoing 2020 Х 33 Renovation of the headquarters in Langen 2021 Ongoing (-)x Ongoing 34 Automated Support Tool for Traffic Complexity Assessment at DFS (AirMagic) 2020 Χ Χ Х Χ 35 A-SMGCS Completed 2018 Х 36 STANLY ACOS Ongoing 2020 37 AMAN DUS bzw. neu AMAN NRW und AMAN BER 2020 Ongoing 38 XMAN 2023 Х Ongoing Х х 39 Free Route Airspace 2021 Ongoing Х Х 40 Met Gate 2024 Ongoing Х Х Х Х

Ongoing

Ongoing

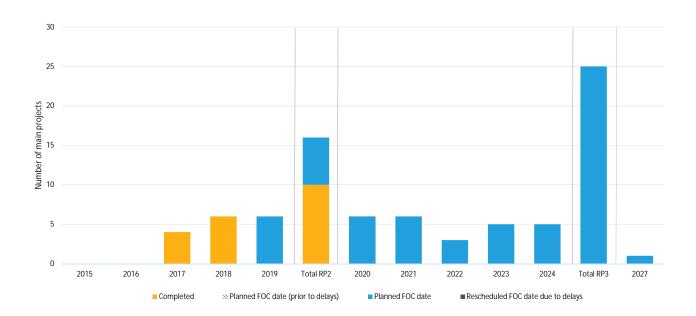
2024

2024

(-)x



EXPECTED BENEFIT PER PROJECT Germany - DFS



Germany planned 41 main projects for RP2: ten projects have been completed, 27 have been started and four are set to start in 2019. 26 projects will continue through RP3.

24 projects have an effect, albeit positive or negative, on cost-efficiency. Negative effects on cost-efficiency can be due to higher investment costs that affect the overall positive impact expected (e.g. reduction of maintenance, staff etc).

Eight projects are expected to have a positive impact on safety, and nine on environment, while capacity is expected to be improved by 12 projects. Some projects do not mention any relevant impact in the future, or the impact is minor and not related to a significant change in any performance area.

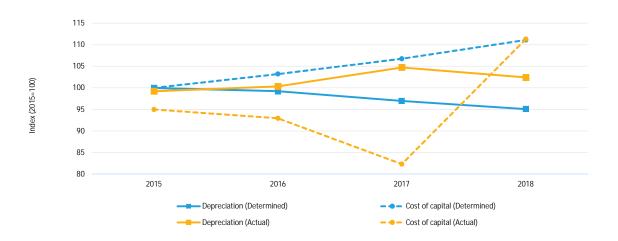
For projects started in RP1 with no clear start date, 2010 was used as default start date.

The actual investments made in RP2 to date for the 21 projects that were linked to the Pilot Common project is 170.89M \in 2009. This amount represents 51% of the actual total CAPEX. Five projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



Determined data (M€ ₂₀₀₉) 2015D 2016D 2017D 2018D 2019D RP2 to date							
Depreciation 88.49 87.81 85.79 84.14 82.39 346.23 - En route 73.09 72.16 70.52 68.74 66.95 284.51 - Ferminal 15.40 15.65 15.28 15.39 15.44 61.72 Cost of Capital 31.17 32.17 33.28 34.63 35.48 131.26 - En route 23.56 24.39 25.31 26.46 27.16 99.72 - Terminal 7.61 7.78 7.96 81.8 83.3 31.15 Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (M€2000) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - En route 22.54 21.97 19.87 26.57 - 90.94	INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Germany - I	DFS					
Depreciation 88.49 87.81 85.79 84.14 82.39 346.23 - En route 73.09 72.16 70.52 68.74 66.95 284.51 - Ferminal 15.40 15.65 15.28 15.39 15.44 61.72 Cost of Capital 31.17 32.17 33.28 34.63 35.48 131.26 - En route 23.56 24.39 25.31 26.46 27.16 99.72 - Terminal 7.61 7.78 7.96 81.8 83.3 31.15 Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (M€2000) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - En route 22.54 21.97 19.87 26.57 - 90.94	Dotorminod data (ME)	2015D	2016D	2017D	2019D	2010D	DD2 to data
En route 73.09 72.16 70.52 68.74 66.95 284.51 - Erminal 15.40 15.65 15.28 15.39 15.44 61.72 Cost of Capital 31.17 32.17 33.28 34.63 35.48 131.26 - En route 23.55 24.39 25.31 26.46 27.16 99.72 - Terminal 7.61 7.78 7.96 8.18 8.31 31.54 Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (M€2009) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreclation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Ferminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 <th>Determined data (Me₂₀₀₉)</th> <th>20100</th> <th>20100</th> <th>20170</th> <th>20100</th> <th>20170</th> <th>KF2 to date</th>	Determined data (Me ₂₀₀₉)	20100	20100	20170	20100	20170	KF2 to date
En route 73.09 72.16 70.52 68.74 66.95 284.51 - Errminal 15.40 15.65 15.28 15.39 15.44 61.72 Cost of Capital 31.17 32.17 33.28 34.63 35.48 131.26 - En route 23.56 24.39 25.31 26.46 27.16 99.72 - Terminal 7.61 7.78 7.96 8.18 8.31 31.54 Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (M€2009) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 </td <td>Depreciation</td> <td>88.49</td> <td>87.81</td> <td>85.79</td> <td>84.14</td> <td>82.39</td> <td>346.23</td>	Depreciation	88.49	87.81	85.79	84.14	82.39	346.23
Cost of Capital 31.17 32.17 33.28 34.63 35.48 131.26 - En route 23.56 24.39 25.31 26.46 27.16 99.72 - Terminal 7.61 7.78 7.96 8.18 8.31 31.54 Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (M€₂₀₀₀) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.0		73.09	72.16	70.52	68.74	66.95	284.51
- En route 23.56 24.39 25.31 26.46 27.16 99.72 - Terminal 7.61 7.78 7.96 8.18 8.31 31.54 Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (M€2009) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 Cost of Capital 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84	- Terminal	15.40	15.65	15.28	15.39	15.44	61.72
Terminal 7.61 7.78 7.96 8.18 8.31 31.54 Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (Μ€₂οογ) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Difference between Actual and Determined (M€₂ooγ) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 -	Cost of Capital	31.17	32.17	33.28	34.63	35.48	131.26
Total 119.66 119.98 119.07 118.77 117.87 477.48 Actual data (Μ€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€ ₂₀₀₉) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 -		23.56	24.39	25.31	26.46	27.16	99.72
Actual data (M€₂₀₀) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€₂₀₀₀) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86	- Terminal	7.61	7.78	7.96	8.18		31.54
Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18)	Total	119.66	119.98	119.07	118.77	117.87	477.48
Depreciation 87.80 88.79 92.68 90.64 - 359.90 - En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18)							
- En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) <td< td=""><td>Actual data (M€₂₀₀₉)</td><td>2015A</td><td>2016A</td><td>2017A</td><td>2018A</td><td>2019A</td><td>RP2 to date</td></td<>	Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
- En route 72.55 73.73 77.64 75.44 - 299.36 - Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
- Terminal 15.25 15.06 15.03 15.20 - 60.54 Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	Depreciation	87.80	88.79	92.68	90.64	-	359.90
Cost of Capital 29.61 28.98 25.66 34.70 - 118.94 - En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	- En route	72.55	73.73	77.64	75.44	-	299.36
- En route 22.54 21.97 19.87 26.57 - 90.94 - Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	- Terminal	15.25	15.06	15.03	15.20	-	60.54
- Terminal 7.07 7.01 5.80 8.13 - 28.00 Total 117.41 117.77 118.34 125.33 - 478.84 Difference between Actual and Determined (M€₂009) 2015 2016 2017 2018 2019 RP2 to date Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	Cost of Capital	29.61	28.98	25.66	34.70	-	118.94
Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	- En route	22.54	21.97	19.87	26.57	-	90.94
Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	- Terminal	7.07	7.01	5.80	8.13	-	28.00
Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	Total	117.41	117.77	118.34	125.33	-	478.84
Depreciation (0.69) 0.98 6.88 6.50 - 13.68 - En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)							
- En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	Difference between Actual and Determined (M€2009)	2015	2016	2017	2018	2019	RP2 to date
- En route (0.54) 1.57 7.13 6.70 - 14.86 - Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)							
- Terminal (0.15) (0.59) (0.24) (0.20) - (1.18) Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	Depreciation	(0.69)	0.98	6.88	6.50	-	13.68
Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	- En route	(0.54)	1.57	7.13	6.70	-	14.86
Cost of Capital (1.57) (3.20) (7.61) 0.06 - (12.32) - En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	- Terminal	. , ,	(0.59)	(0.24)	(0.20)	-	
- En route (1.02) (2.42) (5.45) 0.11 - (8.78) - Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)	Cost of Capital	· ,	. ,	. ,	. ,	-	
- Terminal (0.54) (0.78) (2.17) (0.05) - (3.54)				<u> </u>		-	
	- Terminal	. ,			(0.05)	-	<u>`</u>
	Total	(2.25)	(2.22)	(0.73)	6.56	-	



Over the first 4 years of RP2, 33% of planned CAPEX has not been materialised. However, the related actual costs (depreciation and cost of capital) exceeded the determined costs and therefore the difference of costs have been borne (or are being borne) by the ANSP. The difference between these costs amounts to 1.36M€₂₀₀₉.

Throughout RP2 to date, the actual depreciation was higher than the determined one by $13.68\text{M} \in_{2009}$. The substantial increase in depreciation occurred from 2016 to 2017 (6.88M \in_{2009}) mainly due to investment in the iCAS programme and especially the iCAS Upper Airspace. Furthermore, measures regarding the improvement of IT infrastructure (e.g. the backup system of SDDS-NG and the purchase of VAN routers) had an impact on depreciation. This is also the case for 2018, when the actual depreciation was higher than determined by $6.50\text{M} \in_{2009}$.

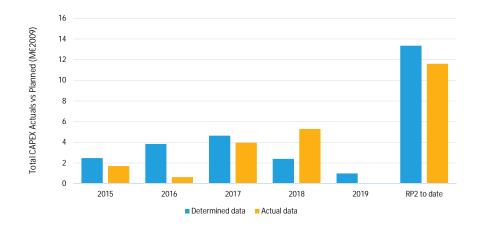
Throughout RP2 to date, the actual cost of capital was 12.32M \in_{2009} lower than determined. This was largely due to a lower than planned net value of the fixed asset base as a result of delays in investments, coupled with a lower than determined WACC.

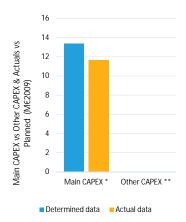


4.6.4 Luxembourg - ANA Luxembourg

Throughout the RP2 to date, Luxembourg underspent $1.75 \text{M} \in_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined ($-0.01 \text{M} \in_{2009}$). Luxembourg planned seven main projects for RP2: all have been started. Six projects are expected to be completed in 2019, with the remaining one expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	2.48	3.84	4.65	2.39	1.00	13.36
- Main CAPEX *	2.48	3.84	4.65	2.39	1.00	13.36
- % Main into Total CAPEX	100%	100%	100%	100%	100%	100%
- Other CAPEX **	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	0%	0%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	1.71	0.63	3.97	5.30	-	11.60
- Main CAPEX	1.71	0.63	3.97	5.30	-	11.60
- % Main into Total CAPEX	100%	100%	100%	100%	-	100%
- Other CAPEX	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	-	0%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(0.77)	(3.22)	(0.68)	2.91	- [(1.75)
- Main CAPEX	(0.77)	(3.22)	(0.68)	2.91	-	(1.75)
- Other CAPEX	-	-	-	-	-	-
Total CAPEX (%)	-31%	-84%	-15%	122%	-	-13%
- Main CAPEX (%)	-31%	-84%	-15%	122%	-	-13%
- Other CAPEX (%)	0%	0%	0%	0%	-	0%





The total capital expenditure to date is 11.60M \in ₂₀₀₉. For RP2 to date, Luxembourg spent 1.75M \in ₂₀₀₉ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 13% lower than planned and there is no other CAPEX.

In 2015, Luxembourg spent $0.77M \in_{2009}$ less than planned. For 2016 and 2017, Luxembourg underspent $3.22M \in_{2009}$ and $0.68M \in_{2009}$, respectively. In 2018, actual CAPEX is $2.91M \in_{2009}$ higher than planned.

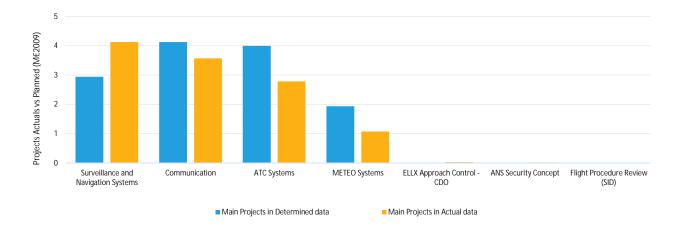
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Luxembourg - ANA Luxembourg						
# Main Projects in Determined data (M€2009)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 Surveillance and Navigation Systems	0.64	-	1.22	1.08	0.17	2.94
2 Communication	0.30	-	3.15	0.68	0.54	4.13
3 ATC Systems	0.34	3.48	-	0.17	0.17	4.00
4 METEO Systems	1.20	-	0.28	0.46	0.12	1.93
5 ELLX Approach Control - CDO	-	-	-	-	-	-
6 ANS Security Concept	-	-	-	-	-	-
7 Flight Procedure Review (SID)	-	-	-	-	-	-
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 Surveillance and Navigation Systems	0.06	0.35	1.43	2.30	-	4.13
2 Communication	0.28	-	0.97	2.33	-	3.57
3 ATC Systems	1.21	0.25	1.21	0.11	-	2.78
4 METEO Systems	0.16	0.03	0.36	0.51	-	1.07
5 ELLX Approach Control - CDO	-	-	-	0.03	-	0.03
6 ANS Security Concept	-	-	-	0.02	-	0.02
7 Flight Procedure Review (SID)	-	-	-	0.01	-	0.01

#	Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
1	Surveillance and Navigation Systems	(0.58)	0.35	0.21	1.22	-	1.19
2	Communication	(0.02)	-	(2.18)	1.65	-	(0.56)
3	ATC Systems	0.87	(3.23)	1.21	(0.06)	-	(1.21)
4	METEO Systems	(1.03)	0.03	0.09	0.05	-	(0.86)
5	ELLX Approach Control - CDO	-	-	-	0.03	-	0.03
6	ANS Security Concept	-	-	-	0.02	-	0.02
7	Flight Procedure Review (SID)	-	-	-	0.01	-	0.01



RP2 to date, the major project is "Surveillance and Navigation Systems", which received a steady flow of investment throughout the period. The total actual investment in this project is 4.13M \in ₂₀₀₉, with a difference of 1.19M \in ₂₀₀₉ more than planned. The second largest project is the "Communication", which received a total actual investment of 3.57M \in ₂₀₀₉, however, less than determined by 0.56M \in ₂₀₀₉.

Projects "ANS Security Concept", "ELLX Approach Control - CDO" and "Flight Procedure Review (SID)" were not originally included in the Performance Plan; however, the actual data reveals minor investments for these projects.

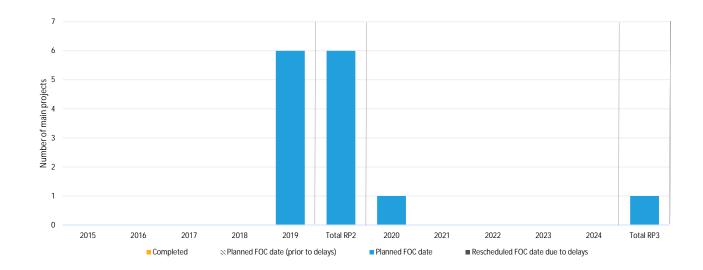


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Luxem	bourg - ANA Luxembou	rg				
# Actual funding deciaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
	-	-	-	-	-	-
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	-	-	-	-	-
SDM Payment	-	-	=	-	-	-



EXPECTED BENEFIT PER PROJECT Luxembourg - ANA Luxembourg

# Main Projects		Status in 2018	FOC date*	Ехре	ected be	PCP	NOP		
				SAF	ENV	CAP	CEF		
1 Surveillance and	d Navigation Systems	Ongoing	2019						
2 Communication	1	Ongoing	2019	Х	Х	Х	Х		
3 ATC Systems		Ongoing	2021	Х	Х	Х	Х		
4 METEO System	S	Ongoing	2019		Х		Х		
5 ELLX Approach	Control - CDO	Ongoing	2019	Х	Х	Х			
6 ANS Security Co	oncept	Ongoing	2019	Х		Х	Х		
7 Flight Procedur	e Review (SID)	Ongoing	2019	Х	Х	Х	Х		



Luxembourg planned seven main projects for RP2: all have been started. Six projects are expected to be completed in 2019, with the remaining one expected to continue through RP3.

Luxembourg invested in safety, environment, capacity and cost efficiency equally (five out of seven projects) as priorities.

No project was linked to the Pilot Common Project or included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



Determined data (M€₂009) 2015D 2016D 2017D 2018D 2019D RP2 to date Depreciation 0.31 0.39 0.37 0.32 0.31 1.39 - En route 0.31 0.39 0.37 0.32 0.31 1.39 - Terminal	INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Luxembourg	- ANA Luxembourg					
- En route 0.31 0.39 0.37 0.32 0.31 1.39 - Terminal	Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Terminal -	Depreciation	0.31	0.39	0.37	0.32	0.31	1.39
Cost of Capital 0.15 0.31 0.27 0.24 0.21 0.96 - En route 0.04 0.08 0.07 0.06 0.05 0.26 - Terminal 0.10 0.22 0.20 0.17 0.15 0.70 Total 0.46 0.69 0.64 0.56 0.52 2.35 Actual data (M€2000) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 0.32 0.32 0.35 0.25 - 1.23 - En route 0.32 0.32 0.35 0.25 - 1.23 - Terminal	- En route	0.31	0.39	0.37	0.32	0.31	1.39
En route 0.04 0.08 0.07 0.06 0.05 0.26 - Terminal 0.10 0.22 0.20 0.17 0.15 0.70 Total 0.46 0.69 0.64 0.56 0.52 2.35 Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 0.32 0.32 0.35 0.25 - 1.23 - En route 0.32 0.32 0.35 0.25 - 1.23 - Terminal - 0.27	- Terminal	-	-	-	-	-	-
Terminal 0.10 0.22 0.20 0.17 0.15 0.70 Total 0.46 0.69 0.64 0.56 0.52 2.35 Actual data (M€₂₀₀₀) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 0.32 0.32 0.35 0.25 - 1.23 - En route 0.32 0.32 0.35 0.25 - 1.23 - Terminal - <td>Cost of Capital</td> <td>0.15</td> <td>0.31</td> <td>0.27</td> <td>0.24</td> <td>0.21</td> <td>0.96</td>	Cost of Capital	0.15	0.31	0.27	0.24	0.21	0.96
Total 0.46 0.69 0.64 0.56 0.52 2.35 Actual data (Μ€₂009) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 0.32 0.32 0.32 0.35 0.25 - 1.23 - En route 0.32 0.32 0.35 0.25 - 1.23 - Terminal -	- En route	0.04	0.08	0.07	0.06	0.05	0.26
Actual data (M€₂₀₀₀) 2015A 2016A 2017A 2018A 2019A RP2 to date Depreciation 0.32 0.32 0.35 0.25 - 1.23 - En route 0.32 0.32 0.35 0.25 - 1.23 - Terminal -							
Depreciation 0.32 0.32 0.32 0.35 0.25 - 1.23 - En route 0.32 0.32 0.35 0.25 - 1.23 - Terminal - </td <td>Total</td> <td>0.46</td> <td>0.69</td> <td>0.64</td> <td>0.56</td> <td>0.52</td> <td>2.35</td>	Total	0.46	0.69	0.64	0.56	0.52	2.35
Depreciation 0.32 0.32 0.32 0.35 0.25 - 1.23 - En route 0.32 0.32 0.35 0.25 - 1.23 - Terminal - </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
En route 0.32 0.32 0.32 0.35 0.25 - 1.23 - Terminal - 0.33 - Terminal 0.13 0.18 0.14 0.32 - 0.77 - 0.77 - 0.77 - 0.77 - 0.77 - 0.77 - 0.77 - 0.05 0.07 0.02 0.07 0.02 0.07 0.01 0.02 0.07 0.01 0.01 0.02 0.07 0.01 0.01 0.02 0.06 - 0.07 0.07 0.07	Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
En route 0.32 0.32 0.32 0.35 0.25 - 1.23 - Terminal - 0.33 - Terminal 0.13 0.18 0.14 0.32 - 0.77 - 0.77 - 0.77 - 0.77 - 0.77 - 0.77 - 0.77 - 0.05 0.07 0.02 0.07 0.02 0.07 0.01 0.02 0.07 0.01 0.01 0.02 0.07 0.01 0.01 0.02 0.06 - 0.07 0.07 0.07						1	
- Terminal - <th< td=""><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td></th<>						-	
Cost of Capital 0.19 0.27 0.20 0.44 - 1.10 - En route 0.06 0.09 0.06 0.12 - 0.33 - Terminal 0.13 0.18 0.14 0.32 - 0.77 Total 0.50 0.59 0.55 0.69 - 2.33 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.01 (0.07) (0.02) (0.07) - (0.15) - En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal -		0.32		0.35	0.25	-	1.23
- En route 0.06 0.09 0.06 0.12 - 0.33 - Terminal 0.13 0.18 0.14 0.32 - 0.77 Total 0.50 0.59 0.55 0.69 - 2.33 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.01 (0.07) (0.02) (0.07) - (0.15) - En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal						-	
- Terminal 0.13 0.18 0.14 0.32 - 0.77 Total 0.50 0.59 0.55 0.69 - 2.33 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.01 (0.07) (0.02) (0.07) - (0.15) - En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal	Cost of Capital	0.19		0.20	0.44	-	
Total 0.50 0.59 0.55 0.69 - 2.33 Difference between Actual and Determined (M€2009) 2015 2016 2017 2018 2019 RP2 to date Depreciation 0.01 (0.07) (0.02) (0.07) - (0.15) - En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal -	- En route		0.09	0.06	0.12	-	0.33
Depreciation 0.01 (0.07) (0.02) (0.07) - (0.15) - En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal	- Terminal					-	
Depreciation 0.01 (0.07) (0.02) (0.07) - (0.15) - En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal	Total	0.50	0.59	0.55	0.69	-	2.33
Depreciation 0.01 (0.07) (0.02) (0.07) - (0.15) - En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal							
- En route 0.01 (0.07) (0.02) (0.07) - (0.15) - Terminal	Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
- Terminal - Termi	Depreciation	0.01	(0.07)	(0.02)	(0.07)	-	(0.15)
- Terminal	- En route	0.01	(0.07)	(0.02)	(0.07)	-	
- En route 0.01 0.01 (0.02) 0.06 - 0.07 - Terminal 0.02 (0.05) (0.05) 0.15 - 0.07	- Terminal	-	· '	· '	· '	-	
- En route 0.01 0.01 (0.02) 0.06 - 0.07 - Terminal 0.02 (0.05) (0.05) 0.15 - 0.07	Cost of Capital	0.04	(0.04)	(0.07)	0.21	-	0.14
	- En route	0.01	0.01		0.06	-	0.07
Total 0.05 (0.11) (0.09) 0.13 - (0.01)	- Terminal	0.02	(0.05)	(0.05)	0.15	-	0.07
	Total	0.05	(0.11)	(0.09)	0.13	-	(0.01)



Over the first 4 years of RP2, 13% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed $0.01M\epsilon_{2009}$ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than determined by $0.15M \in_{2009}$. This was mainly due to delays in project implementation and lower than planned investments for the en route activity.

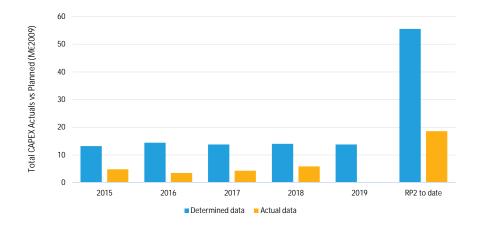
Throughout RP2 to date, the actual cost of capital was 0.14M \in 2009 higher than determined. This was mainly due to a higher net book value of the fixed assets than initially determined, especially on terminal assets.

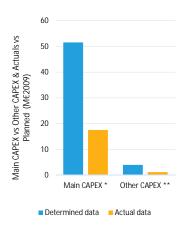


4.6.5 MUAC

Throughout the RP2 to date, MUAC underspent $36.91 \text{M} \in_{2009}$ (-66%) with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-5.95M \in_{2009}). MUAC planned 12 main projects for RP2: five projects have been completed and seven have been started. One project was started in RP1 and is expected to be completed in 2019. Five projects are expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	13.25	14.43	13.82	14.04	13.80	55.53
- Main CAPEX *	11.57	13.38	13.19	13.43	13.22	51.57
- % Main into Total CAPEX	87%	93%	95%	96%	96%	93%
- Other CAPEX **	1.68	1.05	0.63	0.60	0.57	3.96
- % Other into Total CAPEX	13%	7%	5%	4%	4%	7%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A F	RP2 to date
Total CAPEX	4.87	3.49	4.34	5.92	-	18.62
- Main CAPEX	4.62	3.22	3.75	5.90	-	17.49
- % Main into Total CAPEX	95%	92%	86%	100%	-	94%
- Other CAPEX	0.25	0.27	0.60	0.02	-	1.13
- % Other into Total CAPEX	5%	8%	14%	0%	-	6%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(8.38)	(10.93)	(9.48)	(8.12)	-1	(36.91)
- Main CAPEX	(6.95)	(10.15)	(9.45)	(7.53)	-	(34.08)
- Other CAPEX	(1.44)	(0.78)	(0.03)	(0.58)	-	(2.83)
Total CAPEX (%)	-63%	-76%	-69%	-58%	-	-66%
- Main CAPEX (%)	-60%	-76%	-72%	-56%	-	-66%
- Other CAPEX (%)	-85%	-74%	-5%	-97%	-	-71%





The total capital expenditure to date is $18.62 \text{M} \in_{2009}$. For RP2 to date, MUAC spent $36.91 \text{M} \in_{2009}$ (-66%) less CAPEX than originally planned. For RP2 to date, the main CAPEX is 66% lower than planned, while other CAPEX is 71% lower.

MUAC invested less than initially planned, in every year of RP2 to date, 8.38M \in_{2009} less in 2015, 10.93M \in_{2009} less in 2016, 9.48M \in_{2009} less in 2017 and 8.12M \in_{2009} less in 2018.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

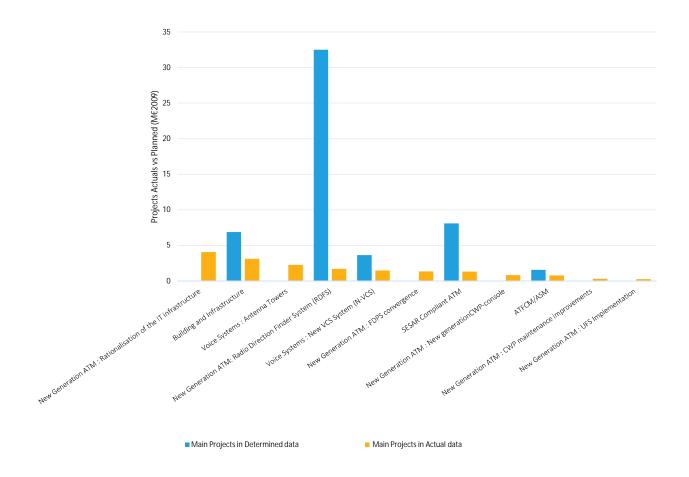
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT M	IUAC						
# Main Projects in Determined da	ta (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 New Generation ATM : Rationalis	sation of the IT infrastructure	-	_	_	_	-	-
2 Building and Infrastructure		2.05	1.21	1.38	1.14	1.09	6.88
3 Voice Systems : Antenna Towers		-	-	-	-	-	-
4 New Generation ATM: Radio Dire		7.82	8.57	8.18	7.93	6.52	32.49
5 Voice Systems : New VCS System		1.20	1.19	0.36	0.88	1.73	3.63
6 New Generation ATM: FDPS con	vergence	-	-	-	-	-	-
7 SESAR Compliant ATM		0.14	2.00	2.88	3.07	3.48	8.09
8 New Generation ATM : New gene	erationCWP-console	-	-	-	-	-	-
9 ATFCM/ASM		0.36	0.41	0.40	0.40	0.39	1.58
10 New Generation ATM : CWP mai		-	-	-	-	-	-
11 New Generation ATM: UFS Imple		-	-	-	-	-	-
12 Voice Systems : B-VCS replaceme	ent	-	-	-	-	-	-
# Main Projects in Actual data (Me	€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 New Generation ATM : Rationalis	sation of the IT infrastructure	0.22	0.67	1.13	2.05	- I	4.06
2 Building and Infrastructure	sation of the fill initiastracture	0.28	0.59	0.93	1.34	-	3.13
3 Voice Systems : Antenna Towers		1.47	0.80	-	-	_	2.27
4 New Generation ATM: Radio Dire		1.16	0.07	0.45	0.03	-	1.70
5 Voice Systems : New VCS System		0.26	0.31	0.45	0.05		1.48
6 New Generation ATM : FDPS con		1.15	0.31	0.03	0.03	-	1.34
7 SESAR Compliant ATM	vergence	1.13		0.18	1.14	-	1.32
8 New Generation ATM : New generation	orationCWD consolo		0.00	0.13	0.70		0.83
9 ATFCM/ASM	eratione vvr-console	0.01	0.00	0.13	0.70	-	0.83
10 New Generation ATM : CWP mai	ntonanco improvomente	0.01	0.13	0.00	0.02	-	0.77
11 New Generation ATM : UFS Imple		0.08	0.27	0.02	0.02	-	0.31
12 Voice Systems : B-VCS replacement		- 0.08	-	-	-	-	- 0.27
# Difference between Actuals and		2015 2	016 20	017 20	018 20)19	RP2 to date
# Difference between Actuals and	Determined (IVIE ₂₀₀₉)	2010 2	010 20)	J10 20)19 1	RPZ to date
1 New Generation ATM : Rationalis	sation of the IT infrastructure	0.22	0.67	1.13	2.05	ı	4.06
2 Building and Infrastructure	sation of the H illinastructure	(1.77)	(0.62)	(0.45)	0.19	-	(2.65)
3 Voice Systems : Antenna Towers		1.47	0.80	(0.43)	0.17		2.27
4 New Generation ATM: Radio Dire		(6.66)	(8.50)	(7.73)	(7.91)	_	(30.79)
5 Voice Systems : New VCS System		(0.94)	(0.87)	0.49	(0.83)	-	(2.15)
6 New Generation ATM : FDPS con		1.15	0.19	-	(0.03)	_	1.34
7 SESAR Compliant ATM		(0.14)	(2.00)	(2.69)	(1.93)	_	(6.77)
8 New Generation ATM : New generation	erationCWP-console	(0.14)	0.00	0.13	0.70	_	0.83
9 ATFCM/ASM		(0.36)	(0.28)	(0.34)	0.17	_	(0.81)
10 New Generation ATM : CWP mai	ntenance improvements	(0.00)	0.27	0.02	0.02	-	0.31
11 New Generation ATM : UFS Imple		0.08	0.19	-	-	-	0.27
12 Voice Systems : B-VCS replaceme			-	-	-	-	-
						I	



INVESTMENTS PER MAIN PROJECT MUAC



RP2 to date, the largest investment is "New Generation ATM: Rationalisation of the IT infrastructure" which received a total of 4.06M \in _{2009</sub>, even though no investment was originally planned. On the other hand, project "New Generation ATM: Radio Direction Finder System (RDFS)" for which 32.49M \in _{2009</sub> was planned, only received 1.7M \in _{2009}. The second largest investment is placed in project "Building and Infrastructure", which received 3.13M \in _{2009}, however, it is 2.65M \in _{2009} lower than determined in the Performance Plan.

There are five projects, which were initially not included in the Performance Plan but still received investments: "New Generation ATM: Rationalisation of the IT infrastructure", "Voice Systems: Antenna Towers", "New Generation ATM: FDPS convergence", "New Generation ATM: New generation CWP-console", "New Generation ATM: CWP maintenance improvements" and "New Generation ATM: UFS Implementation".



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) MUAC						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
4 New Generation ATM: Radio Direction Finder System (RDFS)	0.34	0.44	-	0.31	- [1.08
5 Voice Systems : New VCS System (N-VCS)	-	1.30	0.73	1.55	-	3.58
2014-EU-TM-0032-S (ADaaS)	-	0.15	0.43	0.38	-	0.96
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.34	1.89	1.16	2.23	-	5.62
SDM Payment	-	-	-	-	-	-

% of Funding Declaration in Total CAPEX for RP2 to date



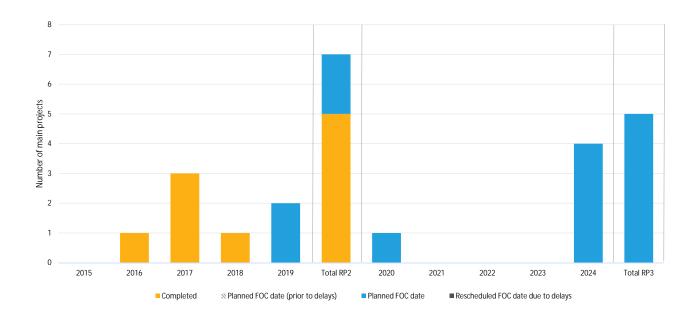
During the RP2, three projects received funding through CEF/TEN-T: "Voice Systems: New VCS System (N-VCS)" received funds through the 2014-EU-TM-0322-W call; "New Generation ATM: Radio Direction Finder System (RDFS)" received funding through the 2014-BE-TM-0189-W call; and "ADaaS" received funding through the 2014-EU-TM-0032-S call.

There was no SDM Payment registered.

The total amount granted to RP2 till date is 5.62M€₂₀₀₉, representing 30% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT MUAC								
# Main Projects	Status in 2018	FOC date*	Ехре	ected be	nefit per	KPA	PCP	NOP
			SAF	ENV	CAP	CEF		
1 New Generation ATM: Rationalisation of the IT infrastructure	Ongoing	2024				Х		
2 Building and Infrastructure	Ongoing	2024						
3 Voice Systems : Antenna Towers	Completed	2017	Х		Х			
4 New Generation ATM: Radio Direction Finder System (RDFS)	Ongoing	2019	Х			Х		Х
5 Voice Systems : New VCS System (N-VCS)	Completed	2017	Х		Х	Х		Х
6 New Generation ATM: FDPS convergence	Completed	2016				Х		
7 SESAR Compliant ATM	Ongoing	2019	Х	Х	Х	Х	Х	
8 New Generation ATM : New generation CWP-console	Ongoing	2020	Х	Х	Х	Х		
9 ATFCM/ASM	Ongoing	2024	Х	Х	Х	Х		
10 New Generation ATM: CWP maintenance improvements	Completed	2018			Х	Х		
11 New Generation ATM: UFS Implementation	Completed	2017	Х		Х			
12 Voice Systems : B-VCS replacement	Ongoing	2024	Х		Х			



MUAC planned 12 main projects for RP2: five projects have been completed and seven have been started. One project was started in RP1 and is expected to be completed in 2019. Five projects are expected to continue through RP3.

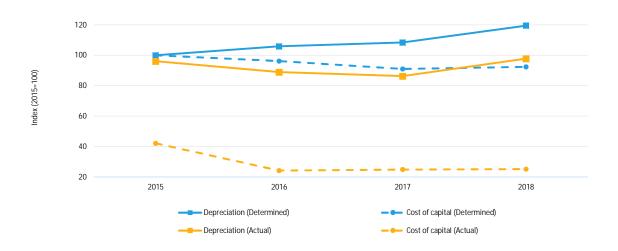
The main priorities for the investments were safety, capacity and cost-efficiency, with eight projects having an expected positive impact. Only three projects are expected to have an impact on the environment.

The actual investment made in RP2 to date for the project that was linked to the Pilot Common Project is $1.32M \in_{2009}$. This amount represents 7% of the actual total CAPEX. Two projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	8.43	8.93	9.14	10.08	10.31	36.58
- En route	8.43	8.93	9.14	10.08	10.31	36.58
- Terminal	-	-	-	-	-	-
Cost of Capital	0.19	0.18	0.17	0.18	0.18	0.72
- En route	0.19	0.18	0.17	0.18	0.18	0.72
- Terminal	-	-	-	-	-	-
Total	8.62	9.11	9.31	10.25	10.48	37.30
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	8.10	7.50	7.28	8.25	-	31.13
- En route	8.10	7.50	7.28	8.25	-	31.13
- Terminal	-	-	-	-	-	
Cost of Capital	0.08	0.05	0.05	0.05	-	0.22
- En route	0.08	0.05	0.05	0.05	-	0.22
- Terminal	-	-	-	-	-	-
Total	8.18	7.54	7.33	8.30	-	31.35
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.33)	(1.43)	(1.86)	(1.83)	- [(5.45
- En route	(0.33)	(1.43)	(1.86)	(1.83)	-	(5.45
- Terminal	-	-	-	-	-	-
Cost of Capital	(0.11)	(0.14)	(0.13)	(0.13)	-	(0.50
- En route	(0.11)	(0.14)	(0.13)	(0.13)	-	(0.50
- Terminal	-	-	-	-	-	,
Total	(0.44)	(1.57)	(1.98)	(1.96)	_	(5.95



Over the first 4 years of RP2, 66% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed $5.95M \in_{2009}$ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, actual depreciation was lower than determined by $5.45M \in_{2009}$. This was mainly due to delays in project implementation in RP2.

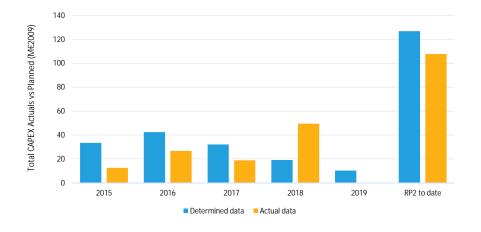
Throughout RP2 to date, the actual cost of capital was $0.50 \text{M} \in_{2009}$ lower than determined. This was mainly due to an actual WACC being consistently lower each year than the determined one (the actual WACC variated between 0.3% and 0.5%, while the determined between 1.1% and 1.2%).

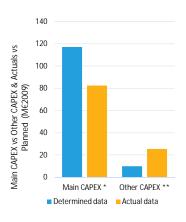


4.6.6 Netherlands - LVNL

Throughout the RP2 to date, the Netherlands underspent $19.15Me_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-8.78Me $_{2009}$). The Netherlands planned 11 main projects for RP2: three projects have been completed and eight have been started. Two projects are expected to be completed in 2019, while six are expected to continue through RP3.

OVER ALL INVESTMENTS						
OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	33.42	42.36	32.08	19.06	10.25	126.92
- Main CAPEX *	27.24	40.24	31.11	18.51	3.02	117.11
- % Main into Total CAPEX	82%	95%	97%	97%	29%	92%
- Other CAPEX **	6.18	2.12	0.97	0.55	7.24	9.81
- % Other into Total CAPEX	18%	5%	3%	3%	71%	8%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	12.62	26.79	18.88	49.48	-1	107.77
- Main CAPEX	7.58	21.00	11.71	42.13	-	82.43
- % Main into Total CAPEX	60%	78%	62%	85%	-	2.86
- Other CAPEX	5.04	5.79	7.17	7.34	-	25.34
- % Other into Total CAPEX	40%	22%	38%	15%	-	24%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(20.80)	(15.57)	(13.20)	30.42	-	(19.15)
- Main CAPEX	(19.67)	(19.24)	(19.40)	23.62	-	(34.68)
- Other CAPEX	(1.136)	3.672	6.20	6.80	-	15.53
Total CAPEX (%)	-62%	-37%	-41%	160%	-	-15%
- Main CAPEX (%)	-72%	-48%	-62%	128%	-	-30%
- Other CAPEX (%)	-18%	173%	639%	1244%	-	158%





The total capital expenditure to date is 107.77M \in ₂₀₀₉. For RP2 to date, The Netherlands spent 19.15M \in ₂₀₀₉ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 30% higher than planned, while other CAPEX is 158% higher.

In 2015, The Netherlands spent 20.80M \in ₂₀₀₉ less than planned. For 2016 and 2017, The Netherlands underspent 15.57M \in ₂₀₀₉ and 13.20M \in ₂₀₀₉, respectively. In 2018, actual CAPEX is 30.42M \in ₂₀₀₉ higher than planned (+160%).

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

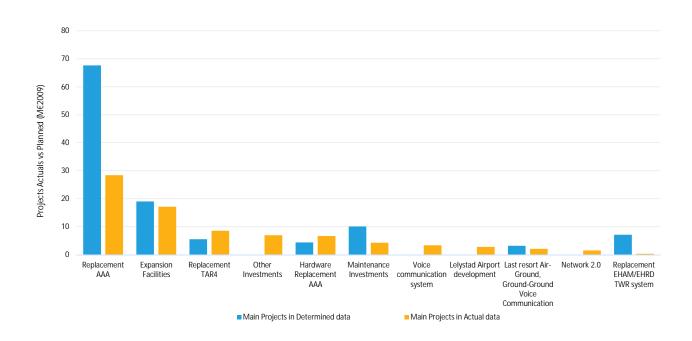
 $^{{}^{\}star\star} \text{ Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.}$



# Main Projects in Determined data (M€2009) 2015D 2016D 2017D 2018D 2019D RP2 to date 1 Replacement AAA 17.73 22.06 12.59 15.24 0.62 67.61 2 Expansion Facilities - 9.82 9.24 19.07 3 Replacement TAR4 3.62 1.96 5.58 4 Other Investments	IN۱	/ESTMENTS PER MAIN PROJECT Netherlands - LVNL						
2 Expansion Facilities - 9.82 9.24 - - 19.07 3 Replacement TAR4 3.62 1.96 - - - 5.58 4 Other Investments - <t< th=""><th>#</th><th>Main Projects in Determined data (M€₂₀₀₉)</th><th>2015D</th><th>2016D</th><th>2017D</th><th>2018D</th><th>2019D</th><th>RP2 to date</th></t<>	#	Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
2 Expansion Facilities - 9.82 9.24 - - 19.07 3 Replacement TAR4 3.62 1.96 - - - 5.58 4 Other Investments - <t< td=""><td>1</td><td>Devil a constant AAA</td><td>17.70</td><td>22.07</td><td>10.50</td><td>15.04</td><td>ا در د</td><td>/7/1</td></t<>	1	Devil a constant AAA	17.70	22.07	10.50	15.04	ا در د	/7/1
3 Replacement TAR4 3.62 1.96 - - - 5.58 4 Other Investments - <							0.62	
4 Other Investments -						-	-	
5 Hardware Replacement AAA - - 4.40 - - 4.40 6 Maintenance Investments 2.16 2.52 2.15 3.28 2.40 10.11 7 Voice communication system - - - - - - - 8 Lelystad Airport development -						-	-	5.58
6 Maintenance Investments 2.16 2.52 2.15 3.28 2.40 10.11 7 Voice communication system - - - - - - - 8 Lelystad Airport development -							-	4.40
7 Voice communication system - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>2.40</td><td></td></td<>							2.40	
8 Lelystad Airport development - 3.20 10 Network 2.0 -							2.40	10.11
9 Last resort Air-Ground, Ground-Ground Voice Communication 1.48 1.73 - - - 3.20 10 Network 2.0 -		•					-	
10 Network 2.0 - - - - - - - - 7.13 11 Replacement EHAM/EHRD TWR system 2.26 2.14 2.73 - - 7.13		zorjetau i iii port do roropiniont					-	- 2.20
11 Replacement EHAM/EHRD TWR system 2.26 2.14 2.73 - - 7.13		·	1.48	1./3	-	-	-	3.20
			-	-	-	-	-	-
	11	Replacement EHAM/EHRD TWR system	2.26	2.14	2.73	-	-	7.13
# Main Projects in Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2018A 2019A RP2 to date	4	Main Projects in Actual data (MS)	20154	20164	20174	20104	20104	DD2 to data
# Main Projects in Actual data (M€ ₂₀₀₉) 2015A 2016A 2017A 2016A 2019A RP2 to date	#	Main Projects in Actual data (ME ₂₀₀₉)	2015A	2010A	2017A	2016A	2019A	RP2 to date
1 Replacement AAA 2.14 11.10 5.55 9.63 - 28.42	1	Renlacement AAA	2 14	11 10	5 55	9.63	ا ۔	28 42
2 Expansion Facilities 0.11 1.11 15.93 17.15	_	'						
3 Replacement TAR4 3.92 2.18 2.48 8.59							-	
4 Other Investments 0.02 6.97 - 6.99		,		2.10			_	
				- -			-	
	_						-	
6 Maintenance Investments 0.58 0.82 0.49 2.42 - 4.32			0.58	0.82				
7 Voice communication system - - 0.03 3.36 - 3.39		,	-	-			-	
8 Lelystad Airport development - - 0.51 2.32 - 2.83	_						-	
9 Last resort Air-Ground, Ground-Ground Voice Communication 0.53 0.96 0.58 0.06 - 2.13	_	· · · · · · · · · · · · · · · · · · ·					-	
10 Network 2.0 0.25 1.31 - 1.56			-	-			-	
11 Replacement EHAM/EHRD TWR system - - 0.26 0.07 - 0.34	11	Replacement EHAM/EHRD TWR system	-	-	0.26	0.07	-	0.34
# Difference hadrings Advise and Determined (NIC) 2015 2017 2017 2017 2010 2010 2010	,,	Difference between Astrological Determined (NAC)	2015 2	047 0	.017 0	010 0	240	DD0 11-1-
# Difference between Actuals and Determined (M€ ₂₀₀₉) 2015 2016 2017 2018 2019 RP2 to date	#	Difference between Actuals and Determined (ME ₂₀₀₉)	2015 2	016 2	017 2	018 20)19	RP2 to date
1 Replacement AAA (15.59) (10.96) (7.04) (5.61) - (39.20)	1	Replacement AAA	(15.59)	(10.96)	(7.04)	(5.61)	-	(39.20)
2 Expansion Facilities 0.11 (8.71) 6.69 (1.91)	2						-	
3 Replacement TAR4 0.31 0.22 2.48 3.00	3		0.31		2.48	-	-	
4 Other Investments 0.02 6.97 - 6.99		•	-			6.97	-	
5 Hardware Replacement AAA 0.40 5.83 (3.98) 0.06 - 2.31	5		0.40	5.83			-	
6 Maintenance Investments (1.58) (1.70) (1.66) (0.86) - (5.79)	6				, ,		-	
7 Voice communication system 0.03 3.36 - 3.39	7		, ,	, ,	_ ,	_ , ,	-	
8 Lelystad Airport development - 0.51 2.32 - 2.83			-	-			-	
9 Last resort Air-Ground, Ground-Ground Voice Communication (0.95) (0.77) 0.58 0.06 - (1.08)			(0.95)	(0.77)			-	
10 Network 2.0 0.25 1.31 - 1.56	10		· · · · · ·				-	
11 Replacement EHAM/EHRD TWR system (2.26) (2.14) (2.46) 0.07 - (6.79)	11	Replacement EHAM/EHRD TWR system	(2.26)	(2.14)			-	



INVESTMENTS PER MAIN PROJECT Netherlands - LVNL



For RP2 to date, the major project is "Replacement AAA" which received a total actual investment of $28.42 \text{M} \in_{2009}$ throughout the whole period. However, this investment was $39.20 \text{M} \in_{2009}$ less than planned. The second major project is "Expansion Facilities" with a total actual investment of $17.15 \text{M} \in_{2009}$, still less than planned by $1.91 \text{M} \in_{2009}$.

There are 4 projects that were not originally included in the Performance Plan but received investments, these being "Other Investments", "Voice Communication System", "Lelystad Airport Development" and "Network 2.0".

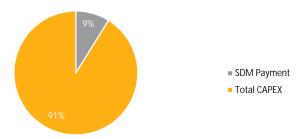


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Netho	erlands - LVNL					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 Replacement AAA	-	3.61	3.28	-	- [6.89
4 Other Investments	-	1.08	0.61	0.68	-	2.37
6 Maintenance Investments	-	-	0.55	0.36	-	0.91
8 Lelystad Airport development	-	-	0.03	-	-	0.03
10 Network 2.0	-	-	0.57	-	-	0.57
11 Replacement EHAM/EHRD TWR System	-	0.19	-	-	-	0.19
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	4.87	5.04	1.04	-	10.96
SDM Payment	0.34	3.93	5.29	-	-	9.56

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



Six projects received funding through CEF/TEN-T funding during the RP2. "Replacement AAA" received funding through the CEF calls; in 2015, 2016 and 2017, "Maintenance Investments" through the 2016 and 2017 CEF calls; "Lelystad Airport Development" through the 2016 CEF Call; "Network 2.0" through the 2016 CEF call and "Replacement EHAM/EHRD TWR System" through the 2015 CEF call. However, with the provided information, the investments could not be linked to specific funds.

The total amount received by RP2 till date is 10.96M \in 2009, representing 10% of the actual total CAPEX.

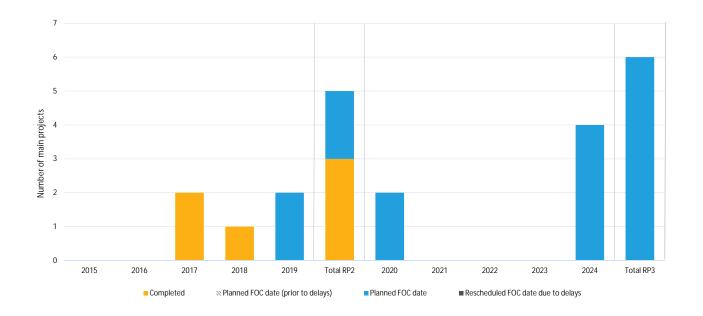


11 Replacement EHAM/EHRD TWR system

EXF	PECTED BENEFIT PER PROJECT Netherlands - LVNL								
#	Main Projects	Status in 2018	FOC date*	Ехре	ected be	nefit per	KPA	PCP	NOP
				SAF	ENV	CAP	CEF		
_1	Replacement AAA	Ongoing	2024	Х	Х	Х	Х	Х	
2	Expansion Facilities	Ongoing	2019	Х	Х	Х	Х		
3	Replacement TAR4	Completed	2017	Х	Х	Х	Х		
4	Other Investments	Ongoing	2024						
5	Hardware Replacement AAA	Completed	2017	Х	Х	Х	Х		
6	Maintenance Investments	Ongoing	2024		Х	Х			
7	Voice communication system	Ongoing	2019			Х	(x)		
8	Lelystad Airport development	Ongoing	2020			Х			
9	Last resort Air-Ground, Ground-Ground Voice Communication	Completed	2018	Х	Х	Х			
10	Network 2.0	Ongoing	2020				Х		

Ongoing

2024



The Netherlands planned 11 main projects for RP2: three projects have been completed and eight have been started. Two projects are expected to be completed in 2019, while six are expected to continue through RP3.

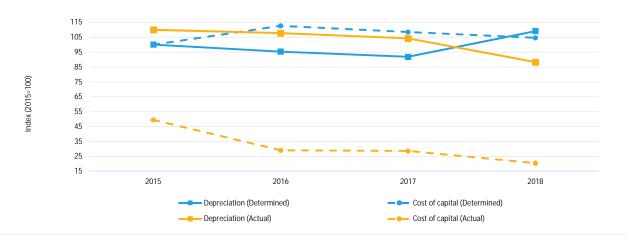
The main priority for the investments was capacity, with eight projects being expected to bring benefits, followed by environment, with six projects expected to bring benefits. The "Voice Communications System" is expected to have a negative impact on cost efficiency.

The actual investment made in RP2 to date for the project that was linked to the Pilot Common Project is $28.42M \in_{2009}$. This amount represents 26% of the actual total CAPEX. No project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Netherlan	ıds - LVNL					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	11.48	10.94	10.54	12.52	12.59	45.48
- En-route	7.94	7.56	7.03	8.63	8.69	31.16
- Terminal	3.54	3.38	3.51	3.89	3.90	14.32
Cost of Capital	3.48	3.92	3.78	3.65	4.39	14.84
- En-route	2.43	2.74	2.55	2.46	2.96	10.19
- Terminal	1.05	1.18	1.23	1.19	1.43	4.65
Total	14.96	14.86	14.32	16.17	16.98	60.32
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	12.62	12.37	11.96	10.14	-	47.09
- En-route	9.23	8.68	8.30	6.21	-	32.42
- Terminal	3.39	3.69	3.67	3.92	-	14.67
Cost of Capital	1.72	1.01	1.00	0.71	-	4.45
- En-route	1.20	0.66	0.63	0.45	-	2.94
- Terminal	0.52	0.35	0.37	0.27	-	1.50
Total	14.35	13.38	12.96	10.85	-	51.54
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	1.15	1.43	1.42	(2.39)	-	1.61
- En-route	1.30	1.12	1.26	(2.42)	-	1.26
- Terminal	(0.15)	0.32	0.15	0.03	-	0.35
Cost of Capital	(1.76)	(2.91)	(2.78)	(2.93)	-	(10.39
- En-route	(1.23)	(2.08)	(1.93)	(2.01)	-	(7.25
- Terminal	(0.53)	(0.83)	(0.86)	(0.92)	-	(3.14
Total	(0.61)	(1.48)	(1.36)	(5.32)	-	(8.78



Over the first 4 years of RP2, 15% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 8.78M€₂₀₀₉ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was higher than determined by $1.61 \text{M} \in_{2009}$. In 2016, higher depreciation was mainly due to higher costs of the new VCS system operating as of March 2015. In 2017, depreciation increased because of the hardware replacement in the ATM system as well as the introduction of a new approach radar. Only in 2018, the actual depreciation was lower than determined by $2.39 \text{M} \in_{2009}$ due to delays in investments implementation.

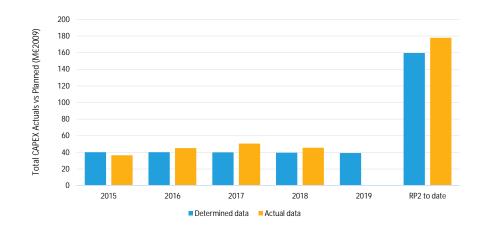
Throughout RP2 to date, the actual cost of capital was 10.39M \in_{2009} lower than determined. This was due to the postponement of the implementation of some investments resulting in a lower than planned fixed asset base, but mainly due to a shift in WACC. The actual WACC was significantly lower (decreasing from 1.73% in 2015 to 0.47% in 2018) than initially planned (decreasing from 3.65% to 2.90%).

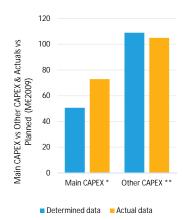


4.6.7 Switzerland - Skyguide

Throughout the RP2 to date, Switzerland overspent 18.24M \in ₂₀₀₉ with respect to the Performance Plan. Due to higher than planned capital expenditure, the actual total depreciation and cost of capital were higher than determined (+4.51M \in ₂₀₀₉). Switzerland planned 11 main projects for RP2: one project has been completed and the remaining ten have been started. Two are expected to be completed in 2019 and eight will continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	40.13	40.13	39.93	39.53	39.14	159.71
- Main CAPEX *	15.65	15.58	11.22	8.21	7.72	50.67
- % Main into Total CAPEX	39%	39%	28%	21%	20%	32%
- Other CAPEX **	24.47	24.54	28.70	31.32	31.42	109.04
- % Other into Total CAPEX	61%	61%	72%	79%	80%	68%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	36.59	45.21	50.57	45.57	-	177.94
- Main CAPEX	12.55	17.27	21.11	21.97	-	72.89
- % Main into Total CAPEX	34%	38%	42%	48%	-	41%
- Other CAPEX	24.04	27.95	29.46	23.60	-	105.05
- % Other into Total CAPEX	66%	62%	58%	52%	-	59%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(3.54)	5.09	10.64	6.04	- [18.24
- Main CAPEX	(3.11)	1.69	9.88	13.76	-	22.22
- Other CAPEX	(0.43)	3.40	0.76	(7.72)	-	(3.99)
Total CAPEX (%)	-9%	13%	27%	15%	-	11%
- Main CAPEX (%)	-20%	11%	88%	168%	-	44%
- Other CAPEX (%)	-2%	14%	3%	-25%	-	-4%





The total capital expenditure to date is 177.94M \in ₂₀₀₉. For RP2 to date, Switzerland spent 18.24M \in ₂₀₀₉ more CAPEX than originally planned. For RP2 to date, the main CAPEX is 44% higher than planned, while other CAPEX is 4% lower.

In 2015, Switzerland spent $3.54\text{M} \in_{2009}$ less than planned. For 2016, 2017 and 2018, Switzerland overspent $5.09\text{M} \in_{2009}$, $10.64\text{M} \in_{2009}$ and $6.04\text{M} \in_{2009}$, respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

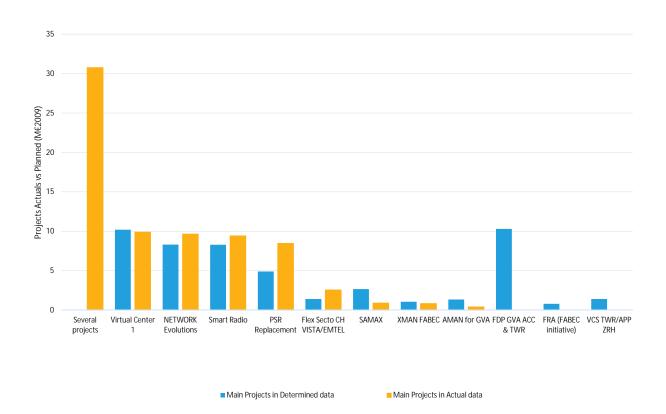
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Switzerland - Skyguide						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 Several projects	-	-	-	_	-	-
2 Virtual Center 1	6.62	3.24	0.30	0.04	0.04	10.19
3 NETWORK Evolutions	1.07	2.36	2.42	2.46	2.40	8.30
4 Smart Radio	2.38	1.65	2.96	1.29	0.78	8.29
5 PSR Replacement	2.22	2.20	0.48	-	-	4.90
6 Flex Secto CH VISTA/EMTEL	1.12	0.21	0.07	-	-	1.40
7 SAMAX	0.60	0.78	0.41	0.87	1.57	2.66
8 XMAN FABEC	0.20	0.20	0.33	0.33	0.33	1.06
9 AMAN for GVA	0.45	0.90	-	-	-	1.35
10 FDP GVA ACC & TWR	1.00	3.01	3.33	2.96	2.61	10.30
11 FRA (FABEC initiative)	-	0.27	0.27	0.26	-	0.80
12 VCS TWR/APP ZRH	-	0.76	0.66	-	-	1.41
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 Several projects	-	3.67	12.37	14.72	- [30.76
2 Virtual Center 1	7.03	2.85	-	-	-	9.89
3 NETWORK Evolutions	1.63	2.58	2.74	2.70	-	9.64
4 Smart Radio	2.55	2.36	2.52	2.00	-	9.42
5 PSR Replacement	0.56	3.72	2.63	1.56	-	8.47
6 Flex Secto CH VISTA/EMTEL	0.55	1.22	0.38	0.41	-	2.57
7 SAMAX	0.06	0.30	0.34	0.18	-	0.89
8 XMAN FABEC	0.16	0.56	0.13	-	-	0.85
9 AMAN for GVA	-	-	-	0.40	-	0.40
10 FDP GVA ACC & TWR	-	-	-	-	-	_
11 FRA (FABEC initiative)	-	-	-	-	-	_
12 VCS TWR/APP ZRH	-	-	-	-	-	-
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 R	P2 to date
1 Several projects	_	3.67	12.37	14.72	<u>.</u>	30.76
2 Virtual Center 1	0.41	(0.38)	(0.30)	(0.04)	_	(0.31)
3 NETWORK Evolutions	0.56	0.22	0.32	0.25	-	1.34
4 Smart Radio	0.17	0.71	(0.45)	0.71	-	1.14
5 PSR Replacement	(1.66)	1.52	2.15	1.56	-	3.57
6 Flex Secto CH VISTA/EMTEL	(0.56)	1.00	0.31	0.41	-	1.17
7 SAMAX	(0.53)	(0.48)	(0.07)	(0.69)	-	(1.77)
8 XMAN FABEC	(0.05)	0.36	(0.20)	(0.33)	-	(0.22)
9 AMAN for GVA	(0.45)	(0.90)	-	0.40	-	(0.95)
10 FDP GVA ACC & TWR	(1.00)	(3.01)	(3.33)	(2.96)	-	(10.30)
11 FRA (FABEC initiative)	-	(0.27)	(0.27)	(0.26)	-	(0.80)
12 VCS TWR/APP ZRH	-	(0.76)	(0.66)	-	-	(1.41)



INVESTMENTS PER MAIN PROJECT Switzerland - Skyguide



For RP2, the second main project was "Virtual Center 1", which received almost the full amount of investment initially planned.

Other projects that received substantial share of the investments were all in line with the Performance Plan, except for the project "FDP FVA ACC & TWR", which was planned to receive $10.30M\epsilon_{2009}$ by the end or 2018 but no investment has been made so far. Two other projects, "FRA" and "VCS TWR/APP ZRH" have not received any investments so far either.

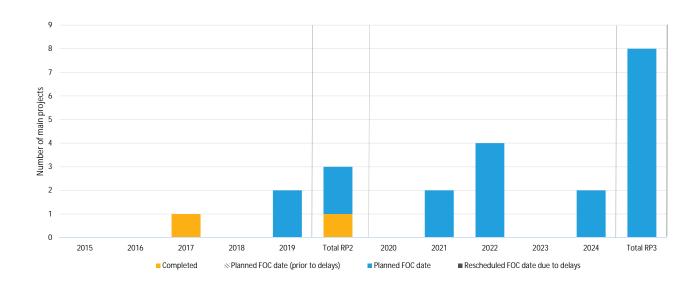


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Switzerla	nd - Skyguide					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
	-	-	-	-	-	<u>-</u>
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	-	-	-	-	_
SDM Payment	-	-	-	-	-	-

Since Switzerland is not part of the European Union, no funding has been granted for projects under CEF/TEN-T.



EXPECTED BENEFIT PER PROJECT Switzerland - Skyguide								
# Main Projects	Status in 2018	FOC date*	Ехрє	ected be	nefit per	· KPA	PCP	NOP
			SAF	ENV	CAP	CEF		
2 Virtual Center 1	Completed	2017	Х		Х	Х		Х
3 NETWORK Evolutions	Ongoing	2024	Х		Х	Х		
4 Smart Radio	Ongoing	2021	Х			Х		
5 PSR Replacement	Ongoing	2019	Х		Х	Х		
6 Flex Secto CH VISTA/EMTEL	Ongoing	2019						
7 SAMAX	Ongoing	2021	Х	Х	Х	Х		
8 XMAN FABEC	Ongoing	2022	Х	Х	Х	Х	Х	
9 AMAN for GVA	Ongoing	2022	Х	Х	Х	Х		
10 FDP GVA ACC & TWR	Ongoing	2022			Х			
11 FRA (FABEC initiative)	Ongoing	2022		Х	Х	Х	Х	Х
12 VCS TWR/APP ZRH	Ongoing	2024	Х		Х	Х		



Switzerland planned 11 main projects for RP2: one project has been completed and the remaining ten have been started. Two are expected to be completed in 2019 and eight will continue through RP3.

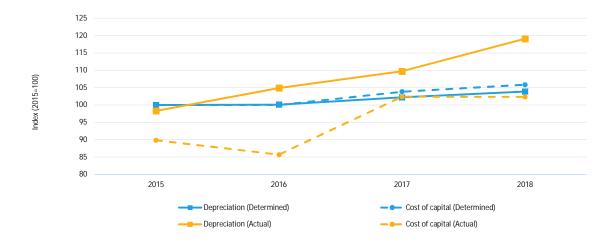
Most of the projects are expected to have a positive impact on capacity, cost-efficiency and safety, while only four are expected to also have an impact on environment.

The actual investment made in RP2 to date for the two projects that were linked to the Pilot Common Project is $0.85M \in_{2009}$. This amount represents 0.47% of the actual total CAPEX. Two projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Switzerlan	d - Skyguide					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	21.95	21.97	22.43	22.80	23.04	89.15
- En route	14.13	14.31	14.77	15.17	15.35	58.37
- Terminal	7.82	7.66	7.66	7.63	7.69	30.78
Cost of Capital	3.92	3.92	4.07	4.15	4.29	16.07
- En route	2.40	2.42	2.48	2.56	2.69	9.87
- Terminal	1.52	1.50	1.59	1.59	1.60	6.20
<u>Total</u>	25.87	25.89	26.50	26.95	27.33	105.22
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	21.57	23.02	24.08	26.14	- [94.82
- En route	13.44	14.38	14.71	16.93	-	59.46
- Terminal	8.13	8.64	9.37	9.21	-	35.35
Cost of Capital	3.52	3.36	4.02	4.01	-	14.92
- En route	2.16	2.07	2.41	2.56	-	9.21
- Terminal	1.36	1.30	1.60	1.45	-	5.71
Total	25.10	26.38	28.10	30.15	-	109.73
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.37)	1.05	1.65	3.34	- [5.67
- En route	(0.69)	0.08	(0.06)	1.76	-	1.09
- Terminal	0.31	0.98	1.71	1.58	-	4.57
Cost of Capital	(0.40)	(0.56)	(0.06)	(0.14)	-	(1.15)
- En route	(0.24)	(0.36)	(0.07)	0.00	-	(0.66)
- Terminal	(0.16)	(0.20)	0.01	(0.14)	-	(0.49)
Total	(0.77)	0.49	1.59	3.20	-	4.51



Over the first 4 years of RP2, the actual CAPEX was 11% higher than determined (overspent). In fact, the related actual costs (depreciation and cost of capital) exceeded the determined costs and therefore the difference of costs have been borne (or are being borne) by the ANSP. The difference between these costs amounts to 4.51M \in ₂₀₀₉.

Throughout RP2 to date, the actual depreciation was higher than determined by 5.67M \in _{2009</sub>. In 2015, the decrease in depreciation was mainly due to delays in project implementation. In 2016, the investments increased, leading to an increase in the actual depreciation. This continued in 2018, as the actual depreciation was 3.34M \in _{2009} higher than determined.

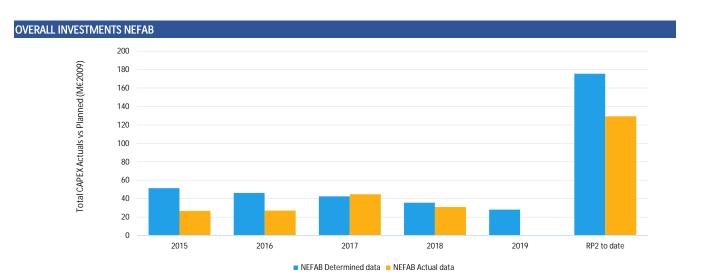
Throughout RP2 to date, the actual cost of capital was 1.15M \in _{2009} lower than determined. This was due to a lower then planned net value of the fixed assets.



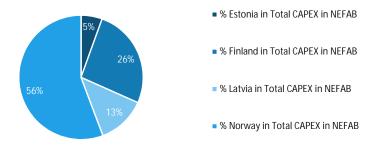
4.7 NEFAB

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	51.27	46.06	42.47	35.59	28.15	175.39
- Main CAPEX	43.46	37.03	34.76	28.60	22.01	143.86
- % Main into Total CAPEX	85%	80%	82%	80%	78%	82%
- Other CAPEX	7.81	9.02	7.71	6.99	6.14	31.54
- % Other into Total CAPEX	15%	20%	18%	20%	22%	18%
- Estonia in Total CAPEX in NEFAB	4.05	2.15	1.70	1.75	1.54	9.64
- % Estonia in Total CAPEX in NEFAB	8%	5%	4%	5%	5%	5%
- Finland in Total CAPEX in NEFAB	9.93	15.06	11.55	9.34	5.23	45.89
- % Finland in Total CAPEX in NEFAB	19%	33%	27%	26%	19%	26%
- Latvia in Total CAPEX in NEFAB	5.49	5.67	5.50	5.48	6.61	22.14
- % Latvia in Total CAPEX in NEFAB	11%	12%	13%	15%	23%	13%
- Norway in Total CAPEX in NEFAB	31.80	23.18	23.73	19.02	14.77	97.72
- % Norway in Total CAPEX in NEFAB	62%	50%	56%	53%	52%	56%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	26.74	27.06	44.71	30.81	-	129.32
- Main CAPEX	22.44	21.31	41.02	26.98	-	111.74
- % Main into Total CAPEX	84%	79%	92%	88%	-	86%
- Other CAPEX	4.30	5.75	3.70	3.83	-	17.58
- % Other into Total CAPEX	16%	21%	8%	12%	-	14%
- Estonia in Total CAPEX in NEFAB	3.49	1.15	5.40	5.79	- 1	15.83
- % Estonia in Total CAPEX in NEFAB	13%	4%	12%	19%	_	12%
- Finland in Total CAPEX in NEFAB	4.80	5.05	6.81	2.94	-	19.60
- % Finland in Total CAPEX in NEFAB	18%	19%	15%	10%	-	15%
- Latvia in Total CAPEX in NEFAB	3.37	6.13	5.17	4.91	-	19.59
- % Latvia in Total CAPEX in NEFAB	13%	23%	12%	16%	-	15%
- Norway in Total CAPEX in NEFAB	15.08	14.73	27.33	17.16	-	74.30
- % Norway in Total CAPEX in NEFAB	56%	54%	61%	56%	- [57%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(24.53)	(19.00)	2.24	(4.78)	_ [(46.07)
- Main CAPEX	(21.02)	(15.72)	6.25	(1.62)	-	(32.12)
- Other CAPEX	(3.51)	(3.28)	(4.02)	(3.16)	-	(13.96)
Total CAPEX (%)	-48%	-41%	5%	-13%	_	-26%
- Main CAPEX (%)	-48%					-22%
	-48%	-42%	18%	-6%	- 1	-//%

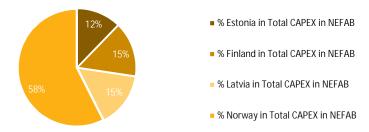




RP2 Performance Plan Total RP2 to date



Actual data Total RP2 to date



During RP2, the total actual investments in CAPEX for NEFAB have been lower than determined in the Performance Plan due to most countries underspending. Actual investments were made for a total amount of $129.32 \text{M} \in_{2009}$, while in the Performance Plan they were set out to be worth $175.39 \text{M} \in_{2009}$, a difference of $46.07 \text{M} \in_{2009}$ or 26%. In 2015, the actual expenses were $24.53 \text{M} \in_{2009}$ (or 48%) lower than anticipated. In 2016, the actual expenses were also lower by $19 \text{M} \in_{2009}$ (or 41%). In 2017, the actual expenses were higher than anticipated by $2.24 \text{M} \in_{2009}$ (or 5%). 2018 saw actual investments of $4.78 \text{M} \in_{2009}$ (or 13%) lower than anticipated.

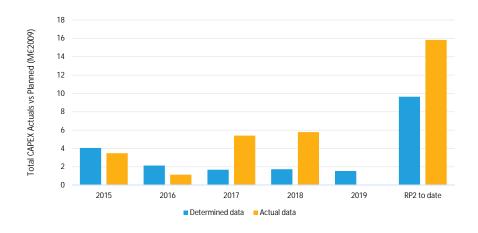
In terms of planned expenses, Norway represented 58% of the expenses, Latvia represented 13%, Finland represented 26% and Estonia represented 5%. The percentages in actual expenses became Norway 58%, Latvia 15%, Finland 15% and Estonia 12% due to Finland underspending and Estonia overspending with respect to the values anticipated in the PP.

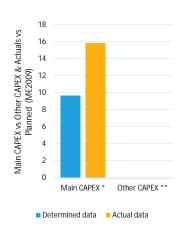


4.7.1 Estonia - EANS

Throughout the RP2 to date, Estonia overspent 6.19M \in_{2009} (+64%) with respect to the Performance Plan. Despite higher than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-1.27M \in_{2009}). Estonia planned six main projects for RP2 to date: two projects have been completed, one has been delayed and three have been started. One project is expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D F	RP2 to date
Total CAPEX	4.05	2.15	1.70	1.75	1.54	9.64
- Main CAPEX *	4.05	2.15	1.70	1.75	1.54	9.64
- % Main into Total CAPEX	100%	100%	100%	100%	100%	100%
- Other CAPEX **	=	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	0%	0%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A F	RP2 to date
Total CAPEX	3.49	1.15	5.40	5.79	- [15.83
- Main CAPEX	3.49	1.15	5.40	5.79	-	15.83
- % Main into Total CAPEX	100%	100%	100%	100%		100%
- Other CAPEX	=	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	-1	0%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(0.56)	(1.00)	3.70	4.05	-	6.19
- Main CAPEX	(0.56)	(1.00)	3.70	4.05	-	6.19
- Other CAPEX	-	-	-	-		=
Total CAPEX (%)	-14%	-47%	218%	232%	-	64%
- Main CAPEX (%)	-14%	-47%	218%	232%	-	64%
- Other CAPEX (%)	0%	0%	0%	0%	-	0%





The total capital expenditure to date is 15.83M \in ₂₀₀₉. For RP2 to date, Estonia spent 6.19M \in ₂₀₀₉ more CAPEX than originally planned. For RP2 to date, the main CAPEX is 64% higher than planned and there is no other CAPEX.

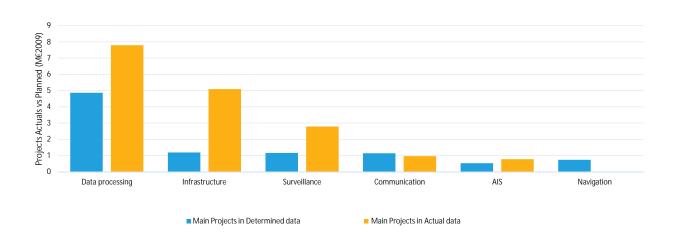
In 2015 and 2016, Estonia underspent 0.56M \in 2009 and 1M \in 2009 respectively. For 2017 and 2018, Estonia overspent 3.70M \in 2009 (+218%) and 4.05M \in 2009 (+232%), respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Estonia - EANS						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 Data processing	2.15	0.74	0.88	1.10	0.85	4.87
2 Infrastructure	0.19	0.73	0.27	-	-	1.19
3 Surveillance	0.98	0.03	0.02	0.13	0.13	1.16
4 Communication	0.38	0.21	0.25	0.30	0.19	1.15
5 AIS	0.30	0.05	0.09	0.09	0.32	0.53
6 Navigation	0.05	0.39	0.18	0.12	0.05	0.74
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 Data processing	2.17	0.97	3.33	1.32	-	7.79
2 Infrastructure	0.03	0.06	1.34	3.66	-	5.09
3 Surveillance	1.21	0.25	1.21	0.11	-	2.78
4 Communication	0.42	0.07	0.15	0.33	-	0.97
5 AIS	-	0.00	0.40	0.38	-	0.78
6 Navigation	-	-	-	-	-	-
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 R	P2 to date
1 Data processing	0.02	0.24	2.45	0.21	-	2.92
2 Infrastructure	(0.16)	(0.67)	1.07	3.66	-	3.90
3 Surveillance	0.23	0.23	1.18	(0.02)	-	1.62
4 Communication	0.04	(0.14)	(0.11)	0.03	-	(0.18)
5 AIS	(0.30)	(0.05)	0.31	0.29	-	0.25
6 Navigation	(0.05)	(0.39)	(0.18)	(0.12)	-	(0.74)



RP2 to date, the main project is "Data processing" which received a steady flow of investment throughout the period, adding up to a total of $7.79M \in_{2009}$ (2.92M \in_{2009} more than determined). The second major project in terms of investment, is "Infrastructure", receiving allocations every year, amounting to $5.09M \in_{2009}$ almost triple the investment planned. Project "Surveillance" also received more than double of the determined investment.

Project "Navigation" has not received any investments RP2 to date.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Estonia - EANS						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
	-	-	-	-	-	
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	-	-	-	-	
SDM Payment	0.05	0.78	0.14	-	-	0.97

% of SDM Payment in Total CAPEX for RP2 to date

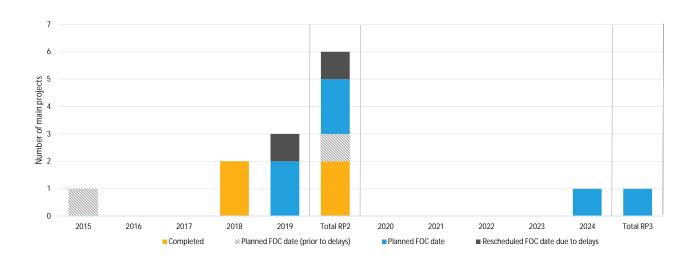


Although no funding was reported in the Monitoring Report of Estonia, data reveals SDM payment amounting to 0.97M€₂₀₀₉ throughout RP2, representing 6% of the actual total CAPEX.



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#	Main Projects	Status in 2018	FOC date*	Ехре	cted be	PCP	NOP		
				SAF	ENV	CAP	CEF		
_1	Data processing	Ongoing	2024						
2	Infrastructure	Completed	2018	Х	Х	Х	Х		
3	Surveillance	Ongoing	2019	Х	Х	Х	Х		
4	Communication	Completed	2018		Х		Х		
5	AIS	Ongoing	2019	Х	Х	Х			
6	Navigation	Delayed	2024	Х		Х	Х		



Estonia planned six main projects for RP2 to date: two projects have been completed, one has been delayed and three have been started. One project is expected to continue through RP3.

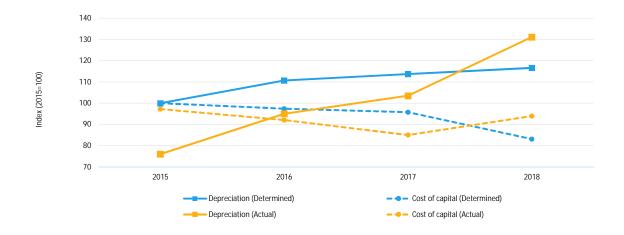
The priorities were equal with four out of six different projects being expected to bring benefits to safety, environment, capacity and cost-efficiency. "Data Processing" is not expected to benefit any of the KPAs.

None of the projects were linked to the Pilot Common Project or included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	3.29	3.64	3.73	3.83	3.88	14.49
- En route	2.85	3.13	3.21	3.29	3.32	12.48
- Terminal	0.44	0.50	0.52	0.54	0.55	2.00
Cost of Capital	1.39	1.36	1.33	1.16	1.03	5.24
- En route	1.20	1.17	1.12	0.99	0.86	4.47
- Terminal	0.19	0.19	0.22	0.17	0.17	0.77
Total	4.68	4.99	5.07	4.99	4.91	19.73
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	2.50	3.12	3.40	4.31	-	13.33
- En route	2.25	2.63	2.94	3.75	-	11.58
- Terminal	0.25	0.49	0.46	0.56	-	1.76
Cost of Capital	1.35	1.28	1.18	1.31	-	5.13
- En route	1.14	1.08	0.96	1.13	-	4.32
- Terminal	0.21	0.20	0.23	0.18	-	0.81
Total	3.85	4.40	4.58	5.62	-	18.46
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.79)	(0.51)	(0.33)	0.48	-	(1.16
- En route	(0.60)	(0.50)	(0.27)	0.47	-	(0.91
- Terminal	(0.19)	(0.01)	(0.06)	0.01	-	(0.25
Cost of Capital	(0.04)	(0.07)	(0.15)	0.15	-	(0.11
- En route	(0.06)	(0.08)	(0.16)	0.14	-	(0.15
- Terminal	0.02	0.01	0.01	0.01	-	0.04
Total	(0.83)	(0.59)	(0.48)	0.63	_	(1.27)



Over the first 4 years of RP2, the actual CAPEX was 64% higher than determined (overspent). Despite this fact, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 1.27M€₂₀₀₉ for investments that have been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than determined by $1.16M \in_{2009}$. This was mainly due to delays in investments (CPDLC, WAM etc). Only in 2018, actual depreciation was higher than determined by $0.48M \in_{2009}$ because of new investments (software of ATM system and DLS).

Throughout RP2 to date, the actual cost of capital was $0.11 \text{M} \in_{2009}$ lower than determined. This is mainly due to a lower fixed asset base and lower WACC than initially determined. However, in 2018, actual cost of capital was higher than planned due to a higher fixed asset base (as a result of the new investments).



4.7.2 Finland - ANS Finland

Total CAPEX (%)

Main CAPEX (%)

- Other CAPEX (%)

Throughout the RP2 to date, Finland underspent 26.29M \in 2009 (-57%) with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-7.45M \in 2009). Finland planned 13 main projects for RP2: three projects have been completed and ten have been started. Six projects are expected to be completed in 2019, with the remaining four are expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	9.93	15.06	11.55	9.34	5.23	45.89
- Main CAPEX *	6.34	9.69	8.26	6.78	3.61	31.07
- % Main into Total CAPEX	64%	64%	72%	73%	69%	68%
- Other CAPEX **	3.60	5.37	3.29	2.56	1.62	14.82
- % Other into Total CAPEX	36%	36%	28%	27%	31%	32%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	4.80	5.05	6.81	2.94	- [19.60
- Main CAPEX	3.35	4.20	6.28	2.53	-	16.37
- % Main into Total CAPEX	70%	83%	92%	86%	-	84%
- Other CAPEX	1.45	0.85	0.53	0.41	-	3.23
- % Other into Total CAPEX	30%	17%	8%	14%	-	16%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(5.14)	(10.02)	(4.74)	(6.40)	-1	(26.29)
- Main CAPEX	(2.99)	(5.49)	(1.98)	(4.24)	-	(14.70)
- Other CAPEX	(2.150)	(4.522)	(2.76)	(2.15)		(11.59)

-52%

-47%

-60%

-66%

-57%

-84%

-41%

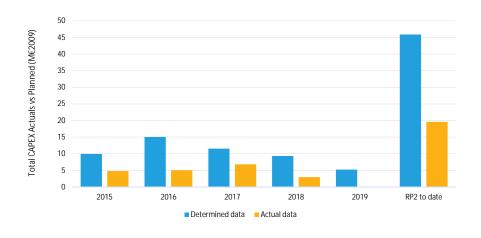
-24%

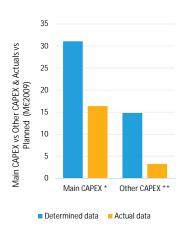
-84%

-68%

-63%

-84%





The total capital expenditure to date is 19.60M \in_{2009} . For RP2 to date, Finland spent 26.29M \in_{2009} less CAPEX than originally planned. For RP2 to date, the main CAPEX is 47% lower than planned, while other CAPEX is 78% lower.

Finland invested less than initially planned, in every year of RP2 to date, 5.14M \in_{2009} less in 2015, 10.02M \in_{2009} less in 2016, 4.74M \in_{2009} less in 2017 and 6.40M \in_{2009} less in 2018.

-57%

-47%

-78%

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

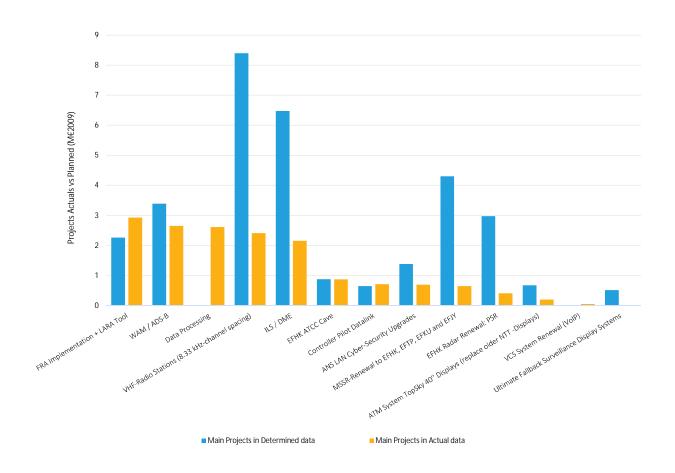
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Finland - ANS Finland						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 FRA Implementation + LARA Tool	1.66	0.60	-	-	-	2.26
2 WAM / ADS-B	1.66	0.26	_	0.66	0.81	3.39
3 Data Processing	-	-	-	-	-	-
4 VHF-Radio Stations (8.33 kHz-channel spacing)	_	1.72	3.37	3.31	-	8.40
5 ILS / DME	1.70	1.93	1.43	1.41	1.38	6.48
6 EFHK ATCC Cave	0.87	-	-	-	-	0.87
7 Controller Pilot Datalink	-	0.64	-	-	-	0.64
8 ANS LAN Cyber-Security Upgrades	0.44	0.77	0.17	-	0.04	1.38
9 MSSR-Renewal to EFHK, EFTP, EFKU and EFJY	-	1.46	1.43	1.41	1.38	4.30
10 EFHK Radar Renewal: PSR	-	1.29	1.69	-	-	2.98
11 ATM System TopSky 40" Displays (replace older NTT -Displays)	-	0.67	-	-	-	0.67
12 VCS System Renewal (VoIP)	-	-	-	-	-	-
13 Ultimate Fallback Surveillance Display Systems	-	0.34	0.17	-	-	0.51
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
					i	
1 FRA Implementation + LARA Tool	1.27	1.56	0.09	0.01	-	2.92
2 WAM / ADS-B	0.33	0.39	1.62	0.32	-	2.65
3 Data Processing	-	0.71	1.53	0.37	-	2.61
4 VHF-Radio Stations (8.33 kHz-channel spacing)	-	0.00	1.82	0.58	-	2.41
5 ILS / DME	1.15	0.34	0.59	0.07	-	2.15
6 EFHK ATCC Cave	-	0.73	0.14	-	-	0.87
7 Controller Pilot Datalink	0.59	-	-	0.11	-	0.71
8 ANS LAN Cyber-Security Upgrades	0.01	0.24	0.41	0.03	-	0.69
9 MSSR-Renewal to EFHK, EFTP, EFKU and EFJY	-	-	-	0.64	-	0.64
10 EFHK Radar Renewal: PSR	-	-	-	0.40	-	0.40
11 ATM System TopSky 40" Displays (replace older NTT -Displays)	-	0.20	-	-	-	0.20
12 VCS System Renewal (VoIP) 13 Ultimate Fallback Surveillance Display Systems	-	0.03	0.03	-	-	0.06
13 Offinate Failback Surveillance Display Systems	-	-	0.05	-	-	0.05
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015 20	016 2	017 2	018 20)19 l	RP2 to date
1 FRA Implementation + LARA Tool	(0.39)	0.96	0.09	0.01	-	0.66
2 WAM / ADS-B	(1.33)	0.13	1.62	(0.34)	-	0.07
3 Data Processing	-	0.71	1.53	0.37	-	2.61
4 VHF-Radio Stations (8.33 kHz-channel spacing)	-	(1.71)	(1.55)	(2.73)	-	(5.99)
5 ILS / DME	(0.55)	(1.59)	(0.84)	(1.34)	-	(4.33)
6 EFHK ATCC Cave	(0.87)	0.73	0.14	-	-	(0.01)
7 Controller Pilot Datalink	0.59	(0.64)	-	0.11	-	0.06
8 ANS LAN Cyber-Security Upgrades	(0.42)	(0.54)	0.25	0.03	-	(0.69)
9 MSSR-Renewal to EFHK, EFTP, EFKU and EFJY	-	(1.46)	(1.43)	(0.76)	-	(3.66)
10 EFHK Radar Renewal: PSR	-	(1.29)	(1.69)	0.40	-	(2.57)
11 ATM System TopSky 40" Displays (replace older NTT -Displays)	-	(0.47)	-	-	-	(0.47)
12 VCS System Renewal (VoIP)	-	0.03	0.03	-	-	0.06
13 Ultimate Fallback Surveillance Display Systems	-	(0.34)	(0.12)	-	-	(0.46)



INVESTMENTS PER MAIN PROJECT Finland - ANS Finland



RP2 to date, the main project is "FRA Implementation + LARA Tool" which received investment throughout the period and exceeded the planned investment by 0.66M \in _{2009</sub>. The second major project is "WAM / ADS-B" which received almost the same amount as planned. Project "Data Processing" was initially not included in the Performance Plan but received investment throughout the period.

For projects "VHF-Radio Stations (8.33 kHz-channel spacing)", "ILS / DME", "VHF-Radio Stations (8.33 kHz-channel spacing)" and "EFHK Radar Renewal: PSR" substantial investments were planned; however, less than half of the investments were made.

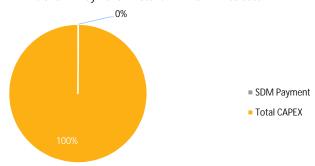


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Finland	- ANS Finland					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	0.00	3.15	(0.11)	-	-	3.05
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	0.00	3.15	(0.11)	-	-	3.05
SDM Payment	-	=	0.02	-	-	0.02

% of Funding Declaration in Total CAPEX for RP2 to date



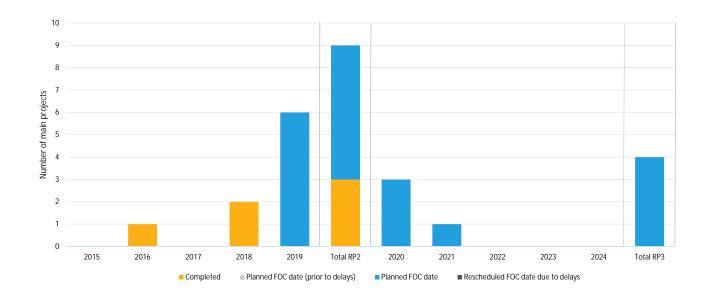
% of SDM Payment in Total CAPEX for RP2 to date



Throughout RP2, Finland received grants through seven different funding schemes; however, the investments could not be linked to specific funds. The total amount received RP2 to date is 3.05M€₂₀₀₉, not taking into account the funds received in 2014, which represents 16% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT Finland - ANS Finland								
# Main Projects	Status in 2018	FOC date*	Ехре	ected be	nefit per	KPA	PCP	NOP
			SAF	ENV	CAP	CEF		
1 FRA Implementation + LARA Tool	Ongoing	2019		Х		Х	Х	Х
2 WAM / ADS-B	Ongoing	2020	Х	Х	Х	Х		Х
3 Data Processing	Ongoing	2019	Х	Х	Х	Х	Х	
4 VHF-Radio Stations (8.33 kHz-channel spacing)	Ongoing	2019						
5 ILS / DME	Ongoing	2019	Х			Х		
6 EFHK ATCC Cave	Completed	2018	Х					
7 Controller Pilot Datalink	Completed	2018	Х		Х	Х	Х	Х
8 ANS LAN Cyber-Security Upgrades	Ongoing	2019	Х					
9 MSSR-Renewal to EFHK, EFTP, EFKU and EFJY	Ongoing	2019	Х			Х		
10 EFHK Radar Renewal: PSR	Ongoing	2020	Х					
11 ATM System TopSky 40" Displays (replace older NTT -Displays)	Completed	2016	Х			Х		
12 VCS System Renewal (VoIP)	Ongoing	2020	Х	Х	Х	Х	Х	
13 Ultimate Fallback Surveillance Display Systems	Ongoing	2021	Х					



Finland planned 13 main projects for RP2: three projects have been completed and ten have been started. Six projects are expected to be completed in 2019, with the remaining four are expected to continue through RP3.

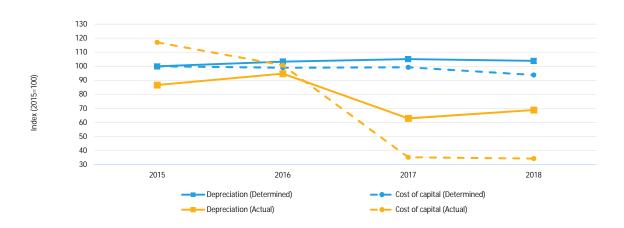
The main priority was safety with 11 projects expected to bring benefits. The second priority was cost-efficiency where eight projects are expected to bring benefits. "VHF-Radio Stations (8.33 kHz-channel spacing)" is not expected to bring benefits to any of the KPAs.

The actual investment in RP2 to date for the four projects that were linked to the Pilot Common Project is 6.3M€₂₀₀₉. This amount represents 32% of the actual total CAPEX. Three projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Finland - A	ANS Finland					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Danzasiation	F 40	F //	F 7/	F (0	E 24	22.50
Depreciation - En route	5.48 4.13	5.66 4.28	5.76 4.37	5.69	5.31 3.98	22.58 17.14
				4.36		
- Terminal	1.35	1.38	1.38	1.33	1.33	5.44
Cost of Capital	1.94	1.92	1.92	1.82	1.75	7.59
- En route	1.49	1.51	1.50	1.44	1.41	5.94
- Terminal	0.44	0.41	0.42	0.38	0.34	1.65
Total	7.41	7.58	7.68	7.50	7.06	30.17
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	4.75	5.19	3.45	3.77	- [17.16
- En route	3.53	3.94	2.71	3.03	-	13.21
- Terminal	1.22	1.25	0.74	0.75	-	3.95
Cost of Capital	2.27	1.95	0.68	0.66	-	5.56
- En route	1.76	1.55	0.55	0.56	-	4.41
- Terminal	0.51	0.40	0.13	0.11	-	1.15
Total	7.01	7.14	4.13	4.44	-	22.72
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.73)	(0.47)	(2.31)	(1.91)	-1	(5.42
- En route	(0.60)	(0.34)	(1.67)	(1.33)	-	(3.93
- Terminal	(0.13)	(0.13)	(0.64)	(0.58)	-	(1.49
Cost of Capital	0.33	0.03	(1.24)	(1.15)	-	(2.03
- En route	0.26	0.04	(0.95)	(0.88)	-	(1.53
- Terminal	0.07	(0.01)	(0.29)	(0.27)	-	(0.50
Total	(0.40)	(0.43)	(3.55)	(3.06)	-	(7.45



Over the first 4 years of RP2, 57% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 7.45M€₂₀₀₉ (or 25%) for investments that have not been materialised RP2 to date.

Throughout RP2 to date, the actual depreciation was lower than determined by $5.42 \text{M} \in_{2009}$. In 2015 and 2016, lower depreciation was mainly due to delayed investments. In 2017, lower depreciation was caused by changes in the cost base (ANS assets at the airports (APP/TWR) are mainly owned by the airport operator Finavia and ANS Finland pays a so-called fixed asset fee for the use these assets). In 2018, the main reasons for lower depreciation were project implementation delays and the allocation of investment costs to operating costs.

Throughout RP2 to date, the cost of capital was 2.03M€₂₀₀₉ lower than determined. In 2015 and 2016, cost of capital was higher than anticipated due to a different capital structure than planned, increasing the WACC. In 2017 and 2018, cost of capital was lower than determined because of a lower than determined fixed asset base (caused by structural changes) coupled with a decrease in actual WACC compared to determined.

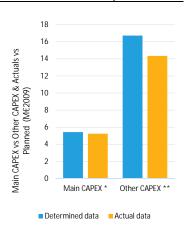


4.7.3 Latvia - LGS

Throughout the RP2 to date, Latvia underspent $26.29M \in_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (- $6.5M \in_{2009}$). Latvia planned five main projects for RP2: one project has been completed and four have been started. One project has been started in RP1 and is expected to be completed in 2019. One project will continue through RP3

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D F	RP2 to date
Total CAPEX	5.49	5.67	5.50	5.48	6.61	22.14
- Main CAPEX *	1.28	2.02	1.08	1.05	2.09	5.42
- % Main into Total CAPEX	23%	36%	20%	19%	32%	25%
- Other CAPEX **	4.21	3.65	4.42	4.43	4.52	16.72
- % Other into Total CAPEX	77%	64%	80%	81%	68%	75%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A F	RP2 to date
Total CAPEX	3.37	6.13	5.17	4.91	- [19.59
- Main CAPEX	0.52	1.23	2.00	1.49	-	5.25
- % Main into Total CAPEX	15%	20%	39%	30%	-	27%
- Other CAPEX	2.85	4.90	3.17	3.42	-	14.35
- % Other into Total CAPEX	85%	80%	61%	70%	-	73%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(2.12)	0.46	(0.32)	(0.57)	-	(2.55)
- Main CAPEX	(0.76)	(0.79)	0.93	0.44	-	(0.18)
- Other CAPEX	(1.36)	1.25	(1.25)	(1.00)	-	(2.37)
Total CAPEX (%)	-39%	8%	-6%	-10%	-	-12%
- Main CAPEX (%)	-59%	-39%	86%	42%	-	-3%
- Other CAPEX (%)	-32%	34%	-28%	-23%	-	-14%





The total capital expenditure to date is $19.59M \in_{2009}$. For RP2 to date, Latvia spent $2.55M \in_{2009}$ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 12% lower than planned, while other CAPEX is 14% lower.

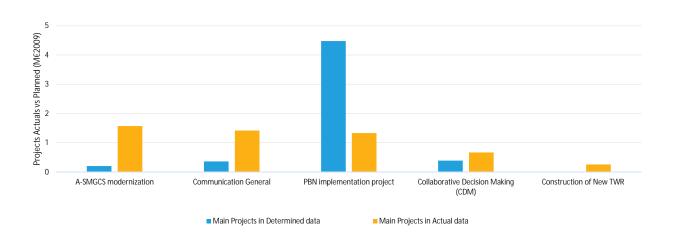
In 2015, Latvia spent 2.12M \in ₂₀₀₉ less than planned. In 2016, actual CAPEX is 0.46M \in ₂₀₀₉ higher than planned. For 2017 and 2018, Latvia underspent 0.32M \in ₂₀₀₉ and 0.57M \in ₂₀₀₉, respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Latvia - LGS						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 A-SMGCS modernization	0.08	0.04	0.04	0.04	0.79	0.20
2 Communication General	0.14	0.11	0.08	0.03	1.09	0.36
3 PBN implementation project	1.06	1.78	0.87	0.77	-	4.48
4 Collaborative Decision Making (CDM)	-	0.09	0.09	0.21	0.21	0.39
5 Construction of New TWR	-	-	-	-	-	-
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 A-SMGCS modernization	0.09	0.24	0.50	0.75	-	1.57
2 Communication General	0.23	0.28	0.39	0.53	-	1.42
3 PBN implementation project	0.20	0.61	0.52	-	-	1.33
4 Collaborative Decision Making (CDM)	-	-	0.46	0.21	-	0.67
5 Construction of New TWR	-	0.11	0.15	-	-	0.26
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 F	RP2 to date
					i	
1 A-SMGCS modernization	0.01	0.20	0.46	0.71	-	1.37
2 Communication General	0.09	0.16	0.31	0.50	-	1.06
3 PBN implementation project	(0.86)	(1.17)	(0.35)	(0.77)	-	(3.15)
4 Collaborative Decision Making (CDM)	-	(0.09)	0.37	0.00	-	0.28
5 Construction of New TWR	-	0.11	0.15	-	-	0.26



RP2 to date, the main project is "A-SMGCS Modernisation" which received $1.37M \in_{2009}$ more than initially planned amounting $1.57M \in_{2009}$. The second largest actual investment was made in project "Communication General" which received a total of $1.36M \in_{2009}$, $1.06M \in_{2009}$ more than initially planned.

Project "PBN Implementation Project" received 1.33M \in ₂₀₀₉ instead of 4.48M \in ₂₀₀₉ which was initially planned. Project "Construction of New TWR" only started to receive investments in 2016 and 2017, as the need for a new Tower building became urgent due to the rapid expansion of the Riga Airport.

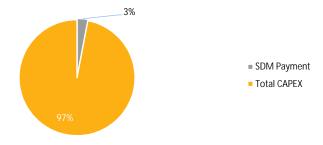


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Latvia - LGS						
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	-	-	0.30	-	-	0.30
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding Declaration (Monitoring Report)	-	-	0.30	-	-	0.30
SDM Payment	0.12	0.05	0.42	-	-	0.59

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



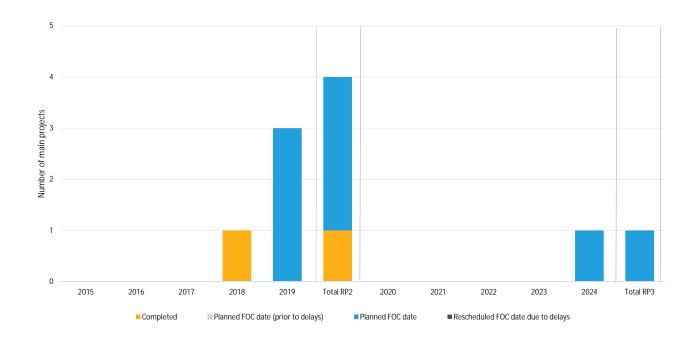
Latvia received grants amounting to 0.30M \in _{2009</sub>, all received in 2017, representing 2% of the actual total CAPEX. However, with the information provided, none of the funds could be linked to a specific project.

Despite the funding declaration amounting to only $0.30M \epsilon_{2009}$, the SDM payment received by Latvia was $0.59M \epsilon_{2009}$.



EXPECTED BENEFIT	PER PROJECT	Latvia - LGS

# Main Projects	Status in 2018	FOC date*	Expected benefit per KPA				PCP	NOP
			SAF	ENV	CAP	CEF		
1 A-SMGCS modernization	Ongoing	2024	Х	Х	Х	х	Х	İ
2 Communication General	Ongoing	2019			Х		Х	
3 PBN implementation project	Ongoing	2019		Х		х		
4 Collaborative Decision Making (CDM)	Ongoing	2019						
5 Construction of New TWR	Completed	2018						



Latvia planned five main projects for RP2: one project has been completed and four have been started. One project has been started in RP1 and is expected to be completed in 2019. One project will continue through RP3.

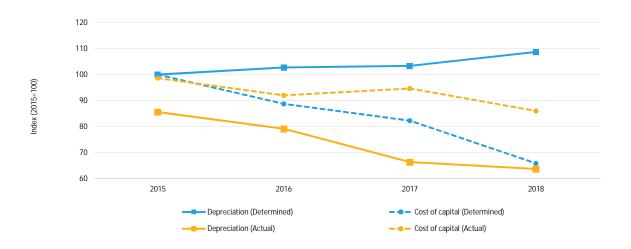
Two out of five projects are expected to have a positive impact on environment, capacity and cost efficiency, while only one project is expected to benefit safety. Projects "Collaborative Decision Making (CDM)" and "Construction of New TWR" are not expected to impact any of the KPAs.

The actual investment made in RP2 to date for the two projects that were linked to the Pilot Common Project is $2.99M \in_{2009}$. This amount represents 15% of the actual total CAPEX. No project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Latvia - LG	SS					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to dat
Depreciation	5.77	5.93	5.96	6.27	5.88	23.93
- En route	3.80	3.91	3.99	4.11	3.77	15.80
- Terminal	1.97	2.02	1.97	2.17	2.12	8.13
Cost of Capital	1.22	1.09	1.01	0.81	0.77	4.12
- En route	0.90	0.85	0.78	0.71	0.69	3.24
- Terminal	0.32	0.24	0.23	0.10	0.08	0.88
Total	6.99	7.01	6.97	7.08	6.65	28.06
Astrophysical Astronomy	20154	20174	20174	20104	20104	DD2 to dot
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	4.94	4.57	3.83	3.68	- [17.02
- En route	3.43	3.09	2.60	2.56	-	11.68
- Terminal	1.51	1.48	1.23	1.12	-	5.34
Cost of Capital	1.21	1.13	1.16	1.05	-	4.54
- En route	0.90	0.89	0.94	0.94	-	3.67
- Terminal	0.31	0.24	0.22	0.11	-	0.87
Total	6.15	5.69	4.99	4.73	-	21.56
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(0.83)	(1.36)	(2.13)	(2.59)	-	(6.92
- En route	(0.37)	(0.82)	(1.39)	(1.55)	-	(4.13
- Terminal	(0.46)	(0.54)	(0.74)	(1.05)	-	(2.79
Cost of Capital	(0.02)	0.04	0.15	0.25		0.42
- En route	(0.00)	0.04	0.16	0.24	-	0.43
- Terminal	(0.01)	0.00	(0.01)	0.01	-	(0.01
Total	(0.85)	(1.32)	(1.98)	(2.35)	-	(6.50



Over the first 4 years of RP2, 12% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed $6.5M \epsilon_{2009}$ (or 23%) for investments that have not been materialised RP2 to date.

Throughout RP2 to date, actual depreciation was lower than determined by $6.92M \in_{2009}$. This was mainly due to project delays, end of useful life of fixed assets that were not put into operation and lower than anticipated investments.

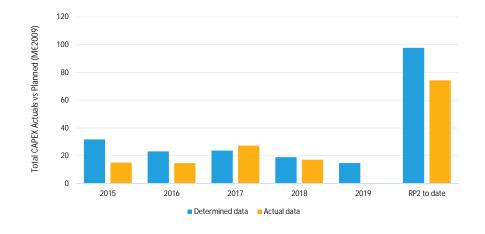
Throughout RP2 to date, cost of capital was $0.42M \in_{2009}$ higher than determined. This was due to a shift in net value fixed assets (WACC remained the same); the actual net asset base for Latvia was higher than the determined. This increase in the net book value can be explained by a decline in the fixed asset base's depreciation as a result of several investments that are not operational yet and the end of useful life of several investments made.

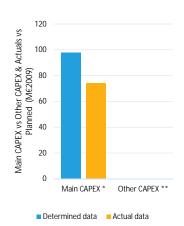


4.7.4 Norway - Avinor

Throughout the RP2 to date, Norway underspent $23.42 \text{M} \in_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-18.77M \in_{2009}). Norway planned 14 main projects for RP2: four projects have been completed and ten have been started. Nine are expected to be completed in 2019, with the remaining one expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	31.80	23.18	23.73	19.02	14.77	97.72
- Main CAPEX *	31.80	23.18	23.73	19.02	14.77	97.72
- % Main into Total CAPEX	100%	100%	100%	100%	100%	100%
- Other CAPEX **	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	0%	0%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	15.08	14.73	27.33	17.16	-	74.30
- Main CAPEX	15.08	14.73	27.33	17.16	-	74.30
- % Main into Total CAPEX	100%	100%	100%	100%	-	100%
- Other CAPEX	-	-	-	-	-	-
- % Other into Total CAPEX	0%	0%	0%	0%	=	0%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(16.72)	(8.45)	3.61	(1.86)	- [(23.42)
- Main CAPEX	(16.72)	(8.45)	3.61	(1.86)	-	(23.42)
- Other CAPEX	-	-	-	-	-	-
Total CAPEX (%)	-53%	-36%	15%	-10%	-	-24%
- Main CAPEX (%)	-53%	-36%	15%	-10%	-	-24%
- Other CAPEX (%)	0%	0%	0%	0%	-	0%





The total capital expenditure to date is 74.30M \in_{2009} . For RP2 to date, Norway spent 23.42M \in_{2009} less CAPEX than originally planned. For RP2 to date, the main CAPEX is 24% lower than planned and there is no other CAPEX.

In 2015 and 2016, Norway underspent 16.72M \in 2009 and 8.45M \in 2009, respectively. In 2017, Norway spent 3.61M \in 2009 more than planned. In 2018, actual CAPEX is 1.86M \in 2009 lower than planned.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

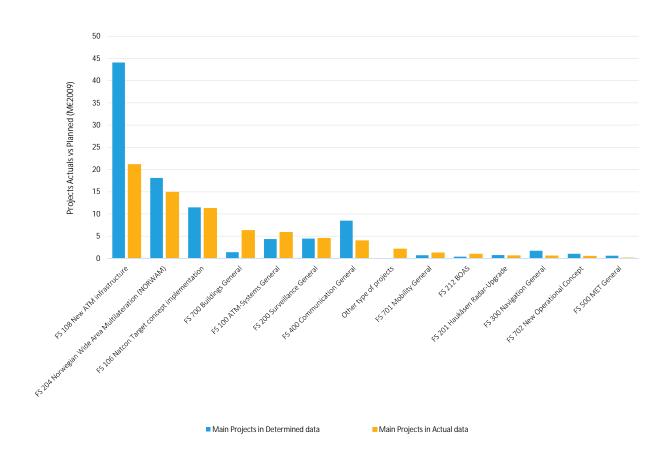
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



Main Projects in Determined data (Me ₂₀₀₀)	INVESTMENTS PER MAIN PROJECT Norway - Avinor						
2 F S 204 Norwegian Wide Area Multilateration (NORWAM) 4 F S 700 Buildings General 7.61 3.89 - 1.14.9 4 F S 700 Buildings General 0.37 0.36 0.35 0.34 0.29 1.42 5 F S 100 ATM-Systems General 0.10 0.10 0.10 1.91 2.26 0.67 4.48 6 F S 200 Surveillance General 0.10 0.10 1.91 2.26 0.67 4.48 7 F S 400 Communication General 0.10 0.10 1.91 2.28 2.22 1.78 8.50 8 Offer type of projects 0.10 1.80 0.18 0.18 0.18 0.17 0.17 0.71 0.71 9 F S 701 Mobility General 0.18 0.18 0.18 0.18 0.17 0.17 0.71 0.71 10 F S 212 B08ΔS 0.39 - 1 1. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
2 F S 204 Norwegian Wide Area Multilateration (NORWAM) 4 F S 700 Buildings General 7.61 3.89 - 1.14.9 4 F S 700 Buildings General 0.37 0.36 0.35 0.34 0.29 1.42 5 F S 100 ATM-Systems General 0.10 0.10 0.10 1.91 2.26 0.67 4.48 6 F S 200 Surveillance General 0.10 0.10 1.91 2.26 0.67 4.48 7 F S 400 Communication General 0.10 0.10 1.91 2.28 2.22 1.78 8.50 8 Offer type of projects 0.10 1.80 0.18 0.18 0.18 0.17 0.17 0.71 0.71 9 F S 701 Mobility General 0.18 0.18 0.18 0.18 0.17 0.17 0.71 0.71 10 F S 212 B08ΔS 0.39 - 1 1. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1 FS 108 New ATM infrastructure	10.46	10.28	14.50	8.84	11.22	44.09
3 FS 106 Nation Target concept implementation 7 - 61 3.89						-	
4 F 700 Buildings General 0.37 0.36 0.35 0.34 0.29 1.42 5 F 100 Arth-Systems General 2.06 1.67 (0.18) 0.81 0.40 4.35 6 F S 200 Surveillance General 0.10 0.10 1.91 2.26 0.67 4.48 7 F 3 400 Communication General 2.09 1.91 2.28 2.22 1.78 6.50 8 Other type of projects -	•	7.61	3.89	-	-	-	11.49
5 Is 100 ATM-Systems General 2.06 1.67 (0.18) 0.81 0.40 4.35 6 Is 2000 Surveillance General 0.10 0.10 1.91 2.28 2.22 1.78 8.50 8 Other typee Oprojects - </td <td></td> <td></td> <td></td> <td>0.35</td> <td>0.34</td> <td>0.29</td> <td></td>				0.35	0.34	0.29	
6 FS 200 Surveillance General 209 191 228 222 1.78 8.50 8.0 fter type of projects 2.09 191 228 2.22 1.78 8.50 8.0 fter type of projects 2.09 191 228 2.22 1.78 8.50 8.0 fter type of projects 2.09 191 228 2.22 1.78 8.50 8.0 fter type of projects 2.00 191 228 2.22 1.78 8.50 8.0 8.0 fter type of projects 2.00 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 8.0 191 228 2.22 1.78 8.50 8.0 191 228 2.22 1.78 8.50 8.0 191 228 2.22 1.78 8.50 8.0 191 228 2.22 1.78 8.50 8.0 191 228 2.22 1.78 8.50 8.0 191 228 2.22 1.78 8.50 8.0 191 228 2.22 1.78 8.0 191 228 2.22 1.78 8.0 191 228 2.22 1.78 9.0 191 228 2.22 1.22 1.00 1.00 1.22 1.32 9.0 1.22 1.22 1.23 1.23 1.2							
7 F S 400 Communication General 2.09 1.91 2.28 2.22 1.78 8.50 8 Other type of projects - - - - - - - - - - - - - - 0.77 0.71 0.71 0.71 1.72 1.71 1.72 1.71 1.74							
9 FS 701 Mobility General 10 FS 212 BOAS 10.39 0.39 11 FS 201 Haukäsen Radar-Upgrade 10.77 0.77 12 FS 300 Navigation General 10.52 0.51 0.50 0.20 0.10 1.74 13 FS 702 New Operational Concept 11.05 1.05 14 FS 500 MET General 10.16 0.15 0.15 0.15 0.14 0.61 Main Projects in Actual data (M€2009) 2015A 2016A 2017A 2018A 2019A RP2 to date Main Projects in Actual data (M€2009) 2015A 2016A 2017A 2018A 2019A RP2 to date FS 108 New ATM infrastructure		2.09	1.91			1.78	
10 FS 212 BOAS 11 FS 201 Haukåsen Radar-Upgrade 1.77 0.77 12 FS 300 Navigation General 1.05 1.05 14 FS 500 New Operational Concept 1.05 1.05 14 FS 500 MeV operational Concept 1.05 1.05 14 FS 500 MET General 2.016 - 2.015 - 0.15 - 0.15 - 0.15 2.018 - 2.018 - 2.018 - 2.019 - 2.018 2.019	8 Other type of projects	-	-	-	-	-	-
11 FS 201 Hauk\text{sen Radar-Upgrade}	9 FS 701 Mobility General	0.18	0.18	0.18	0.17	0.17	0.71
12 FS 300 Navigation General 1.05	10 FS 212 BOAS	0.39	-	-	-	-	0.39
13 FS 702 New Operational Concept 1 FS 500 MET General 1 No.16 NET Second Test in Actual data (M€2009) 2015A 2016A 2017A 2018A 2019A RP2 to date 1 FS 108 New ATM Infrastructure 1 No.26 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New ATM Infrastructure 1 No.27 New Operational Concept Implementation 1 No.27 New ATM Infrastructure 1 No.27 New Operational Concept Implementation 1 No.28 New ATM Infrastructure 1 No.27 New Operational Concept Implementation 1 No.28 New ATM Infrastructure 1 No.27 New Operational Concept Implementation (NORWAM) 1 No.27 New Operational Concept Implementation (NORWAM) 2 No.27 New Operational Concept Implementation (NORWAM) 3 No.27 New Operational Concept Implementation (NORWAM) 3 No.27 New Operational Concept Implementation (NORWAM) 3 No.27 New Operational Concept Implementation (NORWAM) 3 No.27 New Operational Concept Implementation (NORWAM) 3 No.27 New Operational Concept Implementation (NORWAM) 3 No.27 New Operational Concept Implementation (NORWAM) 3 No.27	11 FS 201 Haukåsen Radar-Upgrade	0.77	-	-	-	=	0.77
14 FS 500 MET General 0.16 0.15 0.15 0.15 0.14 0.61 # Main Projects in Actual data (M€2009) 2015A 2016A 2017A 2018A 2019A RP2 to date 1 FS 108 New ATM infrastructure 1.35 2.68 12.12 5.01 - 21.16 2 FS 204 Norwegian Wide Area Multilateration (NORWAM) 2.13 3.09 6.36 3.36 - 14.93 3 FS 106 Natcon Target concept implementation 6.26 4.79 0.23 0.00 - 11.27 4 FS 700 Buildings General 0.62 0.25 2.43 1.45 - 6.32 5 FS 100 ATM-Systems General 0.60 0.25 2.24 1.45 - 6.32 6 FS 200 Surveillance General 1.18 0.47 1.17 1.73 - 4.54 7 FS 400 Communication General 0.50 1.12 1.41 0.96 - 3.99 8 Other type of projects - - - 1.12 1.01 - 2.0 1		0.52	0.51	0.50	0.20	0.10	1.74
# Main Projects in Actual data (M€2009) 1 FS 108 New ATM infrastructure 1 .35		1.05	-	-	-	-	1.05
1 FS 108 New ATM infrastructure 1.35 2.68 12.12 5.01 - 21.16 2 FS 204 Norwegian Wide Area Multilateration (NORWAM) 2.13 3.09 6.36 3.36 - 14.93 3 FS 106 Natcon Target concept implementation 6.26 4.79 0.23 0.00 - 11.27 4 FS 700 Buildings General 0.92 1.52 2.43 1.45 - 6.32 5 FS 100 ATM-Systems General 0.62 0.25 2.03 2.96 - 5.87 6 FS 200 Surveillance General 1.18 0.47 1.17 1.73 - 4.54 7 FS 400 Communication General 0.50 1.12 1.41 0.96 - 3.99 8 Other type of projects - - 1.12 1.01 - 2.13 9 FS 701 Mobility General 0.12 0.32 0.39 0.44 - 1.26 10 FS 212 BOAS 0.83 0.15 - - - 0.60 12 FS 300 Navigation General 0.17	14 FS 500 MET General	0.16	0.15	0.15	0.15	0.14	0.61
2 FS 204 Norwegian Wide Area Multilateration (NORWAM) 2 .13 3.09 6.36 3.36 . 14.93 3 FS 106 Natcon Target concept implementation 6 .26 4.79 0.23 0.00 . 11.27 4 FS 700 Buildings General 0 .92 1.52 2.43 1.45 . 6.32 5 FS 100 ATM-Systems General 0 .062 0.25 2.03 2.96 . 5.87 6 FS 200 Surveillance General 1 .18 0.47 1.17 1.73 . 4.54 7 FS 400 Communication General 0 .50 1.12 1.41 0.96 . 3.99 8 Other type of projects 1 . 1.12 1.01 . 2.13 9 FS 701 Mobility General 0 .12 0.32 0.39 0.44 . 1.26 10 FS 212 BOAS 0 .83 0.15	# Main Projects in Actual data (M€2009)	2015A	2016A	2017A	2018A	2019A	RP2 to date
2 FS 204 Norwegian Wide Area Multilateration (NORWAM) 2 .13 3.09 6.36 3.36 . 14.93 3 FS 106 Natcon Target concept implementation 6 .26 4.79 0.23 0.00 . 11.27 4 FS 700 Buildings General 0 .92 1.52 2.43 1.45 . 6.32 5 FS 100 ATM-Systems General 0 .062 0.25 2.03 2.96 . 5.87 6 FS 200 Surveillance General 1 .18 0.47 1.17 1.73 . 4.54 7 FS 400 Communication General 0 .50 1.12 1.41 0.96 . 3.99 8 Other type of projects 1 . 1.12 1.01 . 2.13 9 FS 701 Mobility General 0 .12 0.32 0.39 0.44 . 1.26 10 FS 212 BOAS 0 .83 0.15	1 FS 108 New ATM infrastructure	1 35	2 68	12 12	5.01	-1	21 16
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			-	-	-	-	
			(0.05)	(0.15)	(0.15)	(0.14)	



INVESTMENTS PER MAIN PROJECT Norway - Avinor



For RP2 to date, the main project is the "FS 108 New ATM infrastructure". In the Performance Plan, this project was foreseen to receive $44.09M \in_{2009}$; however, it received $21.16M \in_{2009}$, almost half of the determined investment. This is due to a change of project scope and a slower start than expected, resulting in a lower actual investment. Two other main projects: the "FS 204 Norwegian Wide Area Multilateration (NORWAM)" and the "FS 106 Natcon Target concept implementation" are also falling short of $3.19M \in_{2009}$ and $0.22M \in_{2009}$, respectively.

All projects have received investments over the last 4 years; however, the project "FS 700 Buildings General" received a higher investment than originally planned, resulting in an overspending of 4.90M€₂₀₀₉ or 4 times more than determined.

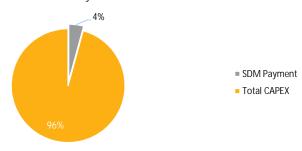


PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Norway - A	vinor					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
3 FS 106 Natcon Target concept implementation	1.24	0.46	1.46	-	-	3.15
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	1.24	0.46	1.46	-	-	3.15
SDM Payment	1.24	0.46	1.46	-	-	3.15

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date

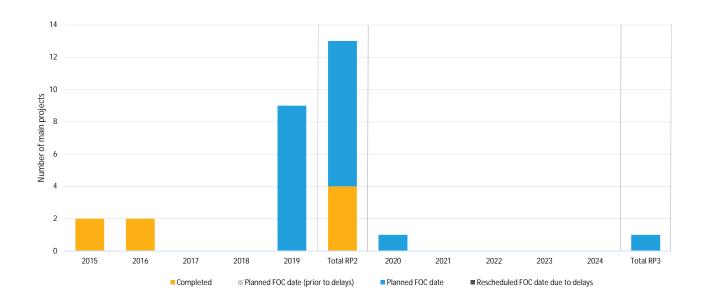


Although Norway is not a part of the European Union; it obtained one funding via INEA/CEF/M2014/1037259 for the project "FS 106 Natcon Target concept implementation".

The total funding received to date is 3.15M€₂₀₀₉ which covered 28% of the investments planned for this project and 4% of the actual total CAPEX.



EXPECTED BENEFIT PER PROJECT Norway - Avinor								
# Main Projects	Status in 2018	FOC date*	Expe	ected be	nefit pei	· KPA	PCP	NOP
			SAF	ENV	CAP	CEF		
1 FS 108 New ATM infrastructure	Ongoing	2020	Х	х	х	х	Х	Х
2 FS 204 Norwegian Wide Area Multilateration (NORWAM)	Ongoing	2019	Х	Х	Х	х		
3 FS 106 Natcon Target concept implementation	Completed	2016	Х	Х	Х	Х		
4 FS 700 Buildings General	Ongoing	2019						
5 FS 100 ATM-Systems General	Ongoing	2019	Х	Х	Х	Х		Х
6 FS 200 Surveillance General	Ongoing	2019	Х	Х	Х	Х		
7 FS 400 Communication General	Ongoing	2019	Х		Х			
8 Other type of projects	Ongoing	2019	Х					
9 FS 701 Mobility General	Completed	2016	Х	Х	Х	Х		
10 FS 212 BOAS	Completed	2015	Х					
11 FS 201 Haukåsen Radar-Upgrade	Ongoing	2019	Х	Х	Х	Х		
12 FS 300 Navigation General	Completed	2015	Х	Х	Х	х		
13 FS 702 New Operational Concept	Ongoing	2019	Х			х		
14 FS 500 MET General	Ongoing	2019	Х			Х		



Norway planned 14 main projects for RP2: four projects have been completed and ten have been started. Nine are expected to be completed in 2019, with the remaining one expected to continue through RP3.

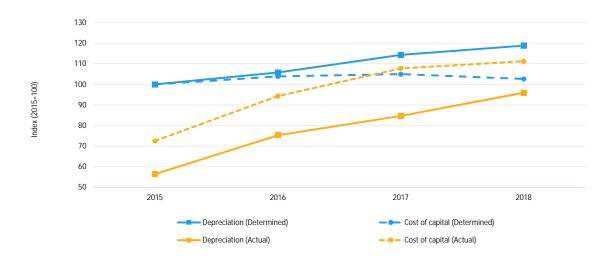
All but one project will have a positive impact on safety; 10 out of 14 projects are expected to benefit cost-efficiency; nine are expected to benefit capacity and eight are expected to benefit environment. One project, "Buildings General" is expected not to benefit any KPA.

The actual investment in RP2 to date for the one project that was linked to the Pilot Common Project is $21.16M \in_{2009}$. This amount represents 28% of the actual total CAPEX. Two projects were included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Norway - A	winor					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	13.10	13.86	14.98	15.57	15.37	57.51
- En route	7.65	8.81	9.58	10.13	9.80	36.17
- Terminal	5.45	5.05	5.39	5.44	5.57	21.34
Cost of Capital	8.64	8.97	9.07	8.86	8.51	35.54
- En route	5.95	6.37	6.50	6.43	6.19	25.25
- Terminal	2.68	2.60	2.57	2.43	2.31	10.29
<u>Total</u>	21.74	22.83	24.04	24.43	23.88	93.04
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	7.40	9.87	11.10	12.57	-	40.94
- En route	5.28	5.78	6.12	7.86	-	25.05
- Terminal	2.12	4.09	4.98	4.71	-	15.89
Cost of Capital	6.27	8.14	9.31	9.61	-	33.33
- En route	4.72	4.81	5.66	6.08	-	21.28
- Terminal	1.55	3.33	3.64	3.52	-	12.05
Total	13.67	18.02	20.41	22.18	-	74.27
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(5.71)	(3.99)	(3.87)	(3.00)	-	(16.56)
- En route	(2.37)	(3.03)	(3.46)	(2.27)	-	(11.12)
- Terminal	(3.34)	(0.96)	(0.42)	(0.73)	-	(5.44)
Cost of Capital	(2.37)	(0.83)	0.24	0.74	-	(2.21)
- En route	(1.23)	(1.56)	(0.83)	(0.35)	-	(3.97)
- Terminal	(1.13)	0.73	1.07	1.09	-	1.76
Total	(8.07)	(4.81)	(3.63)	(2.25)	-	(18.77)



Over the first 4 years of RP2, 24% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 18.77M \in 2009 for investments that have not been materialised RP2 to date.

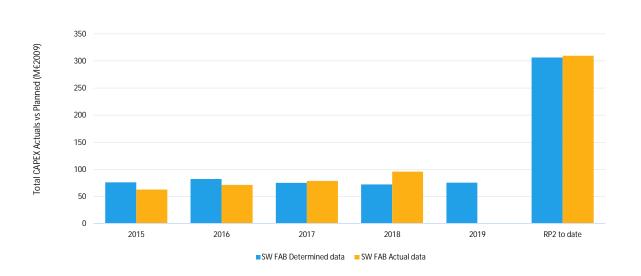
Throughout RP2 to date, actual depreciation was lower than determined by $16.56M \in_{2009}$. This was due to a lower than planned level of investments during RP2.

Throughout RP2 to date, cost of capital was $2.21M \in_{2009}$ lower than determined. This was mainly due to a lower than determined net value of the fixed assets as a result of delays in the investments.



4.8 SW FAB

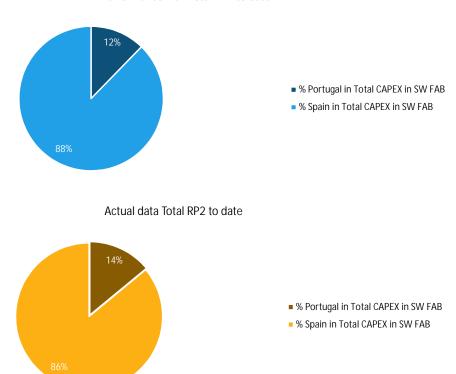
OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	76.28	82.47	75.30	72.34	75.76	306.39
- Main CAPEX	52.88	59.16	52.70	50.08	53.78	214.83
- % Main into Total CAPEX	69%	72%	70%	69%	71%	70%
- Other CAPEX	23.40	23.30	22.60	22.26	21.98	91.56
- % Other into Total CAPEX	31%	28%	30%	31%	29%	30%
- Protugal in Total CAPEX in SW FAB	7.96	14.80	8.70	6.20	10.37	37.66
- % Portugal in Total CAPEX in SW FAB	10%	18%	12%	9%	14%	12%
- Spain in Total CAPEX in SW FAB	68.31	67.67	66.60	66.14	65.39	268.73
- % Spain in Total CAPEX in SW FAB	90%	82%	88%	91%	86%	88%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	62.87	71.57	79.02	96.00	-	309.46
- Main CAPEX	41.56	46.87	53.59	67.66	-	209.69
- % Main into Total CAPEX	66%	65%	68%	70%	-	68%
- Other CAPEX	21.31	24.70	25.43	28.33	-	99.77
- % Other into Total CAPEX	34%	35%	32%	30%	-	32%
- Portugal in Total CAPEX in SW FAB	9.54	6.90	8.83	18.06	- [43.33
- % Portugal in Total CAPEX in SW FAB	15%	10%	11%	19%	-	14%
- Spain in Total CAPEX in SW FAB	53.33	64.67	70.19	77.93	-	266.13
- % Spain in Total CAPEX in SW FAB	85%	90%	89%	81%	-	86%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(13.40)	(10.90)	3.72	23.65	- [3.07
- Main CAPEX	(11.32)	(12.29)	0.89	17.58	-	(5.14)
- Other CAPEX	(2.09)	1.39	2.83	6.07	-	8.21
Total CAPEX (%)	-18%	-13%	5%	33%	-	1%
- Main CAPEX (%)	-21%	-21%	2%	35%	-	-2%
- Other CAPEX (%)	-9%	6%	13%	27%	-	9%





OVERALL INVESTMENTS SW FAB

RP2 Performance Plan Total RP2 to date



The total CAPEX to date in the SW FAB is $309.46 \text{M} \in_{2009}$, $3.07 \text{M} \in_{2009}$ (or 1%) higher than planned due to Portugal overspending and Spain underspending with respect to the initial planned amounts. In 2015, the actual CAPEX was $13.4 \text{M} \in_{2009}$ (-18%) lower than planned. For 2016, the actual CAPEX was $10.9 \text{M} \in_{2009}$ (-13%) less than planned. 2017 also saw an actual CAPEX of $3.72 \text{M} \in_{2009}$ (+5%) more than planned. In 2018, a large increase in total actual CAPEX occurred, this being $19.69 \text{M} \in_{2009}$ (+105%) more than planned.

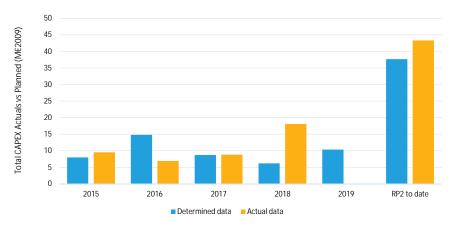
In terms of planned expenses, Portugal represented 12% with Spain amounting for 88% of the planned expenses. The percentage in actual expenses became Portugal 14% and Spain 86%. This shift in prercentages was due to Portugal overspending and Spain underspending with respect to planned CAPEX.

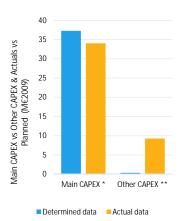


4.8.1 Portugal - NAV Portugal

Throughout the RP2 to date, Portugal overspent 5.67M€₂₀₀₉ with respect to the Performance Plan. Despite higher than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-10M ϵ_{2009}). Portugal planned nine main projects for RP2: one project has been completed, one has been delayed to RP3 and seven have been started, with six of them expected to be completed in 2019 and one expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	7.96	14.80	8.70	6.20	10.37	37.66
- Main CAPEX *	7.87	14.53	8.70	6.20	10.28	37.30
- % Main into Total CAPEX	99%	98%	100%	100%	99%	99%
- Other CAPEX **	0.09	0.27	-	-	0.09	0.36
- % Other into Total CAPEX	1%	2%	0%	0%	1%	1%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	9.54	6.90	8.83	18.06	- [43.33
- Main CAPEX	7.27	4.93	6.01	15.83	-	34.05
- % Main into Total CAPEX	76%	71%	68%	88%	-	79%
- Other CAPEX	2.27	1.97	2.81	2.23	-	9.27
- % Other into Total CAPEX	24%	29%	32%	12%	-	21%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	1.58	(7.90)	0.13	11.86	-	5.67
- Main CAPEX	(0.60)	(9.60)	(2.68)	9.63	-	(3.25)
- Other CAPEX	2.176	1.699	2.81	2.23	-	8.92
Total CAPEX (%)	20%	-53%	1%	191%	-	15%
- Main CAPEX (%)	-8%	-66%	-31%	155%	-	-9%
- Other CAPEX (%)	2404%	635%	-	-	-	2490%





The total capital expenditure to date is $43.33M \in_{2009}$. For RP2 to date, Portugal spent $5.67M \in_{2009}$ more CAPEX than originally planned. For RP2 to date, the main CAPEX is 9% lower than planned, while other CAPEX is 2490% higher.

In 2015, Portugal spent 1.58M€2009 more than planned. In 2016, actual CAPEX is 7.90M€2009 lower than planned. For 2017 and 2018, Portugal overspent 0.13M€₂₀₀₉ and 11.86M€₂₀₀₉ (+191%), respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

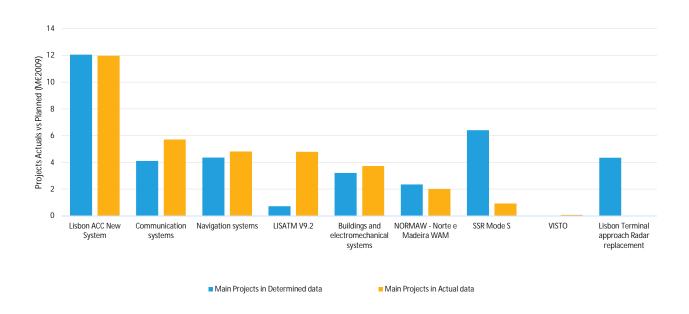
** Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Portugal - NAV Portugal						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
" Waii 11 Occus in Determined data (Wez ₂₀₀₉)	20100	20100	20170	20100	20170	Ri Z to date
1 Lisbon ACC New System	_	6.60	3.95	1.51	5.67	12.06
2 Communication systems	1.90	1.25	0.44	0.27	0.26	4.12
3 Navigation systems	1.45	-	1.23	1.68	3.14	4.36
4 LISATM V9.2	0.54	-	0.18	-	-	0.72
5 Buildings and electromechanical systems	0.81	1.52	0.53	0.35	0.35	3.21
6 NORMAW - Norte e Madeira WAM	2.35	-	-	-	-	2.35
7 SSR Mode S	0.36	3.39	0.26	2.39	0.87	6.40
8 VISTO	-	-	-	-	-	-
9 Lisbon Terminal approach Radar replacement	0.45	1.78	2.11	-	-	4.34
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
4 111 400 11 0 1	0.65	0.00	0.40	44.07	1	44.05
1 Lisbon ACC New System	0.01	0.00	0.60	11.37	-	11.97
2 Communication systems	1.55	1.84	1.54	0.79	-	5.71
3 Navigation systems	1.47	0.70	1.25	1.40	-	4.82
4 LISATM V9.2	0.92	1.21	1.29	1.37	-	4.79
5 Buildings and electromechanical systems	1.26	0.95	0.94	0.57	-	3.72
6 NORMAW - Norte e Madeira WAM	1.64	0.19	0.10	0.09	-	2.02
7 SSR Mode S	0.43	0.03	0.29	0.18	-	0.93
8 VISTO	-	-	-	0.08	-	0.08
9 Lisbon Terminal approach Radar replacement	-	-	-	-	-	-
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
1 Lisbon ACC New System	0.01	(6.60)	(3.35)	9.86	- 1	(0.08)
2 Communication systems	(0.35)	0.59	1.10	0.52	-	1.86
3 Navigation systems	0.02	0.70	0.02	(0.28)	-	0.46
4 LISATM V9.2	0.38	1.21	1.11	1.37	-	4.07
5 Buildings and electromechanical systems	0.44	(0.56)	0.42	0.21	-	0.51
6 NORMAW - Norte e Madeira WAM	(0.71)	0.19	0.10	0.09	-	(0.33)
7 SSR Mode S	0.07	(3.36)	0.03	(2.21)	-	(5.47)
8 VISTO		-	-	0.08	- 1	0.08
9 Lisbon Terminal approach Radar replacement	(0.45)	(1.78)	(2.11)	-	-	(4.34)



INVESTMENTS PER MAIN PROJECT Portugal - NAV Portugal



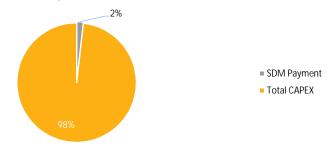
RP2 to date, the main project is "Lisbon ACC New System" which received investments throughout the period amounting to 11.97M€₂₀₀₉. The second major project is "Communication systems" which received more investment than initially planned. "LISATM V9.2" received almost 4 times more the initial investment.

"SSR Mode S" received only 0.93M \in_{2009} , compared to the 6.40M \in_{2009} initially planned. Portugal also planned 4.34M \in_{2009} for the project "Lisbon Terminal Approach Radar Replacement", but no investment was actually made.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Portu	gal - NAV Portugal					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
3 Navigation Systems	-		-	-	-	
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	-	-	-	-1	-
SDM Payment	0.03	0.04	0.71	-	-	0.78

% of SDM Payment in Main CAPEX for RP2 to date

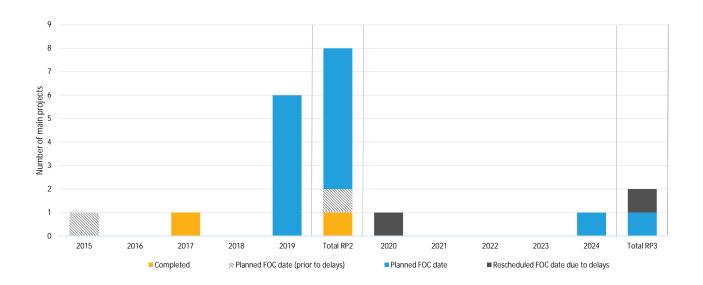


The funding declaration shows no grants received; however, data reveals there is an SDM Payment of $0.78M \in_{2009}$, representing 2% of the actual total CAPEX.

[&]quot;Navigation Systems" was funded through INEA/CEF/TRAN/M2015/1125723. However, there was no information regarding the year(s) in which this project received funds or the amount granted.



# Main Projects	Status in 2018	Status in 2018 FOC date*		Status in 2018 FOC date* Expected benefit per KP			Expected benefit per KPA		PCP	NOP
			SAF	ENV	CAP	CEF				
1 Lisbon ACC New System	Ongoing	2024	Х	Х	Х	Х	Х	х		
2 Communication systems	Ongoing	2019	Х	Х	Х	Х	Х			
3 Navigation systems	Ongoing	2019	Х	Х	Х	Х	Х			
4 LISATM V9.2	Completed	2017	Х	Х	Х	Х	Х			
5 Buildings and electromechanical systems	Ongoing	2019								
6 NORMAW - Norte e Madeira WAM	Ongoing	2019								
7 SSR Mode S	Ongoing	2019				Х				
8 VISTO	Ongoing	2019	Х		Х	Х				
9 Lisbon Terminal approach Radar replacement	Delayed	2024								



Portugal planned nine main projects for RP2: one project has been completed, one has been delayed to RP3 and seven have been started, with six of them expected to be completed in 2019 and one expected to continue through RP3.

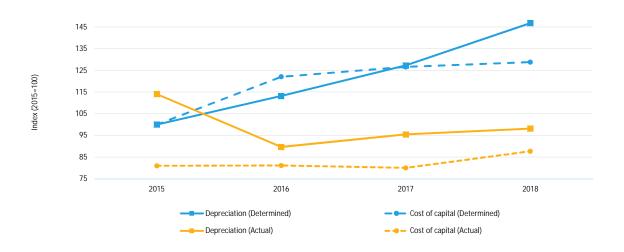
The main priority was cost-efficiency with six projects expected to benefit this KPA. For safety and capacity, five projects are expected to bring benefits, while for environment, only four projects are expected to bring benefits.

The actual investment made in RP2 to date for the four projects that were linked to the Pilot Common Project is $27.3M \in_{2009}$. This amount represents 63% of the actual total CAPEX. One project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Portugal - N	AV Portugal					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	5.45	6.17	6.94	8.00	10.27	26.55
- En route	3.48	4.14	4.81	5.74	7.08	18.16
- Terminal	1.97	2.03	2.13	2.26	3.18	8.39
Cost of Capital	3.46	4.22	4.38	4.45	4.65	16.51
- En route	2.57	3.20	3.22	3.24	3.49	12.24
- Terminal	0.88	1.02	1.16	1.21	1.16	4.27
Total	8.91	10.39	11.31	12.45	14.92	43.06
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	6.21	4.89	5.20	5.35	-	21.65
- En route	3.50	2.81	3.01	2.90	-	12.22
- Terminal	2.71	2.08	2.20	2.44	-	9.43
Cost of Capital	2.80	2.81	2.77	3.03	-	11.40
- En route	2.26	2.14	1.97	2.14	-	8.52
- Terminal	0.54	0.67	0.79	0.89	-	2.89
Total	9.01	7.69	7.97	8.38	-	33.05
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	0.77	(1.28)	(1.73)	(2.65)	-	(4.90)
- En route	0.02	(1.33)	(1.80)	(2.83)	-	(5.94)
- Terminal	0.74	0.05	0.07	0.18	-	1.04
Cost of Capital	(0.66)	(1.41)	(1.61)	(1.42)	-	(5.10)
- En route	(0.31)	(1.06)	(1.25)	(1.10)	-	(3.72)
- Terminal	(0.35)	(0.35)	(0.36)	(0.32)	-	(1.38)
Total	0.11	(2.69)	(3.34)	(4.07)	-	(10.00)



Over the first 4 years of RP2, the actual CAPEX is 15% higher than determined (overspent). Despite this fact, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed $10M\epsilon_{2009}$ for investments that have been materialised RP2 to date.

Throughout RP2 to date, actual depreciation was lower than determined by $4.90M \in_{2009}$. This was mainly due to implementation date deferrals coming from previous years.

Throughout RP2 to date, cost of capital was 5.10M ϵ_{2009} lower than determined. This was due to a lower than determined net value of the fixed assets as a result of implementation date deferrals coming from previous years.

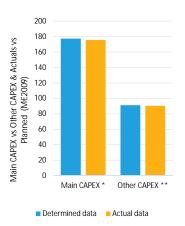


4.8.2 Spain - ENAIRE

Throughout the RP2 to date, Spain underspent $2.59M\epsilon_{2009}$ with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (- $30.45M\epsilon_{2009}$). Spain planned 11 main projects for RP2: one project has been completed, one has been delayed and nine have been started. Five projects are expected to be completed in 2019, while the remaining four are expected to continue through RP3.

OVERALL INVESTMENTS						
OVERALL HAVESTIVIERTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	68.31	67.67	66.60	66.14	65.39	268.73
- Main CAPEX *	45.00	44.63	44.01	43.88	43.49	177.52
- % Main into Total CAPEX	66%	66%	66%	66%	67%	66%
- Other CAPEX **	23.31	23.04	22.60	22.26	21.90	91.20
- % Other into Total CAPEX	34%	34%	34%	34%	33%	34%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	53.33	64.67	70.19	77.93	-	266.13
- Main CAPEX	34.29	41.94	47.58	51.83	-	175.63
- % Main into Total CAPEX	64%	65%	68%	67%	-	66%
- Other CAPEX	19.05	22.73	22.62	26.10	-	90.50
- % Other into Total CAPEX	36%	35%	32%	33%	-	34%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(14.98)	(2.99)	3.59	11.79	- [(2.59)
- Main CAPEX	(10.72)	(2.69)	3.57	7.95	-	(1.89)
- Other CAPEX	(4.26)	(0.31)	0.02	3.84	-	(0.70)
Total CAPEX (%)	-22%	-4%	5%	18%	-	-1%
- Main CAPEX (%)	-24%	-6%	8%	18%	-	-1%
- Other CAPEX (%)	-18%	-1%	0%	17%	-	-1%





The total capital expenditure to date is $266.13M\epsilon_{2009}$. For RP2 to date, Spain spent $2.59M\epsilon_{2009}$ less CAPEX than originally planned. For RP2 to date, the main CAPEX is 1% lower than planned, while other CAPEX shows no variation.

In 2015 and 2016, Spain underspent 14.98M \in ₂₀₀₉ and 2.99M \in ₂₀₀₉, respectively. For 2017 and 2018, actual CAPEX is overspent by 3.59M \in ₂₀₀₉ and 11.79M \in ₂₀₀₉, respectively.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

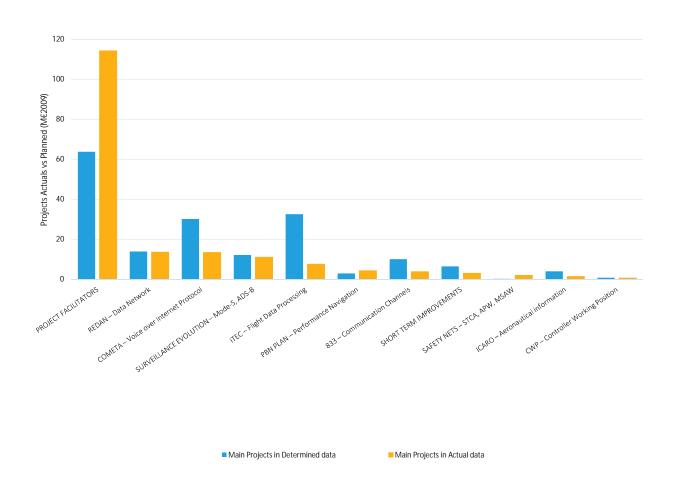
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Spain - ENAIRE						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 PROJECT FACILITATORS	19.72	14.80	14.04	15.20	17.49	63.77
2 REDAN – Data Network	4.99	4.10	4.16	0.68	0.49	13.93
3 COMETA – Voice over Internet Protocol	4.37	9.59	8.25	8.02	7.66	30.23
4 SURVEILLANCE EVOLUTION – Mode-S, ADS-B	2.35	3.41	3.11	3.36	3.53	12.24
5 iTEC – Flight Data Processing	3.99	7.18	9.38	12.02	12.28	32.58
6 PBN PLAN – Performance Navigation	0.95	0.68	0.67	0.73	0.77	3.04
7 833 – Communication Channels	1.65	2.86	3.07	2.57	-	10.15
8 SHORT TERM IMPROVEMENTS	5.74	0.78	-	-	-	6.51
9 SAFETY NETS – STCA, APW, MSAW	0.07	0.07	0.07	0.07	0.06	0.27
10 ICARO – Aeronautical information	1.17	1.17	0.84	0.84	0.73	4.02
11 CWP – Controller Working Position	-	-	0.40	0.40	0.49	0.80
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 PROJECT FACILITATORS	21.30	28.31	28.24	36.41	-	114.25
2 REDAN – Data Network	4.67	3.67	3.35	1.94	-	13.63
3 COMETA – Voice over Internet Protocol	1.13	0.70	7.87	3.76	-	13.47
4 SURVEILLANCE EVOLUTION – Mode-S, ADS-B	3.98	1.36	2.35	3.39	-	11.09
5 iTEC – Flight Data Processing	0.04	3.78	2.40	1.44	-	7.66
6 PBN PLAN – Performance Navigation	1.08	0.67	0.70	1.87	-	4.32
7 833 – Communication Channels	0.45	1.28	1.25	0.91	-	3.89
8 SHORT TERM IMPROVEMENTS	0.46	0.55	0.96	1.13		3.10
9 SAFETY NETS – STCA, APW, MSAW	0.45	1.01	0.29	0.33	_	2.08
10 ICARO – Aeronautical information	0.52	0.27	0.01	0.66	-	1.46
11 CWP – Controller Working Position	0.32	0.27	0.01	0.00		0.68
11 OWI CONTROLL WORKING LOSIGOTI	0.21	0.32	0.13			0.00
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
1 PROJECT FACILITATORS	1.58	13.51	14.19	21.21	- I	50.49
2 REDAN – Data Network	(0.32)	(0.43)	(0.81)	1.26	-	(0.30)
3 COMETA – Voice over Internet Protocol	(3.23)	(8.88)	(0.38)	(4.26)	-	(16.76)
4 SURVEILLANCE EVOLUTION – Mode-S, ADS-B	1.62	(2.05)	(0.76)	0.03	-	(1.15)
5 iTEC – Flight Data Processing	(3.95)	(3.40)	(6.98)	(10.58)	-	(24.91)
6 PBN PLAN – Performance Navigation	0.12	(0.01)	0.03	1.14	-	1.28
7 833 – Communication Channels	(1.20)	(1.57)	(1.82)	(1.66)	-	(6.25)
8 SHORT TERM IMPROVEMENTS	(5.27)	(0.23)	0.96	1.13	-	(3.41)
9 SAFETY NETS – STCA, APW, MSAW	0.38	0.94	0.22	0.26	-	1.81
10 ICARO – Aeronautical information	(0.65)	(0.90)	(0.83)	(0.18)	-	(2.56)
11 CWP – Controller Working Position	0.21	0.32	(0.25)	(0.40)	-	(0.12)
3						



INVESTMENTS PER MAIN PROJECT Spain - ENAIRE



RP2 to date, the biggest investments have been for the "Project facilitators" equivalent to 114.25M \in ₂₀₀₉ or 65% of the actual "Main CAPEX" investments. This is 50.49M \in ₂₀₀₉ more than initially foreseen in the Performance Plan causing allocation of lower investments to other projects.

Project "REDAN – Data Network" received investments in line with the Performance Plan; however, the "COMETA" project received less than planned (16.76M \in _{2009 less)}. Project "iTEC – Flight Data Processing" was the 2nd main project in the Performance Plan with a foreseen investment of 32.58M \in ₂₀₀₉, however, only 7.66M \in ₂₀₀₉ has been placed so far.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Spain - ENAIR	RE					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
3 COMETA – Voice over Internet Protocol	-	-	-	0.01	-	0.01
4 SURVEILLANCE EVOLUTION – Mode-S, ADS-B	-	-	-	0.64	-	0.64
11 CWP – Controller Working Position	-	-	-	0.48	-	0.48
PROJECT FACILITATORS - REDAN – Data Network & PBN PLAN	5.06	5.36	4.84	2.46	-	17.72
PROJECT FACILITATORS & COMETA – VoIP & PBN PLAN	-	0.46	2.52	1.85	-	4.83
PROJECT FACILITATORS - REDAN – Data Network	-	0.00	0.00	0.00	-	0.01
PROJECT FACILITATORS & iTEC – Flight Data Processing	-	-	1.10	1.76	-	2.87
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	5.06	5.82	8.47	7.20	-	26.54
SDM Payment	3.47	4.45	9.96	-	-	17.87

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



Spain received 29.20M€₂₀₀₉ funding during RP2 from 7 different sources: "FPA 1037259", "FPA 1132363", "FPA 1131871", "FPA 1349619", "1602559 UNDER FRAMEWORK PARTNERSHIP AGREEMENT No MOVE/E2-2014-717/SESAR FPA" and "1482884 UNDER FRAMEWORK PARTNERSHIP AGREEMENT No MOVE/E2-2014-717/SESAR FPA".

The grants were used to cover several projects. Most of the funding has been received in 2017.

The total grants received to date amount to 26.54M€₂₀₀₉, representing 10% of the actual total CAPEX to date over RP2.



SAFETY NETS – STCA, APW, MSAW

10 ICARO – Aeronautical information

11 CWP – Controller Working Position

EXPECTED BENEFIT PER PROJECT Spain - ENAIRE								
# Main Projects	Status in 2018	FOC date*	Expe	ected be	nefit per	· KPA	PCP	NOP
			SAF	ENV	CAP	CEF		
1 PROJECT FACILITATORS	Ongoing	2020	Х	Х	Х	х	Х	
2 REDAN – Data Network	Ongoing	2019	Х		Х	Х	Х	
3 COMETA – Voice over Internet Protocol	Ongoing	2019			Х	Х		
4 SURVEILLANCE EVOLUTION – Mode-S, ADS-B	Ongoing	2023	Х	Х	Х	Х		
5 iTEC – Flight Data Processing	Ongoing	2019	Х		Х			
6 PBN PLAN – Performance Navigation	Ongoing	2020	Х	Х	Х	Х	Х	
7 833 – Communication Channels	Completed	2018			Х			
8 SHORT TERM IMPROVEMENTS	Ongoing	2019	Х		Х		Х	

Ongoing

Ongoing

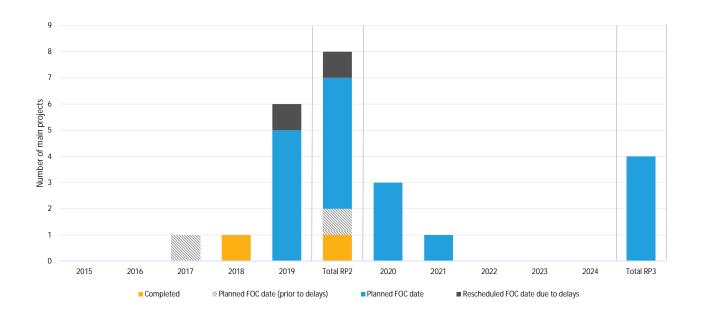
Delayed

2019

2020

2021

Х



Spain planned 11 main projects for RP2: one project has been completed, one has been delayed and nine have been started. Five projects are expected to be completed in 2019, while the remaining four are expected to continue through RP3.

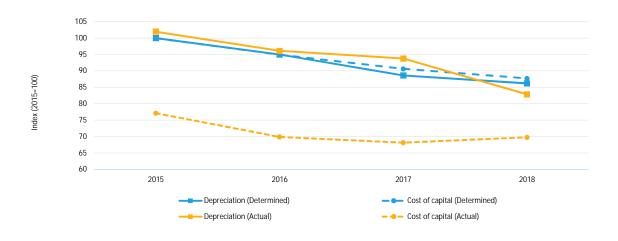
Ten projects are expected to benefit capacity, nine are expected to improve safety and six are expected to benefit cost-efficiency. Only three of the projects are expected to benefit the environment.

The actual investment in RP2 to date for the seven projects that were linked to the Pilot Common Project is 139.53M€₂₀₀₉. This amount represents 52% of the actual total CAPEX. One project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Spain - EN	NAIRE					
·		004 (D	00470	00400	204.00	DD0 I I I
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	76.31	72.50	67.64	65.79	65.44	282.24
- En route	69.69	66.14	62.19	60.62	60.36	258.64
- Terminal	6.62	6.37	5.45	5.16	5.09	23.60
Cost of Capital	38.65	36.69	35.04	33.91	32.82	144.29
- En route	36.02	34.22	32.66	31.62	30.59	134.51
- Terminal	2.63	2.48	2.38	2.29	2.23	9.78
Total	114.96	109.20	102.68	99.69	98.27	426.52
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	77.80	73.35	71.57	63.25	- [285.97
- En route	68.90	64.71	65.23	58.19	-	257.03
- Terminal	8.90	8.64	6.34	5.06	-	28.94
Cost of Capital	29.81	27.01	26.33	26.96	-	110.11
- En route	27.15	24.52	24.52	25.32	-	101.51
- Terminal	2.66	2.49	1.81	1.64	-	8.60
Total	107.61	100.36	97.90	90.21	-	396.08
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	1.49	0.85	3.93	(2.54)	- [3.73
- En route	(0.79)	(1.43)	3.04	(2.43)	-	(1.62
- Terminal	2.28	2.28	0.89	(0.11)	-	5.35
Cost of Capital	(8.84)	(9.68)	(8.71)	(6.94)	-	(34.18
- En route	(8.87)	(9.69)	(8.14)	(6.30)	-	(33.00
- Terminal	0.03	0.01	(0.57)	(0.65)	-	(1.18)
Total	(7.35)	(8.84)	(4.78)	(9.48)	-	(30.45)



Over the first 4 years of RP2, 1% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed 30.45M€₂₀₀₉ for investments that have not been materialised RP2 to date.

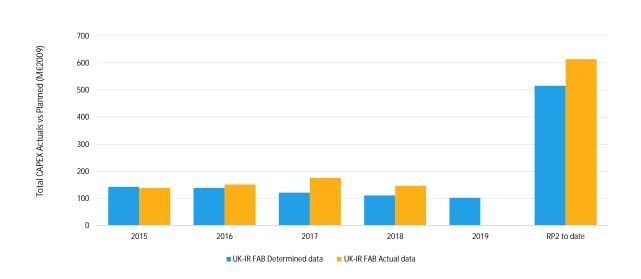
Throughout RP2 to date, actual depreciation was higher than determined by 3.73M€₂₀₀₉. This was mainly due to the lower than planned level of investments.

Throughout RP2 to date, cost of capital was 34.18M \in_{2009} lower than determined. This was mainly due to a lower than planned asset base and a lower than planned WACC (the interests on debt were slightly lower than in the Performance Plan). Furthermore, there was a rationalisation of the investment plan that resulted in a significant cost reduction.



4.9 UK-IR FAB

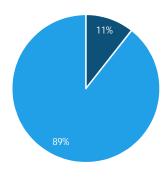
OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	143.36	139.39	121.57	111.71	102.93	516.03
- Main CAPEX	124.35	122.86	106.09	96.27	84.49	449.57
- % Main into Total CAPEX	87%	88%	87%	86%	82%	87%
- Other CAPEX	19.01	16.53	15.49	15.44	18.44	66.47
- % Other into Total CAPEX	13%	12%	13%	14%	18%	13%
- Ireland in Total CAPEX in BALTIC	13.69	13.69	13.69	13.69	13.69	54.76
- % Ireland in Total CAPEX in BALTIC	10%	10%	11%	12%	13%	11%
- United Kingdom in Total CAPEX in BALTIC	129.67	125.70	107.88	98.02	89.24	461.27
- % United Kingdom in Total CAPEX in BALTIC	90%	90%	89%	88%	87%	89%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	139.23	151.72	175.97	147.01	-	613.93
- Main CAPEX	120.47	141.05	158.55	125.91	-	545.97
- % Main into Total CAPEX	87%	93%	90%	86%	-	89%
- Other CAPEX	18.76	10.67	17.42	21.11	-	67.96
- % Other into Total CAPEX	13%	7%	10%	14%	-	11%
- Ireland in Total CAPEX in BALTIC	10.25	10.25	10.25	10.25	- [41.02
- % Ireland in Total CAPEX in BALTIC	7%	7%	6%	7%	-	7%
- United Kingdom in Total CAPEX in BALTIC	128.97	141.46	165.72	136.76	-	572.91
- % United Kingdom in Total CAPEX in BALTIC	93%	93%	94%	93%	-	93%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(4.14)	12.33	54.40	35.31	-1	97.90
- Main CAPEX	(3.88)	18.19	52.47	29.63	- [96.41
- Other CAPEX	(0.26)	(5.85)	1.93	5.67	- [1.49
Total CAPEX (%)	-3%	9%	45%	32%	-	19%
- Main CAPEX (%)	-3%	15%	49%	31%	-	21%
- Other CAPEX (%)	-1%	-35%	12%	37%	-	2%





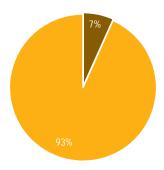
OVERALL INVESTMENTS UK-IR FAB

RP2 Performance Plan Total RP2 to date



- % Ireland in Total CAPEX in BALTIC
- % United Kingdom in Total CAPEX in BALTIC

Actual dataTotal RP2 to date



- % Ireland in Total CAPEX in BALTIC
- % United Kingdom in Total CAPEX in RALTIC

The determined total CAPEX shows a negative trend, decrease in the values from 143.36M \in_{2009} in 2015 to 102.93M \in_{2009} in 2019. The actual data shows the opposite, with an increase up to 2017, from 139.23M \in_{2009} in 2015 to 175.97M \in_{2009} in 2017, followed by a decrease in 2018 to 147.01M \in_{2009} . Except for 2015, the total actual CAPEX is always higher than the determined, mainly due to the United Kingdom increasing the assets.

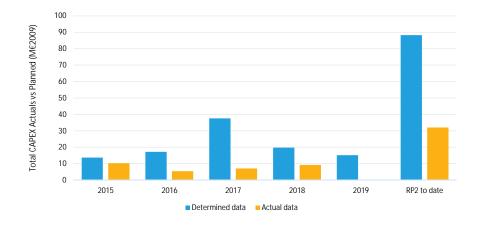
The United Kingdom is responsible for the biggest portion of the CAPEX. Roughly 89% of the determined and 93% of the actual CAPEX was spent by the UK. The actual share of Ireland is lower than determined, due to their lower than planned CAPEX and the higher than planned CAPEX from the UK.

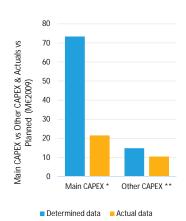


4.9.1 Ireland - IAA

Throughout the RP2 to date, Ireland underspent $56.22M \in_{2009}$ (or 63.73%) with respect to the Performance Plan. Due to lower than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-2.51M \in_{2009}). Ireland planned ten main projects for RP2: one project has been completed, four have been delayed and five have been started. One project is expected to continue through RP3.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	13.69	17.21	37.57	19.75	15.22	88.22
- Main CAPEX *	7.77	10.92	35.32	19.36	14.31	73.36
- % Main into Total CAPEX	57%	63%	94%	98%	94%	83%
- Other CAPEX **	5.92	6.29	2.26	0.39	0.90	14.86
- % Other into Total CAPEX	43%	37%	6%	2%	6%	17%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	10.25	5.40	7.07	9.27	- [32.00
- Main CAPEX	7.75	3.27	3.77	6.75	-	21.54
- % Main into Total CAPEX	76%	61%	53%	73%	-	67%
- Other CAPEX	2.51	2.13	3.31	2.53	-	10.46
- % Other into Total CAPEX	24%	39%	47%	27%	-	33%
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(3.44)	(11.81)	(30.50)	(10.48)	-	(56.22)
- Main CAPEX	(0.02)	(7.64)	(31.55)	(12.61)	-	(51.82)
- Other CAPEX	(3.41)	(4.17)	1.05	2.13	-	(4.40)
Total CAPEX (%)	-25%	-69%	-81%	-53%	-	-64%
- Main CAPEX (%)	0%	-70%	-89%	-65%	-	-71%
- Other CAPEX (%)	-58%	-66%	47%	542%	-	-30%





The total capital expenditure to date is $32.00M \in_{2009}$. For RP2 to date, Ireland spent $56.22M \in_{2009}$ (-64%) less CAPEX than originally planned. For RP2 to date, the main CAPEX is 71% lower than planned, while other CAPEX is 30% lower.

Ireland invested less than initially planned, in every year of RP2 to date, 3.44M€ $_{2009}$ less in 2015, 11.81M€ $_{2009}$ less in 2016, 30.50M€ $_{2009}$ less in 2017 (-81%) and 10.48M€ $_{2009}$ less in 2018.

^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

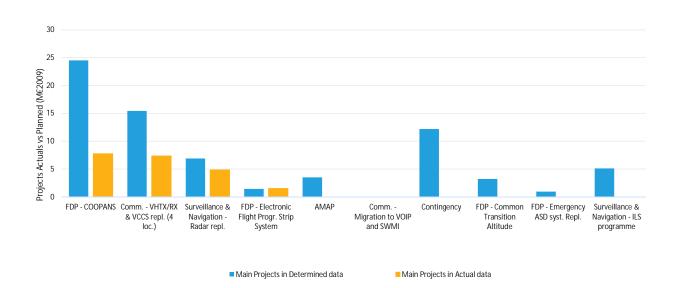
^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT Ireland - IAA						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 FDP - COOPANS	0.87	0.40	11 //	2.70	7 70	24.52
2 Comm VHTX/RX & VCCS repl. (4 loc.)	3.66	8.40 0.76	7.52	3.79 3.51	7.72 0.42	24.52 15.45
3 Surveillance & Navigation - Radar repl.	3.00	0.76		3.51		
4 FDP - Electronic Flight Progr. Strip System	1.45		3.48	3.42	3.36	6.90 1.45
5 AMAP	1.45	0.80	0.65	0.28	-	3.52
6 Comm Migration to VOIP and SWMI	1.79	0.00	0.00	0.20	1.13	3.32
7 Contingency	<u> </u>	-	12.21	-	1.13	12.21
8 FDP - Common Transition Altitude			12.21	3.23		3.23
9 FDP - Emergency ASD syst. Repl.	_	0.95			_	0.95
10 Surveillance & Navigation - ILS programme		0.75		5.13	1.68	5.13
10 Salvemance & Navigation - 123 programme				3.13	1.00	3.13
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
-						
1 FDP - COOPANS	2.64	0.35	0.95	3.84	-	7.78
2 Comm VHTX/RX & VCCS repl. (4 loc.)	2.95	2.06	2.27	0.09	-	7.37
3 Surveillance & Navigation - Radar repl.	2.15	0.87	0.55	1.29	_	4.86
4 FDP - Electronic Flight Progr. Strip System	-	-	-	1.53	-	1.53
5 AMAP	-	-	-	-	-	-
6 Comm Migration to VOIP and SWMI	-	-	-	-	-	-
7 Contingency	-	-	-	-	-	-
8 FDP - Common Transition Altitude	-	-	-	-	-	-
9 FDP - Emergency ASD syst. Repl.	-	-	-	-	-	-
10 Surveillance & Navigation - ILS programme	-	-	-	-	-	-
# Difference between Astrological Determined (NC)	2015	2017	2017	2010	2010 5)D0 to doto
# Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019 6	RP2 to date
1 FDP - COOPANS	1.77	(8.05)	(10.51)	0.05	_ [(16.74)
2 Comm VHTX/RX & VCCS repl. (4 loc.)	(0.71)	1.30	(5.25)	(3.42)		(8.08)
3 Surveillance & Navigation - Radar repl.	2.15	0.87	(2.93)	(2.13)	-	(2.04)
4 FDP - Electronic Flight Progr. Strip System	(1.45)	-	-	1.53	_	0.08
5 AMAP	(1.79)	(0.80)	(0.65)	(0.28)	_	(3.52)
6 Comm Migration to VOIP and SWMI	-	-	-	-	-	- (5.02)
7 Contingency	-	-	(12.21)	-	-	(12.21)
8 FDP - Common Transition Altitude	_	-	-	(3.23)	-	(3.23)
9 FDP - Emergency ASD syst. Repl.	-	(0.95)	-	-	-	(0.95)
10 Surveillance & Navigation - ILS programme	-	-	-	(5.13)	-	(5.13)



INVESTMENTS PER MAIN PROJECT Ireland - IAA



RP2 to date, the main project is "FDP - COOPMANS" and has received steady funding throughout the years, 16.74M€₂₀₀₉ less than determined.
6 projects have received no investments to date, namely "AMAP", "Comm. - Migration to VOIP and SWMI", "Contingency", "FDP - Common Transition Altitude", "FDP - Emergency ASD syst. Repl." and "Surveillance & Navigation - ILS Programme".

"FDP - Electronic Flight Programme Strip System" received 0.08M $\!\!\!\in_{2009}$ more than determined.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Ireland	- IAA					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 FDP - COOPANS	0.60	1.45	-	-	-	2.05
4 FDP - Electronic Flight Progr. Strip System	-	0.27	-	-	-	0.27
5 AMAP	-	-	0.47	-	-	0.47
6 Comm Migration to VOIP and SWMI	-	0.48	-	-	-	0.48
Several projects	0.18	0.71	(0.10)	-	-	0.80
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	-	0.78	2.90	0.37	-	4.06
SDM Payment	0.33	1.99	0.80	-	-	3.12

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



Ireland obtained funding for multiple projects via the TEN-T/CEF funding program, receiving grants in 2015, 2016 and 2017 from 12 different funds. However, with the provided information, the projects could not be linked to a specific fund.

The total amount granted to Ireland RP2 to date amounts to 4.06M€₂₀₀₉, representing 13% of the actual total CAPEX.



9 FDP - Emergency ASD syst. Repl.

10 Surveillance & Navigation - ILS programme

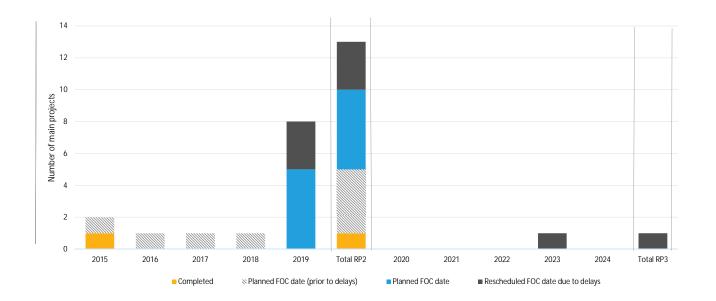
EXPECTED BENEFIT PER PROJECT Ireland - IAA								
# Main Projects	n Projects Status in 2018		Expected benefit per KPA					NOP
			SAF	ENV	CAP	CEF		
1 FDP - COOPANS	Ongoing	2019	Х	х	х	Х		
2 Comm VHTX/RX & VCCS repl. (4 loc.)	Ongoing	2019	Х		Х	Х		
3 Surveillance & Nagivation - Radar repl.	Ongoing	2019	Х			Х		
4 FDP - Electronic Flight Progr. Strip System	Completed	2015	Х	Х	Х	Х	Х	
5 AMAP	Delayed	2023	Х					
6 Comm Migration to VOIP and SWMI	Ongoing	2019	Х			Х		
7 Contingency	Delayed	2017	Х		Х	Х		
8 FDP - Common Transition Altitude	Delayed	2018	Х	Х		Х		

Delayed

Ongoing

2016

2019



Ireland planned ten main projects for RP2: one project has been completed, four have been delayed and five have been started. One project is expected to continue through RP3.

For the delayed MET project (AMAP), the vendor procurement stage has been completed and license agreements with individual airport authorities have been established. The progress made led to a significant reduction in the aviation charge-out issuing from Met Éireann over the coming 10 years. The modernisation phase of AMAP will conclude in 2019 with progress towards automation of weather observations (to be developed subsequently). It is now more likely that automation will be introduced in mid to late RP3.

Although Ireland has not mentioned any other delays in the Monitoring Report, since no investments have been made in the 'Contingency', 'FDP-Common Transition Altitude' and 'FDP - Emergency ASD syst. Repl' during RP2, it was assumed that these 3 projects have also been delayed.

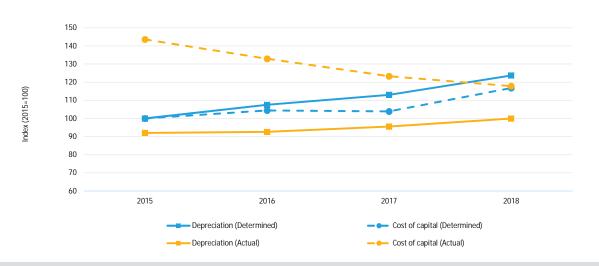
All projects are expected to improve safety; eight out of ten are expected to benefit cost-efficiency and six are expected to benefit capacity. Only three projects are expected to have a positive impact on environment.

The actual investment made in RP2 to date for the one project that was linked to the Pilot Common Project is 1.53M \in _{2009</sub>. This amount represents 5% of the actual total CAPEX. No project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL Ireland - IA	Δ					
INVESTIGENTS VS DEL REGIATION AND COST OF CALITICE HEIGHT - IN	vn.					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	13.30	14.30	15.03	16.45	16.13	59.07
- En route	9.26	9.82	10.39	11.62	11.25	41.10
- Terminal	4.03	4.47	4.63	4.83	4.88	17.97
Cost of Capital	6.52	6.81	6.77	7.61	7.69	27.70
- En route	4.49	4.62	4.67	5.36	5.36	19.14
- Terminal	2.02	2.18	2.10	2.25	2.33	8.56
Total	19.81	21.10	21.80	24.06	23.82	86.77
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Depreciation	12.23	12.31	12.70	13.29	-1	50.53
- En route	8.50	8.54	8.89	9.53	-	35.46
- Terminal	3.73	3.77	3.81	3.76	-	15.07
Cost of Capital	9.36	8.66	8.04	7.68	-	33.73
- En route	6.50	5.97	5.59	5.44	-	23.49
- Terminal	2.86	2.69	2.45	2.24	-	10.24
Total	21.59	20.97	20.73	20.97	-	84.26
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(1.06)	(1.99)	(2.33)	(3.16)	-1	(8.54)
- En route	(0.76)	(1.29)	(1.50)	(2.09)	-	(5.64)
- Terminal	(0.30)	(0.70)	(0.83)	(1.08)	-	(2.90)
Cost of Capital	2.84	1.86	1.27	0.07	-	6.03
- En route	2.01	1.35	0.92	0.08	-	4.36
- Terminal	0.83	0.51	0.34	(0.01)	-	1.68
Total	1.78	(0.13)	(1.06)	(3.09)	-	(2.51)



Over the first 4 years of RP2, 64% of planned CAPEX has not been materialised. However, the related planned costs (depreciation and cost of capital) were included in the determined costs and therefore charged (or are being charged) to airspace users. This implies that users have financed $2.51M\epsilon_{2009}$ for investments that have not been materialised RP2 to date.

Throughout RP2 to date, actual depreciation was lower than determined in the Performance Plan by 8.54M \in _{2009</sub>. This was mainly due to lack of investments throughout the period.

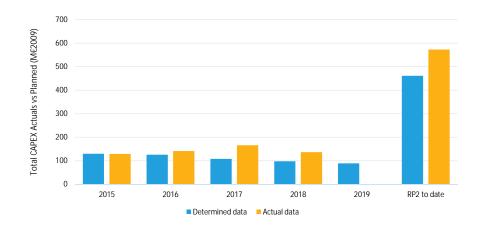
Throughout RP2 to date, cost of capital was higher than determined by 6.03M \in_{2009} . This was mainly due to a change in the capital structure from 50% equity and 50% debt in the Performance Plan to a fully equity capital structure in actual terms. This resulted in a higher than determined WACC and thus, a significant higher than determined cost of capital.

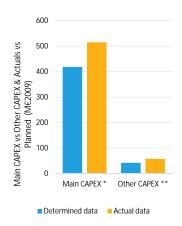


4.9.2 United Kingdom - NATS

Throughout the RP2 to date, the United Kingdom overspent 111.64M \in ₂₀₀₉ with respect to the Performance Plan. Despite higher than planned capital expenditure, the actual total depreciation and cost of capital were lower than determined (-1.86M \in ₂₀₀₉). The United Kingdom planned seven main projects for RP2, five of which have been started in RP1. All the projects have been started and are expected to be completed in 2019.

OVERALL INVESTMENTS						
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Total CAPEX	129.67	125.70	107.88	98.02	89.24	461.27
- Main CAPEX *	116.58	115.09	98.31	88.50	76.71	418.48
- % Main into Total CAPEX	90%	92%	91%	90%	86%	91%
- Other CAPEX **	13.09	10.61	9.57	9.52	12.52	42.79
- % Other into Total CAPEX	10%	8%	9%	10%	14%	9%
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total CAPEX	128.97	141.46	165.72	136.76	-	572.91
- Main CAPEX	112.72	133.30	150.80	118.16	-	514.98
- % Main into Total CAPEX	87%	94%	91%	86%	-	90%
- Other CAPEX	16.25	8.17	14.91	18.60	-	57.93
- % Other into Total CAPEX	13%	6%	9%	14%	-	10%
Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Total CAPEX	(0.70)	15.77	57.83	38.74	-	111.64
- Main CAPEX	(3.86)	18.21	52.49	29.66	-	96.50
- Other CAPEX	3.16	(2.44)	5.34	9.08	-	15.14
Total CAPEX (%)	-1%	13%	54%	40%	-	24%
- Main CAPEX (%)	-3%	16%	53%	34%	=	23%
- Other CAPEX (%)	24%	-23%	56%	95%	-	35%





The total capital expenditure to date is 572.91M \in_{2009} . For RP2 to date, the United Kingdom spent 111.64M \in_{2009} more CAPEX than originally planned. For RP2 to date, the main CAPEX is 23% higher than planned, while other CAPEX is 35% higher.

In 2015, the United Kingdom spent $0.70M \in_{2009}$ less than planned. For 2016, 2017 and 2018, the United Kingdom overspent $15.77M \in_{2009}$, $57.83M \in_{2009}$ (+54%) and $38.74M \in_{2009}$, respectively.

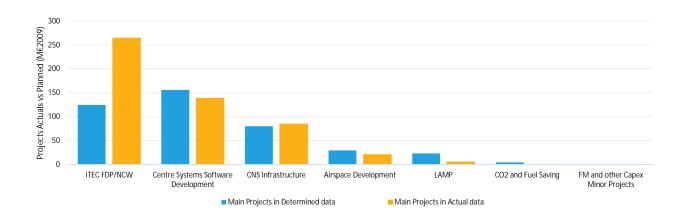
^{*} Main CAPEX: investments in new ATM systems and major overhauls of existing ATM systems that contribute to achieving the performance targets.

^{**} Other CAPEX: Investments including short-term projects and/or activities under a certain threshold.



INVESTMENTS PER MAIN PROJECT United Kingdom - NATS						
# Main Projects in Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
1 ITEC FDP/NCW	31.83	34.91	30.14	27.89	28.15	124.78
2 Centre Systems Software Development	51.40	46.09	30.77	27.64	25.35	155.90
3 CNS Infrastructure	17.86	18.20	22.70	21.25	13.70	80.01
4 Airspace Development	8.22	8.42	6.92	6.17	7.56	29.73
5 LAMP	5.48	6.46	6.78	4.55	0.94	23.26
6 CO2 and Fuel Saving	1.79	1.01	1.00	1.01	1.01	4.81
7 FM and other Capex Minor Projects	-	-	-	-	-	-
# Main Projects in Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
1 iTEC FDP/NCW	44.64	62.33	84.35	73.06	-	264.37
2 Centre Systems Software Development	37.49	42.64	37.31	21.18	-	138.62
3 CNS Infrastructure	21.72	23.90	21.72	17.43	-	84.77
4 Airspace Development	3.19	4.11	7.23	6.37	-	20.91
5 LAMP	5.34	0.30	(0.00)	0.00	-	5.64
6 CO2 and Fuel Saving	0.34	0.02	0.19	0.12	-	0.67
7 FM and other Capex Minor Projects	-	-	-	-	-	-

#	Difference between Actuals and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
1	iTEC FDP/NCW	12.81	27.42	54.20	45.17	-	139.60
2	Centre Systems Software Development	(13.91)	(3.44)	6.54	(6.46)	-	(17.28)
3	CNS Infrastructure	3.86	5.69	(0.97)	(3.82)	-	4.76
4	Airspace Development	(5.03)	(4.31)	0.31	0.21	-	(8.82)
5	LAMP	(0.14)	(6.16)	(6.78)	(4.55)	-	(17.63)
6	CO2 and Fuel Saving	(1.45)	(0.99)	(0.81)	(0.89)	-	(4.14)
7	FM and other Capex Minor Projects	-	-	-	-	-	-



RP2 to date, the main project is " iTEC FDP / NCW" which received $264.37M \in_{2009}$, $139.60M \in_{2009}$ more than planned by the end of 2018. The project was determined to receive $152.93M \in_{2009}$, while in reality already it has already received 173% of the planned investment by the end of 2018.

For all other projects, except for "FM and other Capex Minor Projects", investments were made in line with the Performance Plan, although the projects for "CO2 and Fuel Saving" and "LAMP" are still at a low fulfilment rate.



PUBLIC FUNDING GRANTED FOR TOTAL CAPEX (CEF/TEN-T) Unite	d Kingdom - NATS					
# Actual funding declaration (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
Total ANSP	12.17	16.42	12.39	6.34	-	47.32
Actual funding declaration vs Payments (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Funding declaration (Monitoring Report)	12.17	16.42	12.39	6.34	-	47.32
SDM Payment	14.94	13.82	18.02	0.00	-	46.79

% of Funding Declaration in Total CAPEX for RP2 to date



% of SDM Payment in Total CAPEX for RP2 to date



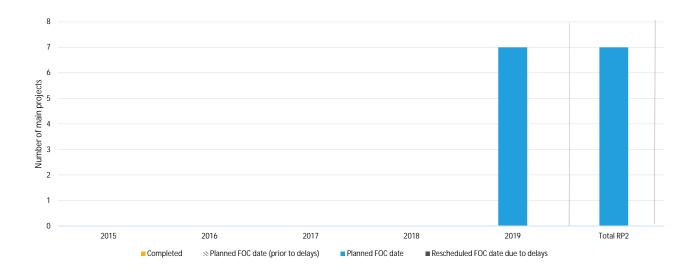
The United Kingdom received grants through seven different funding schemes, with grants received in every year of RP2 to date. However, with the information provided, the funds could not be linked to specific projects.

The total amount granted to the United Kingdom over the RP2 is 47.32M€₂₀₀₉, which represents 8% of the actual total CAPEX.



	EXPECTED	BENEFIT PER PF	ROJECT United	Kingdom - NATS
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# Main Projects	Status in 2018	FOC date*	Ехре	ected be	PCP	NOP		
			SAF	ENV	CAP	CEF		
1 iTEC FDP/NCW	Ongoing	2019	Х				Х	Х
2 Centre Systems Software Development	Ongoing	2019		Х			Х	
3 CNS Infrastructure	Ongoing	2019		Х			Х	
4 Airspace Development	Ongoing	2019	Х	Х			Х	
5 LAMP	Ongoing	2019	Х	Х			Х	Х
6 CO2 and Fuel Saving	Ongoing	2019		Х				
7 FM and other Capex Minor Projects	Ongoing	2019						



The United Kingdom planned seven main projects for RP2, five of which have been started in RP1. All the projects have been started and are expected to be completed in 2019.

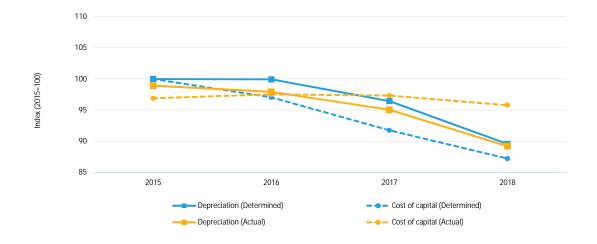
Five out of seven projects are expected to have a positive impact on the environment, while three will also improve safety. No project has been reported as being expected to benefit capacity or cost-efficiency.

The actual investment made in RP2 to date for the five projects that were linked to the Pilot Common Project is $514.31M \in_{2009}$. This amount represents 90% of the actual total CAPEX. One project was included in the Network Operations Plan.

KPAs: SAF = Safety, ENV = Environment, CAP = Capacity, CEF = Cost-efficiency FOC date*: Full Operational Capability date (the planned date of entry into operation)



INVESTMENTS VS DEPRECIATION AND COST OF CAPITAL United Ki	ngdom - NATS					
Determined data (M€ ₂₀₀₉)	2015D	2016D	2017D	2018D	2019D	RP2 to date
Depreciation	158.61	158.50	152.97	142.08	135.26	612.16
- En route	155.45	155.27	149.76	138.96	132.17	599.44
- Terminal	3.15	3.23	3.21	3.11	3.09	12.72
Cost of Capital	50.36	48.88	46.22	43.93	41.03	189.39
- En route	49.18	47.75	45.15	42.89	40.03	184.98
- Terminal	1.18	1.13	1.07	1.04	1.00	4.41
Total	208.97	207.38	199.19	186.01	176.28	801.55
Actual data (M€ ₂₀₀₉)	2015A	2016A	2017A	2018A	2019A	RP2 to date
.15121. 2212 (2009)						
Depreciation	156.91	155.32	150.77	141.49	- [604.50
- En route	153.61	152.10	147.70	138.47	-	591.88
- Terminal	3.30	3.22	3.07	3.02	-	12.61
Cost of Capital	48.81	49.12	49.03	48.24	-	195.19
- En route	47.80	48.10	48.02	47.20	-	191.12
- Terminal	1.00	1.02	1.01	1.04	-	4.07
Total	205.71	204.44	199.80	189.73	-	799.69
Difference between Actual and Determined (M€ ₂₀₀₉)	2015	2016	2017	2018	2019	RP2 to date
Depreciation	(1.70)	(3.18)	(2.20)	(0.58)	-	(7.66)
- En route	(1.84)	(3.17)	(2.06)	(0.49)	-	(7.56)
- Terminal	0.14	(0.01)	(0.14)	(0.09)	-	(0.10)
Cost of Capital	(1.56)	0.24	2.81	4.31	-	5.80
- En route	(1.38)	0.34	2.87	4.31	-	6.15
- Terminal	(0.18)	(0.11)	(0.07)	0.00	-	(0.35)
Total	(3.26)	(2.94)	0.61	3.73	-	(1.86)



Over the first 4 years of RP2, the actual CAPEX is 24% higher than determined (overspent). Despite this fact, the related planned costs (depreciation and cost of capital) were included in the determined costs and charged (or are being charged) to airspace users. This implies that users have financed 1.86M€₂₀₀₉ for investments that have been materialised RP2 to date.

Throughout RP2 to date, actual depreciation was lower than determined by 7.66M \in_{2009} . This was mainly due to project implementation delays, especially from 2016 onwards, due to the timing differences in the deployment of projects as a result of the implementation of the new SESAR programme.

Throughout RP2 to date, cost of capital was $5.80M\epsilon_{2009}$ higher than determined by $6.06M\epsilon_{2009}$. This was mainly due to the higher fixed asset base due to a higher than planned level of investments during RP2.