eMS

electronic
monitoring
system

Notes on this document

This draft manual is based on version 3_4.1a of eMS. Most of the chapters where updated to the current version, nevertheless some chapters might reflect previous versions.

All features of eMS released in later versions are not yet covered by this manual.

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Interact is co-financed by the European Regional Development Fund (ERDF). It supports territorial cooperation between regions of the EU and is the hub for exchanging information and best practices among Interreg programmes. Interact also supports cooperation programmes at EU external borders.

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Background

Every Interreg programme is obliged to set up a computerised monitoring system in order to collect all information on project and programme progress (art. 125(d) of the Regulation 1303/2013).

Additionally, as outlined in the Article 122(3) of the Regulation 1303/2013, programmes should provide their beneficiaries with a system to allow submission of information in electronic form. All exchanges of information between beneficiaries and managing authorities, certifying authorities, audit authorities and intermediate bodies should be carried out via an electronic data exchange system.

In the past, most programmes invested time and money in developing similar but slightly different electronic monitoring systems. There are hundreds of Structural Funds monitoring systems in Europe and each one of these needs to be designed, developed, maintained and improved over time.

Interreg programmes decided that it was time to kick-start a change. With the help of Interact, they joined forces to co-develop a monitoring system that is based on the expertise of many and covers everything a programme needs to run smoothly in different regions in Europe.

The eMS is a monitoring system with communication portal to support submission, approval, management and administration of projects in the context of Interreg programmes. The system supports collection of all information on submitted and approved projects, their implementation and achievements, modifications and closure. Additionally, aggregated data on the progress of projects and the programme level are recorded in the system. All programme bodies are able to communicate with beneficiaries via the system and re-use the data already collected. The eMS is built to support programme authorities in day-to-day programme management and should fulfil all legal requirements.

For Interreg programmes and Interact, co-developing the eMS meant putting the best approaches and ideas on the table and finding a common vision for a simplified, harmonised and inclusive tool for all stakeholders. The eMS was designed together with four ETC programmes and can be used free of charge by any ETC programme. The system is delivered in milestones and first modules can be used by programmes before the full system is built. eMS is currently used in productive environment by 5 programmes and is being tested and prepared for calls for proposals by another 15 programmes. Additionally, more than 10 programmes declared their intention to use the eMS.

The eMS

eMS is a web application built by the Interact Programme for the benefit of all Interreg Programmes.

All that programmes need is some IT expertise and a server to host the system. Programmes enter their programme intervention logic and financial data and configure the system choosing from a range of options.

How eMS was created

Just a year ago, the story of the eMS was one that few would have thought possible.

Many people saw the Interreg world as much too complex to even consider developing a common electronic monitoring system. After all, co-developing a monitoring system meant risk: programmes putting resources in a very uncertain pot, trying to satisfy even more stakeholders than usual, adapting programme rules and habits for the sake of common procedures, and facing the possibility of severe delays in programme implementation in case the system should fail.

So why did Interreg programmes decide to take those risks?

Their vision was, and still is, that cooperation programmes need to live cooperation themselves in order to be credible hosts for successful cooperation projects. After the joint development of Interreg harmonised implementation tools (HIT) proved to be possible and led to very good results, cooperation programmes wanted to continue on this path. They were confident that there could be more examples of how cooperation saves millions of euros, leads to superb results, and can even be fun!

Developing a monitoring system for Interreg programmes is a major effort.

It requires knowledge of the legal framework and programme procedures within Interreg, as well as the skills and experience needed to procure and develop IT tools. Before the joint eMS project, each programme invested time and money in its own system. This led to many similar but slightly different monitoring systems, which caused confusion among beneficiaries and led to duplication of work across programmes. The eMS combines programme resources in a common effort and uses harmonised templates and guidelines drawn from HIT for project applicants, project partners and first level controllers. This makes it easier for them to switch between programmes, and overall saves programmes significant time and money. The eMS also has the added benefit of simplifying collection of data, which paves the way for future thematic studies and other types of reports and evaluations.

The eMS provides features, functionalities and user interfaces that far exceed most of the existing monitoring systems in user friendliness and scope.

For Interreg programmes and Interact, co-developing the eMS meant putting the best approaches and ideas on the table and making joint decisions. It required finding a common vision for a simplified, harmonised and inclusive tool for all stakeholders. Here are just a few of the many innovative features of the eMS:

- It can handle up to four different funds simultaneously;
- It allows for multi-lingual project applications, contracts and monitoring interfaces;
- It creates an online audit trail that stores and provides all required information;
- It creates a content trail from project application to project reports to online publications of outputs and results;
- It features customisable user interfaces and functionalities for all Interreg stakeholders, including project applicants, first level controllers, joint secretariats, managing authorities, certifying authorities, audit authorities, monitoring committees, evaluation experts and contact points.

Interreg programmes can obtain the eMS for free and go online with an open call within a week!

All they need is some IT expertise and a server to host the system. Programmes enter their programme intervention logic and financial data and configure the system choosing from a range of options. As of March 2015, two programmes have already opened calls for applications with the eMS, saying that these timely online calls would have been difficult without the eMS. About 20 Interreg programmes plan to use the eMS and there could even be more. The more programmes use it, the more other programmes will trust in it and adopt it as well. The total savings of tax payers' money is estimated to amount to anything between 10 and 30 million Euros, depending on the number of programmes using the system.

The development of the eMS would not have been possible without prior harmonisation of implementation tools.

This harmonisation effort started in 2010, when Interact, together with Interreg programmes, decided to develop HIT (harmonised implementation tools) for Interreg programmes. In 2013, when it became clear that HIT laid the basis for a joint monitoring system, interested programmes and Interact teamed up to take on this project. By 2014 the IT support and expertise needed to begin development was procured and the project took off.

A key element of the eMS is that the co-creation of the system does not stop after deployment.

Interreg programmes using the system commit themselves to contribute relevant improvements to the eMS to the community of programmes using eMS, creating a snowball effect that multiplies benefits for everyone. For example, one programme plans to develop online tools for project ideas, partner searches and a function for displaying cooperation projects and outputs on geographic maps. These features will be

added to the core eMS and made available to any programme that wants to use them. It is easy to see that overtime the eMS will grow to become the best monitoring system within the realm of Structural Funds as it continues to incorporate functionalities. This is the central argument for cooperation: the co-creation of the eMS will lead to a tool that no programme could ever have developed on its own.

The workflow

Data in eMS are structured in several layers of information and follows a strict workflow. Some steps in the workflow are mandatory; others can be switched on and off via configuration or options in the calls. Forms and user interfaces in the system can only be accessed with corresponding user rights and privileges. Interact provides a default configuration for the main stakeholders of the system (types of users). These configurations can be changed by Interreg programmes and allow them to configure user rights according to their organisation and division of tasks.

The following elements are part of the standard work flow:

1. **Enter programme data (information from Cooperation Programme)**
   This section contains the basic information of the Interreg programme using the software. It is the information from the document called "Cooperation Programme", which is approved by the European Commission.
   This section needs to be filled out once and contains the most basic layer of information in the application. Basic information on programme area (eligible NUTS regions that a programme covers), priority axis, co-financing rates, programme financial allocations, indicators, etc. are stored here. These data are the basis for all future steps in the workflow. This task is usually done by an administrator of the system.

2. **Management of calls**
   Interreg programmes finance projects based on application forms submitted within a defined timeslot and conditions. These timeslots are calls for proposals. Each call has a start and end date which determines the start and deadline for submitting applications. In the eMS, each call can contain different configurations ('call options'), which change the application form visible to applicants. One Interreg programme can announce an unlimited number of calls throughout the programme lifecycle.
   The conditions applying to each call for proposals are usually approved by the Monitoring Committee and configured in the system by the system administrator.

3. **Application Form**
   Any person intending to submit an application within an open call for applications can register a user and fill out the application form directly in the eMS. It is possible to submit applications only within the timeslot and conditions defined in the call for applications. A user who first created an application is treated by the system as a lead user and can provide other users with read - or read/write access to the application form. The lead applicant is the only user who can submit the application.

4. **Assessment**

All submitted applications need to go through a two-step assessment. The eMS contains a sequence of two checklists: "Admin- & Eligibility check" and "Quality Assessment". Assessment of Applications is usually managed by the JS in cooperation with national contact points and/or external experts. The eMs supports 4-eye principle for the assessment and allows assigning specific applications and questions to specific users such as external experts.

5. **Recommendation**

The outcome of the assessment is a recommendation by the assessors to the Monitoring Committee. The project can be recommended for funding, not recommended or recommended under conditions. Recommendations to the MC are usually managed by the JS.

6. **Funding decision (Monitoring Committee)**

The Monitoring Committee decides which projects are approved by the programme or approved under conditions. The decision of the MC and its date need to be inserted into the system, which is usually a task of the JS.
All projects which are approved under conditions need to go through a condition fulfilment procedure, which is, in practice, a modification of the application form based on some clear recommendations of the MC. Modifications are then verified by the JS, which subsequently changes the project status into approved or not approved.
All projects which are not approved are archived in the system.

7. **Handover and supplementary information**

After the project is approved and before it can be contracted, the lead applicant needs to appoint an eMS user who will be the lead partner for the project. The JS checks the proposed user and approves or rejects the proposed lead partner. In case of rejection, the lead applicant needs to propose another user. This process is called handover in the eMS and can be switched off if not needed by the programme.

Additionally, some important information on project management structure and e.g. bank account are ready to be filled out at this stage in the section entitled 'supplementary information'. This section is available from the moment of approval on but is not necessary a step in the workflow, i.e. if not filled out one may still continue the contracting process. There are many tabs in the 'supplementary information' section all of which can be accessed by users with the corresponding user rights (read/write)

8. **Subsidy contract**

The system supports the generation of a Subsidy Contract. It is template-based and uses data from the approved application form. The template for the subsidy contract is programme-specific and can be adjusted by programmes. Please note that some IT expertise is necessary to adjust templates in the eMS The Subsidy Contract –once generated - can be edited (if necessary) and then printed (downloaded as pdf document). Once the Subsidy Contract is marked as approved (eg by the JS), the system changes the status of a project into 'contracted' and allows for partner and project reporting. Basic data on the Subsidy Contract and all its amendments as well as the documents themselves are stored in the eMS in the section 'project history'.

9. **Partner reporting**

   Once the project is contracted, it enters the reporting phase, which will last until the project is finalised. Each project partner needs to report its activities and expenditure in a partner report. In order to do so, the Lead Partner needs to allocate at least one user per project partner. Thereafter, partners can fill out their reports and submit them to their national controllers (FLC).

10. **FLC**

    First level Controllers are national controllers who need to check every partner's report. They have access to the eMS and see the relevant information. They have their working documents available in the system and can do the verification work online. As a result of the FLC check, an FLC certificate is generated and approved by the controller. The eMS also generates an FLC report which contains more detailed information on the FLC work as well as the FLC checklists. After FLC verification, the partner report is forwarded to the Lead Partner.

11. **Project reporting**

    The Lead Partner collects all FLC certified partner reports (including its own) and creates a project report. The Lead Partner decides on which FLC certificates to include in the project report. The LP has the right to exclude partner reports from the project report and to reject expenditure approved by the FLC. As soon as the project report is ready, it is submitted to the JS.

12. **JS verification**

    The JS receives a project report and verifies it accordingly; It has the possibility to make positive or negative corrections to individual expenditure items. Once approved, the report is submitted to the MA.

13. **MA verification**

    MA receives a project report and verifies it accordingly; Also MA has the possibility to make positive or negative corrections to individual expenditure items. Once approved, the report is then submitted to the CA.

14. **CA verification**

    CA verifies the report. Unlike JS and MA, CA can deduct some expenditure or exclude temporarily for further verification) and includes the report in the CA certificate. Once included in the certificate, the report may be paid.

15. **Payment**

    CA performs the payment to the Lead Partner outside of the system and records date and amount paid. The payment can be done in full or in instalments.

16. **CA reporting**

    CA is responsible for several reports to the European Commission. The eMS allows for inclusion of the CA certificates into the application for payment to the European Commission as well as annual accounts. eMS also allows for generation of the accounts for the accounting periods.

    It is also possible to generate programme annual reports and financial statistics, which are required by the regulatory framework.

Horizontal functionalities (not part of the standard workflow)

- **Modifications**

  It must be possible to manage project modifications throughout the project lifecycle. The system allows the JS and the Lead Partner to initiate project modifications. The JS is allowed to initiate modifications at all times and the LP only after the project is in the status 'contracted'. Once the modification is initiated and allowed by the JS, the LP can modify the application form. All modifications need to be verified and approved by the JS and/or the Monitoring Committee. After the modification is approved, a new version of the application form, which becomes the new valid application form. All the previous versions are stored and are accessible at all times in the project history section.

- **Automatic messages**

  The eMS automatically can send messages to different registered stakeholders. Mostly this feature is implemented for status changes (like approval of a project).

Technical requirements for the productive environment

Hardware specifications

The following hardware specifications were used during the procurement of the eMS. The development company guarantees the functionality and performance of the eMS on these specifications.

Interreg programmes can decide to reduce the hardware. Any resulting performance problems are not covered by the guarantee of the service provider.

The eMS can run on virtualised environments. Virtualised environments allow more flexibility, for example it is technically easier to increase the hardware at a later point in time.

Software	50 Sessions	100 Sessions
Apache HTTP Server	4 GB RAM/1 Core	8 GB RAM/1Core
Apache Tomcat (Java Application)	12 GB RAM/2 Cores	24 GB RAM/4 Cores
Mysql Database	16 GB RAM/4 Cores	32 GB RAM/4 Cores
Total	32 GB RAM/7 Cores	64 GB RAM/9 Cores

Operating System and Standard Software

To get the most stable but freely available system, Interact has decided to use CentOS as the operating system for eMS. CentOS offers full updates for the operating system until Q4 2020. Maintenance updates are available until June 2024 (http://wiki.centos.org/About/Product).

- CentOS 7
- Oracle JDK 1.7
- Apache HTTP Server 2.4
- Apache Tomcat 7
- Mariadb

Optional: Apache ActiveMQ 5 (only needed, if there are two parallel Tomcat instances on one machine)

> **Note**
> Multiple parallel instances of the tomcat application server are recommended for all programmes, especially for large ones. Please keep in mind – all technical users on the system count as users, be it applicants or backend-users like JS/MA/CA authorities.

Maintenance for Hardware, Operating System, Standard Software, Certificates

The company providing the hardware (or virtual environment) often provides maintenance for hardware, operating system and software. To ensure the uptime of their server, they often monitor the server itself. In this case, they are responsible for security updates, detection of special hacking attacks (like DDos-Attacks) etc. They usually offer only services for their standard software and do not provide services for the application itself.

For using encrypted connections to the eMS, the use of HTTPS is strongly recommended. For such an encryption, the use of a trusted SSL-Certificate is advisable, which can usually be ordered and maintained by the same company.

A good back-up of the system is very important. Normally this is done by the company providing the server and should be part of the "service level agreement" (SLA).

Installation and Setup of the eMS

Some companies providing server-services, like the ones mentioned above, also provide installation, setup and monitoring of the application and possible updates of the application itself while others just run the server and the operating system.

Some Interreg programmes can order such services within their own organisation and do not need to procure them separately.

It is recommended to find a person (e.g. own administrator or IT Manager) who will take care of updating and maintaining the application itself.

Interact offers set-up support to individual Programmes. This setup support could be in form of one training session or in for of a support during setup of the system. The installation of the environment has to be done by your IT administrator.

In case of difficulties, our IT company PL.O.T. offers support in this matter especially in the configuration and setup of the software. You can find more details about this in the "eMS set-up support" thread in the Interact Observers group forum on basecamp.

Testing Environment

It is recommended to run a second installation of eMS for software and configuration testing.

This environment can run on very limited hardware, since it is only used by the administrator in order to test the configurations and the system.

The test-system could be included into the procurement for maintenance to ask the maintenance providing company to run a very small environment to see and test bug fixes and new features before installing them on a productive environment.

Productive Environment

The experience of Programmes already using the eMS shows that an installation with two parallel tomcat instances can handle up to 200 users at the same time and in case of more parallel sessions, it might experience performance issues. All users, including programme bodies (not only applicants), are covered by this number.

To avoid any performance problems, we recommend to change the server settings at least during the peak periods, like in the end of the call for proposals. After about 200 sessions on Apache Tomcat and a heap size of 2GB for this process, problems with garbage collection appear. It is strongly recommended to add parallel application server instances to avoid performance risks.

Please check out the chapter about performance fine-tuning as well.

Modification, plug-ins, personalisation

Independently from running the software on a server, the software can be modified by a software development company. Usually companies developing software do not run the software and vice versa. Therefore, it is often necessary to order further developments from a different company than the one running the system. Software development could be carried out at an hourly rate or at a total price for a needed functionality.

Which tools are needed for the user of eMS?

eMS is a web application and can therefore be used with any up-to-date web browser like Internet Explorer, Firefox, Chrome or Safari. For technical reasons, eMS only supports the latest version of these browsers and one version before.

Installation of eMS

General remarks

eMS is a Java web application, which has been tested by Interact on the following technologies:

- CentOS 7
- Oracle JDK v. 1.7
- Mariadb
- Apache Tomcat
- Apache WS
- Apache Activemq 5.10

Java is a platform-independent technology. Interact recommends to use the approved and tested software configuration.

Setup support

Please get in touch with Interact to receive information on setup support.

Before installation

eMS is a highly configurable software. Parts of the flexibility are reflected in the User interface of the application; other parts need to be adapted in a special part of the setup script. The following points need to be specified by the ETC Programme before installing eMS:

1. Which languages are used? Which ones are used as input languages, which ones are used as user interface languages?
2. How many parallel installations of eMS are running on one server/machine/vm? If there is more than one eMS instance necessary, the installation of Apache Activemq is required.
3. Which funds are used? Since version 3_0.1 custom funds can be defined in the database.

Interact can provide an up-to-date manual for installing eMS on your system. Please get in touch with us or download the latest version in our forum on basecamp.

There are already translations of the user interface available for several languages. Please get in touch with Interact to receive the latest updated versions.

Installation of eMS

During installation of eMS, several modifications have to be applied to the installation files. For an initial installation the main topics are:

- Languages used in eMS (as content or as user interface translations)
- Translations of certain elements can only be carried out in the database
- Co-financing rates for NUTS regions can only be changed in the database

To install eMS, the following steps are needed (overview):

1. Install needed software landscape (operating system, application server, etc.)
2. Copy configuration files to server
3. Adapt paths in configuration files
4. Modify customizable sql-insert-script
5. Create database user and schema
6. Create database tables
7. Insert not-modifiable part of insert script
8. Insert customized sql-insert-script
9. (Optional) insert custom funds
10. Set environment variable EMS_HOME, pointing to configuration directory
11. Customization of programme logo in war file
12. Installation of war file in webserver

The following points are optional, but might be needed by many programmes:

13. Adaptation and configuration of templates for pdf extraction of different forms
14. Implementation and configuration of validation plugins
15. Import of translations

FAQ on installation

1. *When using only one instance, the server shows an error output at startup:*

   org.apache.velocity.exception.VelocityException: Error initializing log: Failed to initialize an instance of org.apache.velocity.runtime.log.Log4JLogChute with the current runtime configuration….

   Caused by: java.io.FileNotFoundException: velocity.log (Keine Berechtigung)

   The problem arises when using the system to start a tomcat instance. It is by default using the root folder as current or working directory and velocity tries to write the log to the current directory. Please put in value like "WorkingDirectory=/opt/tomcat/logs" in the tomcat7.service file and make the directory writable for the user running the server.

2. *After installation, the styling looks weird (see attached screenshot).*

   The configuration for the styling in TOMCAT_HOME/conf/web.xml is missing. Please add the needed context parameter.

Custom funds

This functionality is only needed by Programmes having different funds than:

- ERDF
- IPAII
- ENI
- ERDF equivalent

or by Programmes who want to rename one of them (e.g. the ERDF equivalent fund).

By default, the above mentioned funds are available in eMS. With this manual, Programmes can add additional funds. Please note: the changes have to be done directly in the relational database of eMS. Therefore, the changes have to be done by a technical administrator.

Fund database table

For historical technical reasons eMS contains two tables, both containing funds:

- fund
- cofinancingsource

Attention!
For technical reasons both tables need to be filled. The "id" of the co-financing source should be equal to the name of the "fund"-element.

Remarks:

There are two flags and one "order" field, which should be set:

- is_equivalent: (please set this to "1" if the fund should be treated in the system as ERDF equivalent
- is_erdf: This should be set only for the ERDF. Please put additional funds to "0"
- order: Please put a number, which follows the maximum number currently available in the funds. This number is used for sorting of Funds in the user interface.

To translate funds please use the fund_mlc table in the database

id	name	is_equivalent	order	is_erdf
1	ERDF	0	1	1
2	IPAII	0	3	0
3	ENI	0	4	0
4	ERDFe	1	2	0
5	MyFund	1	5	0

Table 1: Example of "fund" table in technical database

id	cofinancingsource	is_equivalent	order	is_erdf
ERDF	ERDF	0	1	1
IPAII	IPAII	0	3	0
ENI	ENI	0	4	0
ERDFe	ERDF equivalent	1	2	0
MyFund	My custom fund	1	5	0

Table 2: Example of "cofinancingsource" table in technical database

Fund_id	Language	label
ERDF	EN	ERDF
IPAII	DE	EFRE

Table 3: Example of fund translation in "fund_mlc" table

User roles

The eMS enables managing roles and rights based on privileges. It means that certain functionalities are available only for certain users.

Every feature is dependent on a corresponding privilege. A privilege is directly assigned to the function/workflow.

User role represents a set of privileges and can be assigned to a user.

How to manage roles

Needed user rights / privileges

The user who wants to manage the roles must have the "MG_ROLES" or the "ADMIN" privilege.

How to enter Managing Roles & Privileges

After logging in as "ADMIN", you can enter the "Roles & Privileges" section by clicking on the left side menu item "Manage Roles".

Figure 1 Manage Roles menu item

After entering the section, list of roles is displayed.

Figure 2 List of roles

After a specific role is selected, the privileges can be added or removed. Privileges can allow or deny the role to perform the selected action. A denial overrules a permission of the privilege. So, if a user has more roles, and an action is permitted in one role, and denied in another role, the user will not be able to perform the action.

Figure 3 Adding and removing the privileges

User management

Needed user rights / privileges

The user who wants to manage this section must have the "MG_USERS" or the "ADMIN" privilege.

How to enter Managing Users

After logging in as "ADMIN", you can enter the "Manage Users" section by clicking on the left side menu item "Manage Users".

Figure 4 Manage Users menu item

After entering the section, the list of users is displayed.

Figure 5 List of users

After a specific user is selected, the roles can be assigned. More roles can be assigned to a user. However, if a user has more roles, and an action is permitted in one role, and denied in another role, the user will not be able to perform the action, as the denying the privilege overrules its permission.

Message Portal

eMS allows users to exchange messages within the system.

Message exchange

Needed user rights / privileges

For sending or receiving messages in eMS, no special user rights are needed. Any registered user can send and receive messages.

Figure 6: Mail sending dialog

Messaging

eMS supports standard mailing functions such as sending, forwarding and replying the mails. It enables sending messages to multiple recipients as well as sorting and filtering messages based on different criteria.

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Messaging out of project view

It is now possible to send messages to the users assigned to a project.

Role In The Project	Username	Send Message
Flc 1	FLC1	✉
Flc 2	FLC1	✉
Lead Applicant	applicant1	✉
Lead Partner	applicant1	✉
Project Partner 1	applicant1	✉
Project Partner 2	applicant1	✉

Project Contacts ✖

Figure 7: Project contacts

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Application Form

Most of the forms in the application form are mostly self-explaining. We want to highlight only a few special forms and describe the implemented functionalities.

Calculation of the maximum co-financing rate

eMS calculates a maximum co-financing rate per partner, taking into account several different configured co-financing rates. Some of the percentage values (like different co-financing rates per NUTS region) can only be changed in the technical database.

Configuration can only be done on Programme level. Exact co-financing rate is stored by partner, therefore a later change of the configured percentages does not affect already created application forms – it only changes the maximum co-financing rate for new projects.

The algorithm always takes the lowest amount out of several configured co-financing rates.

Co-financing per NUTS region
- Each NUTS 0 region must have a co-financing rate (e.g. 85%).
- Other NUTS levels could have a co-financing rate configured
- Take the most precice co-financing rate from the NUTS regions, where there is a co-financing rate configured.

Priority axes per Fund
- Each combination of priority axes and fund needs to have a co-financing rate configured
- Compare this co-financing rate to the one from NUTS
- Take the lower value

General block excemption for SMEs
- **OPTIONAL:** Only applies, if option "*Generalblockexemptionforsme*" is ticked in the call
- If organization is an SME (by selecting "Yes" in the related dropdown of the application form - co-financing rate is lowered to 50%

Call specific co-financing rate (call configuration)

In eMS version 3_3.1 a new call option 'call-specific co-financing rate per priority and fund' was introduced. It overrules all other rules of calculating maximum co-financing rate for partner.

Figure 8 Call option - use call specific co-financing rate per priority and fund

When activated, the user needs to fill out the co-financing rate table per priority and fund.

Figure 9 Inserting co-financing rates per priority and fund

Only values inserted in this table are taken into account. If some fields remain unchanged, the system will use usual way of calculating max. co-financing rate for those priorities and/or funds.

It is possible to take the NUTS regions maximum co-financing rates configuration into account.

Figure 10 Taking NUTS co-financing rate into account

In such a case, the system will calculate maximum co-financing rate based on the data per fund/priority and NUTS configuration. If e.g. programme sets the co-financing rate for Priority 1 fund ERDF to 80% and decides to take the NUTS configuration into account for NUTS where maximum co-financing rate is 85% the calculated rate will be 80% and for those with 75%, the 75% will be used.

This configuration influences only co-financing rate allocated to project partners. It is not taken into account when calculating co-financing rate per priority axis and fund in the CA module.

Periods

Defined periods are a prerequisite of successful checking and submitting the AF. Periods can be set in the Application Form ->Work Plan -> Define Periods section.

Depending on the call configuration, periods might be either generated automatically (based on a plugin) or inserted manually by an applicant.

Applicants need to be very cautious about changing the Start / End date of a project, as this change needs to be reflected also in the period definition. Therefore, it is recommended to "Recreate periods" or manually adjust the periods in the "Define periods" section after every change in these dates.

Budget

Budget belongs to the most important parts of the Application Form. Budget needs to be inserted per partner. Therefore, partner information in the "Partner" section needs to be inserted before Budget can be defined.

Partner Budget is usually inserted per Work package or per period. Hence, this information should be also included before filling in the budget. If other order of filling in the AF is applied, you need to be aware, that new cells in the budget will be created with an automatic value (0€) for the additional period/Work package.

The individual budget items can be inserted in the Project Budget -> Partner Budget -> Define Budget section.

Flat rates

Besides calculating using real expenditures, flat rates can be used for calculating certain budget items, particularly for Staff costs ad Office & Administration costs.

Office & Administration costs are calculated as a percentage of Staff costs.

Staff costs (if flatrated) are calculated as a percentage of a sum of expenditures used for all the items but Office & Administration and Net Revenues.

If a value in any cost is changed / added by the applicant, it is better to click the "recalculate" button.

When applying Flat rates, it is important to bear in mind that all the previously inserted sums in Staff costs and O&A Costs will be replaced by the calculated (flatrated) costs.

Partner contributions

Every partner must define the intended source and amount of the (national) contribution (i.e. national funding to match ERDF, IPAII, etc.).

Figure 11 Clicking 'define contributions' leads to the interface for defining contributions

The eMS assumes that own contributions always are either public or private depending on the legal status of the project partner. Every partner needs to have own contribution.

Own contributions of public partners are considered 'public'. Own contributions of private partners are considered 'private'.

Every partner can have an unlimited number of additional contributions sources. Additional contributions can be either public or private.

To add additional contributions, partners must tick the plus icon on the upper right corner (see below). Then enter the source of the contribution and the legal status as public or private contribution.

Figure 12 Contributions can either be public or private

Automatic public contribution

Automatic public contribution is a programme option, which can be set in the Manage programme section. It means that a country, fund, etc. is automatically providing the contribution in case a project is approved.   One example would be the rotation fund in Italy in previous years, which guaranteed national contribution for approved projects.

Many programmes do NOT have any automatic public contributions in their territory. If there is no country in your programme area that automatically provide contributions to ERDF, you may want to consider turning off 'automatic contribution' as it does provide no added value and makes overview tables more complicated.

Figure 13 If your programme has automatic contributions you can turn on this options in the Manage Programme sections

If 'automatic public contributions' are possible, then they appear in the drop-down as well:

Figure 14 A programme allowing automatic public contribution

Submission without check

In certain cases, it is necessary to grant an exception and to allow an applicant to submit the Application Form even if not all the requirements to check successfully have been met. These cases need to be managed individually.

In such a case, a JTS user needs to open the project. The project even if not submitted can be found using the Application Browser.

Figure 15 Allow Submit Without Check, Set Project State To Checked

After entering the project, in the left side menu -> Management, you can click either "Set Project State To Checked" or "Allow Submit Without Check". These settings might be applied only on a particular project, not on multiple projects at once or on the whole call.

Attachment upload

After entering the project as JTS, in the left side menu -> Management, you can also see the item "Attachment upload allowed".

Figure 16 Attachment upload allowed

- AF non-submitted: Using this button for a non-submitted (saved) project, you can prevent the applicant from uploading attachments.

- AF submitted: Using this button for a submitted project, you can enable the applicant to attach additional documents to an already closed (submitted) Application Form.

These settings might be applied only on a particular project, not on multiple projects at once or on the whole call.

Attachment JS

- AF submitted: As a part of evaluation, JTS user may add an attachment to a submitted project by clicking the "Attachment JTS" in the upper menu bar.

- AF non-submitted: Additionally, JTS user has also the possibility to add an attachment to a non-submitted project (only saved). In this case, the JTS user needs to find a project in the Browser, and enter the left side menu -> Management section. Clicking the "Attachment JS" item creates the "Attachment JS" section in the upper menu and redirects user to this section. Here, the attachments can be added.

Figure 17 Attachments JS

Documents

Templates for Pdf creation might be selected in the Documents section of the JTS view.

Figure 18 Documents

After entering the project as JTS, in the left side menu -> Management, "Documents" item needs to be selected in order to get redirected to this section.

Project result indicator

The "project result indicator" section can be turned on in the call configuration via the configuration "Use Project result indicators". This feature was contributed by the Central Europe Programme.

If turned on, a section "project result indicator" is visible in the menu of the application form.

Figure 19 Project result indicator menu entry

To use this section, you need to introduce customized values into your technical database.

```
INSERT INTO `project_result_indicator_measurement_unit` (`id`,`label`) VALUES (1,'Institutions');
INSERT INTO `project_result_indicator_measurement_unit` (`id`,`label`) VALUES (2,'EUR');
INSERT INTO `project_result_indicator_measurement_unit` (`id`,`label`) VALUES (3,'FTE');
INSERT INTO `project_result_indicator_measurement_unit` (`id`,`label`) VALUES (4,'Persons');
INSERT INTO `project_result_indicator_measurement_unit` (`id`,`label`) VALUES (5,'Number of stakeholders
reached');
INSERT INTO `project_result_indicator_measurement_unit` (`id`,`label`) VALUES (6,'Percentage of stakeholders
satisfied');
INSERT INTO `project_result_indicator_measurement_unit` (`id`,`label`) VALUES (7,'Number of communication
activities');

INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (1,1,'Visits to the project
website',5);
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (2,1,'Participants at
project events',5);
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (3,1,'Event participants
satisfied with information provided',6);
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (4,1,'Joint
communication activities implemented with external stakeholders',7);
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (5,0,'Number of
institutions adopting new and/or improved  strategies and action plans',1);
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (6,0,'Number of
institutions applying new and/or improved tools and services',1);
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (7,0,'Amount of funds
leveraged based on project achievements ',2);
```

```
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (8,0,'Number of jobs
created (FTE) based on project achievements ',3);
INSERT INTO `project_result_indicators`
(`id`,`communicative`,`label`,`project_result_indicator_measurement_unit_id`) VALUES (9,0,'Number of trained
persons',4);
```

Figure 20 Central Europe - project result indicators

Please customize this insert script to your needs.

If the values are available in the technical database, the following section appears in the application form.

Figure 21 Project result indicators section

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Output indicators of other specific objectives

eMS by default allows to select output indicators of one specific objective only. Programmes might allow the selection of output indicators form other specific objectives of the same priority axes.

Programmes can allow this selection by selecting the following option in the call management:

"Allow also Output indicators from other Specific Objectives of the selected Priority axes"

If this option is active, the eMS shows a "Show more" button in the "main outputs" section of an "implementation" or "investment" workpackage.

Figure 22 Show more button for additional output indicators

By clicking this button all output indicators of the given priority axes can be selected.

Figure 23 Adding output indicators of other specific objectives to the selection

By selecting elements in the dialog, they become selectable in the dropdown.

Figure 24 Additional output indicators are selectable in dropdown

Additional text fields

eMS allows to add additional text fields to many sections of the application form.

The configuration can be done either globally by adding text fields, which will then be visible in all calls, or by adding call specific text fields.

The global configuration is done in the section "Configure eMS".

Figure 25 Global configuration for additional text fields

The configuration for call specific text fields can be done in the call specific translation tree (in the call management – "Manage Multilanguage for call").

Figure 26 Call specific configuration for additional text fields

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Bookmarking projects

Every user is able to bookmark a project, i.e. mark it for easier and quicker access.

How to bookmark a project

Projects can be bookmarked by clicking on the corresponding item on the left side menu in an opened application form. The same applies for removing a bookmark.

Figure 27 Bookmarking and Unbookmarking Projects

Browsing bookmarked projects

Bookmarked projects can be accessed by clicking the corresponding item on the left side menu of the main page.

Figure 28 Bookmarked Applications

A list of the bookmarked projects will appear.

Figure 29 Browsing the Bookmarked Projects

Project Idea

This module serves for posting and sharing project ideas with the purpose of finding partners or provide inspiration for others.

How to insert a project idea

Needed user rights / privileges

In general, all the users could be able to see and share project ideas. However, they need to be assigned the following privileges:

- For viewing the list of project ideas, privilege SHOW_PROJECT_IDEAS is required.

- The user who wants to post a new idea needs to be assigned the privilege CREATE_PROJECT_IDEAS.

Inserting Project Ideas

For viewing project ideas, you need to navigate to the left-side menu section "Project Idea".

Figure 30 Project idea menu item

After selecting the "Project Idea" menu item you will be redirected to the Project Idea Overview where you can see other ideas and also insert your own ideas.

Figure 31 Project Idea Overview

When creating new project ideas you can fill in the name and description, specify whether you are looking for partner, describe partners and potential partners, etc.

INTERact

Creating a project

Based on the idea, you can easily create a project by clicking the "Create Project" button at the bottom of the Project Idea page.

Figure 32 Creating a project from a project idea

Afterwards, you are only required to select a call and all the information (including details on partners) previously saved as project idea will be directly copied into the new project.

Searching for partners

If the checkboxes "Publicated" and "Partners Needed" are ticked, the Programme can publish the provided information on its website to allow potential partners to search.

There is currently no possibility in eMS to directly search for potential projects. A link to an external website has to be implemented by the programme.

Figure 33 Searching for partners

Checklists

How to create and manage a checklist

Needed user rights / privileges

The user who wants to manage the checklists must have the following three privileges or the "ADMIN" privilege.

- to manage calls ("SHOW_CALLS", "MG_CALLS")

- to manage user roles ("MG_ROLES")

- to manage checklists ("MG_CHECKLIST")

How to create a checklist

A checklist can be created in the section "Manage Checklists" by clicking the "Create Checklist" button. This will create a new checklist initially containing no questions. When creating the checklist you have to provide a name and a type.

These types define at which step in the workflow the checklist will be available (e.g. evaluation of first step, eligibility check).

Currently (in version 3_4.1a) the following types are available:

Type	Description
Phase 1 Eligibility	Admin and eligibility check of the first step in a two-step procedure
Phase 1 Evaluation	Quality assessment of the first step in a two-step procedure. Follows "Phase 1 Eligibility" in the workflow.
Eligibility Check	Either - Admin and eligibility check of the second step in a two-step procedure - Admin and eligibility check in a one-step procedure
Project Evaluation	Either - Quality assessment of the second step in a two-step procedure - Quality assessment in a one-step procedure
Contracting Check	Contracting checklist, available from project approval until contracting. Available only if enabled in the call.
First Level Control Check	FLC checklist, linked to each partner progress report.
JTS Progress Report Check	JTS checklist, linked to each project progress report.
Inherent Risk	FLC assessment, linked to each partner progress report.
Control Risk	FLC assessment, linked to each partner progress report.
MA	MA checklist, linked to each project progress report.
CA	CA checklist, linked to each project progress report.

It is possible to create several checklists of the same type.

How to link a checklist to a call

Checklists are at first independent objects which are not linked to any call. Now, we have to establish the link between the checklists and the calls. Checklists could be used in no, one or several calls.

Checklists do not have to be in place, when the call is launched for applicants, but they have to be in place the first time they are used. For example, for "Phase 1 Evaluation" checklists this means, the configuration has to be finished once you start evaluating projects in Phase 1.

To establish the link, we have to enter the management of the call again. This is carried out in the "Calls" section. At the bottom of the call configuration, there is a section called "Checklist Selection". Here you can choose which checklists should be used in this call.

If you use a two-step call, you need to register a checklist of type "Phase 1 Evaluation".

There are HIT-Templates available for "Eligibility check" and "Project Evaluation".

You can select for a given type, one or several checklists or no checklist. If you use none, the section later on will contain no questions. If you select one, during the evaluation, only the questions from this checklist will be displayed. Choosing several checklists will show the checklists one after the other in the evaluation.

How to manage the user rights for a checklist

Different checklists could be answered by different user groups. Therefore, the checklist must be linked to one or more user groups.

To cover this feature, in addition to creating the checklist, the eMS creates a user privilege to access this checklist. The name of the user privilege follows the pattern "CHECKLIST_*NAME_OF_THE_CHECKLIST_id*". If you create your first checklist and name it for example "*Formal and eligibility check*", the corresponding user privilege is called "CHECKLIST_FORMAL_AND_ELIGIBILITY_CHECK_1".

To allow for example your JTS to answer this checklist, you have to go to the "Manage Roles" section and assign this privilege to the user role.

It is possible to assign either Read/Write or Read only rights for each checklist.

Question types

In the "Manage checklists" section, you can click on the most right icon "Show questions" to see the questions attached to one checklist.

In eMS, each question could be answered with a different type of answer.

Currently the following answer types are available:

Answer type	Used component	Description
Textinput – no calculation		this question has to be answered by writing text
Yes-No	Yes No	Can be answered only by putting yes, or no.
Star-rating	⭐⭐⭐⭐	For putting numeric values (equal to slider)
Slider	6	For putting numeric values (equal to rating)
Label – no calculation	This is my text	Only text output, no input
Yes-No-Not Applicable	Yes No Not Applicable	Three states: Yes, No, Non applicable
Number – 0,5 Steps	1.5	A control where numbers can be entered (limited to steps of 0.5)

Weighting of questions and checklists

Next to the question type, each question can be configured individually. Dependent on the type of question, only some configurations are taken into account by the software.

All questions take the verification configuration into account. Here you can choose how many different users have to answer this question.

Textinput – no calculation: uses only the verification configuration

Star-Rating & Slider: verification, min, max, steps, weight

> The configuration of min configures the minimum value available, maximum defines the maximum value. The steps define the granularity of the steps in between:

- min = 1, max = 10, steps= 1 would make 10 stars, where each is selectable.
- min=0, max=10, steps=2 would make 5 stars, each counting for two points
- min=0, max=10, steps=5 would make 2 stars, each counting for five points

Weight	Min	Max	Steps	Score	Evaluated Result
0					0
15	1	5	5	2	**10**
100	0	10	1	7	**70**
100	0	10	2	2	**20**
100	0	10	5	5	**50**

The **weight** defines how this question is weighted to the total evaluated result of the checklist. It represents the importance of the question with regard to the total evaluation. The weight defines the **maximum value**, which can be achieved by putting the maximum number of points.

Only the weight goes into the total. The evaluated result is defined by the weight and the reached points.

- weight=0: this question will not go into the final result
- weight=1: this question has a weight of 1, both the reached points go into the sum of reached points, maximum 1 point (or accordingly less) goes into the total
- weight=10: same as weight=1, maximum 10 points go into the total
- weight=100: same as weight=1, maximum 100 points go into the total

There is no limit how to set the min, max or the weight or the steps. Dependent on your decision, you are free to put any configuration you want.

Yes-No: verification, min, max, weight

Weight	Value	Evaluated Result
0		0
1	Yes	**1**
1	No	**0**
100	Yes	**100**
100	No	**0**

Table 4 Yes-No

Yes-No-Not Applicable: verification, min, max, weight

Weight	Value	Evaluated Result	Amount going into total
0		0	0
1	Yes	**1**	**1**
1	No	**0**	**1**
1	Not applicable	**0**	**0**
100	Yes	**100**	**100**
100	No	**0**	**100**
100	Not applicable	**0**	**0**

Table 5 Yes-No-Not applicable

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Figure 34 Example of a filled out checklist

Sorting of questions in a checklist

In Figure 1 you can see a list of questions. On the left of each question, there is a small icon. With drag and drop you can rearrange the ordering of questions within a checklist.

How to use a checklist

As previously stated, the different checklists are available in different steps in the workflow. For example, a checklist of type "Phase 1 Evaluation" is available in these calls after the submission of the project whereas a checklist of type "Eligibility Check" is available later on in the workflow.

In an opened project, the individual checklists appear as separate menu items (see Figure 2).

User privileges needed for checklist evaluation:

- EVALUATE_PROJECT_PHASE1
- EVALUATE_PROJECT
- SUBMIT_EVALUATION
- ELIBILITY_CHECK
- ELIGIBILITY_CHECK_SUBMIT

After evaluating a question, the "DONE" checkbox needs to be clicked. This action is necessary for each question.

It will make this answer available in the further step where the different given answers are displayed and combined to a final result.

Figure 35 Eligibility check menu item

Figure 36 Form to answer the questions

Marking Question as Blocker

Certain questions can be marked as "Blocker". This configuration can only be applied to "yes-no"-questions. If one of the marked questions is answered with "no" the whole checklists total evaluated result will go to 0.

Figure 37: Blocker icon

Remark: the "blocker" feature does not block the user from finishing the final check. It does not have influence on the workflow. It is the user's decision what to do, if a checklist contains a negatively answered blocker.

Consolidation of the given answers – Final Check

After each question has been answered by all evaluators, the given answers have to be combined. This can be done by a user having the privilege "EVALUATION_CONSOLIDATE".

Here the user can see the given answers (in the light rows) and assign a final result.

Again, the user has to confirm completed evaluation by checking the checkbox on the right.

After all questions have been answered by all evaluators and are treated in the consolidation view (and after saving), a button appears to finish the answering of this checklist.

Figure 38 Final check

Asking for another opinion

In the final check, eMS allows to ask users for their opinion. This can be carried out clicking the "Add Answer" button. Here you can select the question (and which of the duplicates in case the checklist is duplicated by any of the users) to be asked and a user required to answer this question.

Checklist types

There are predefined steps in the workflow of eMS, where checklists can be defined.

Type	Description
Phase 1 Eligibility	Admin and eligibility check of the first step in a two-step procedure
Phase 1 Evaluation	Quality assessment of the first step in a two-step procedure. Follows "Phase 1 Eligibility" in the workflow.
Eligibility Check	Either - Admin and eligibility check of the second step in a two-step procedure - Admin and eligibility check in a one-step procedure
Project Evaluation	Either - Quality assessment of the second step in a two-step procedure - Quality assessment in a one-step procedure
Contracting Check	Contracting checklist, available from project approval until contracting. Available only if enabled in the call.
First Level Control Check	FLC checklist, linked to each partner progress report.
JTS Progress Report Check	JTS checklist, linked to each project progress report.
Inherent Risk	FLC assessment, linked to each partner progress report.
Control Risk	FLC assessment, linked to each partner progress report.
MA	MA checklist, linked to each project progress report.
CA	CA checklist, linked to each project progress report.
Checklist type	Description
Phase 1 Eligibility Check	Only used in 2-step-call. Eligibility check of first step.
Phase 1 Evaluation	Only used in 2-step-call. Project assessment of first step.
Eligibility Check	Eligibility check (second step in 2-step call or first-and-only step in one step call)
Project Evaluation	Project assessment (second step in 2-step call or first-and-only step in one step call)
First Level Control Check	Checklist for First Level Control, can be answered for each partner report
JTS Progress Report Check	Checklist for JTS, can be answered for each project report
Inherent Risk	Checklist for FLC, linked to each partner report.
Control Risk	Checklist for FLC, linked to each partner report.
MA checklist	Checklist for the MA, linked with the project report.
CA checklist	Checklist for the CA, linked with the project report.

Reset all answers

If the configuration of a checklist is wrong, the eMS allows to reset the given checklist. Be aware: this removes all given answers and <u>sets the checklist back to the initial/empty state</u>! No answers from any user who answered this checklist for this project will be kept!

This feature can be used as well, if e.g. a wrong checklist was assigned to this call. In this case, please change the configuration in the call setup and reset all answers afterwards.

This feature is available to users, who can do the consolidation of this checklist.

Checklist export

In the consolidation view, eMS allows to export the result of an assessment. This report is template based; it can be adapted to the needs of each ETC Programme.

Before exporting/printing the extracted data to pdf, a preview mode is available, where changes in the report can be done.

Skipping consolidation

Version 3_2 of eMS contains a new functionality to skip the consolidation in checklists which need to be answered by one accessor only.

Configuration in the checklist

During the creation of a checklist, it can be marked for skipping the consolidation.

Attention

Skipping consolidation only works if all checklists assigned contain only questions with "two-eye" principle. As well all checklists assigned need to the call need to be marked to skip the consolidation.

Skipping the consolidation

After configuring the system, the user can directly finish the checklist in the answering mode. The consolidation is not visible to the user.

Figure 39: Skipping consolidation

Duplication of checklist

Startting from eMS version 3_4.1, it is possible to configure the checklist so that the user can duplicate it if needed. This functionality is mostly meant for controllers checking public procurements. In this case they usually need to fill out the same checklist as many times as many procurements are reported.

In the Manage checklists section of the eMS, the privileged user can mark checklist as duplicateable.

Figure 40 Duplicateable checklist

In order for the end user to be able to duplicate such checklist, he/she needs a privilege 'DUPLICATE_CHECKLIST'.

Such user sees then a button 'duplicate checklist' and a dropdown listing all duplicateable checklists of the view.

Figure 41 Duplication of checklist

Duplicated checklists are available for all users to fill out (in case of 4 or 6 eyes principle).

Eligibility decision, recommendation and MC decision

Eligibility decision

After the eligibility check is finalized, the JS can assign the eligibility decision. The JS can do it in a list of projects, which is accessible via the 'Eligibility decision' menu item. This list is available separately for the first and for the second step of the 2-Step call.

Figure 42 Eligibility decision menu items

The decision is introduces directly on a list of all projects. It is possible to allocate eligibility decisions for multiple projects at once. The decisions must be saved to be valid.

Figure 43 Eligibility decision

If the project gets status 'eligible' it moves to the quality assessment list. If the project is 'not eligible' it is archived and cannot be further assessed.

Recommendation

After the quality assessment if finalised, the JS needs to assign recommendations to applications before they go to the monitoring committee decision stage.

The recommendations are not binding for MC. Recommended projects can be rejected by the MC and not recommended ones approved, etc.

The recommendations are done in a list similar to the Eligibility decision (see above). The list is accessible via a 'Recommendation' menu item and is separate for the 1st and 2nd step of the 2-step call.

Figure 44 Recommendation menu items

The JS should select from the drop down the relevant recommendation. It is possible to allocate the recommendations for multiple projects at the same time. In order for the system to take the allocation, it must be saved. Once saved, the projects will disappear from the list and will move to the 'Funding decision (MC)' list.

Figure 45 First step recommendation

Needed user rights / privileges

Privilege
RECOMMENDATIONS

Monitoring Committee decision

Extraction of data for the monitoring committee meeting

eMS allows to export of data for the monitoring committee meeting to Microsoft Excel format. All data visible in the decision table are exportable.

Figure 46 Export of overview

Next to this, the system allows to generate quality assessment reports for each application individually. This report can be extracted in the consolidation view of the quality assessment. The report is template based and can therefore be adapted to the needs of the Programme.

Figure 47 Quality assessment report

Monitoring committee decision

The decision of the monitoring committee can be inserted into the eMS. Usually this is done by the JS after the meeting.

The MC decision is recorded in a list 'First step: Decision' for the 1st step of the call and 'Funding decision (MC)' for the 2nd step of the call.

Figure 48 Funding decision menu items

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Possible decisions are:

- Approved
- Approved under condition
- Reserved
- Rejected
- Postponed (Optional)

Figure 49 Funding decision

The values determine the future workflow of the applications. "Approved applications" are forwarded to the "handover" phase, "Approved under conditions" opens the modification procedure of the application form, "Reserved" puts applications on hold until further decision, "Rejected" closes the application procedure and puts projects to archive and 'Postponed' allows Beneficiaries improving the application form and re-submit with later call.

Approved under conditions

In many programmes the JS or external assessors assesses the quality of applications and note conditions which - in their view - should be fulfilled prior to funding. During the quality assessment of applications (menu item: 'Quality assessment') conditions are first noted down in a specific section of the quality assessment checklist. These conditions can be modified later (e.g. after the funding decision by the MC).

Figure 50 To add conditions to an application, the quality assessment checklist must first be finalised by pressing 'Final Check'.

Figure 51 This opens the interface for entering conditions under which the JS wishes to recommend the project for funding to the MC.

After the assessment of an application has been finalized (menu item: 'recommendation'), the JS can view again recommended conditions in a pop-up. The JS can then set the application to be 'recommended under conditions'.

Figure 52 The JS can choose to recommend applications under conditions and view conditions in a pop-up.

The final decision lies with the MC, which can decide that a project is 'Approved under conditions' (menu item: 'Funding decision (MC)'). Please note that the MC is free to take any funding decisions regardless of the recommendations by the JS. Conditions can be further edited after the MC meeting.

Figure 53 After the MC funding decision, final conditions can be further edited.

Saving the MC funding decision as 'approved under conditions' moves the application to the menu item 'approved under conditions'. The status of the application is changed to show that a modification request is in progress.

Opening the application in this view will show details of the ongoing modification request.

Figure 54 (JS view) Approving projects under conditions leads to a modification request from the programme to the LP

Attention

Please note that in the 'Modification Requests Details' view, the 'decision status' is set to 'accepted' because a modification request is initiated by the programme and therefore (i.e. by approving a project under conditions) is automatically accepted. This does not mean that the actual modification by the LP is automatically accepted. It just means that the LP can proceed to modify the application without further approvals on the side of the JS.

The LP can enter the application and will then see the same interface as the one shown above and can access conditions via the interface.

Figure 55 (LP view) Approving applications under conditions leads to a modification request from the programme to the LP and reopens the application form for editing.

The LP then modifies the application and presses 'check modification' and 'submit modification' to close the modification.

Check modification calls a validation plugin, which checks the modification according to pre-defined rules. Via this plugin programmes can e.g. monitor the flexibility rules and prevent changes which are not allowed by programme rules.

Figure 56 (LP View) To submit a modified AF, the LP must first check the modification and then press submit

The JS reviews the modified application form and sets the status to refused, accepted, or handed back.

- Refused: terminates the modification process and omits all modifications done by the LP. No new version of the AF is created. The project is rejected and archived.

- Accepted: accepts the modifications introduced by the LP and generates a new version of the AF. The project status is changed to 'approved' and the project is moved from 'approved under conditions' to the 'handover and contracting' section.

- Handed back: reopens the AF for further modifications by the LP.

Please note that it is not possible to partially accept modifications (e.g. accept those in the project summary section but not those in the budget). Modifications are instead handed back to the LP and the process is repeated until all issues are solved.

Figure 57 (LP View) The JS can decide to refuse or accept modifications or to hand them back to the LP. The compare modification functions opens the track changes functionality

NOTE:

- In order to access the messages via the 'Modification request Details' shown above, you need to click the small arrow to the right.

- In order to access the drop-down and the messages interface you need to click somewhere in the green row.

Needed user rights / privileges

Privilege
PROJECT_DECISION
APPROVE_PROJECT
APPROVE_PROJECT_PHASE1

Handover application to the lead partner

Handover application to the lead partner

Lead applicant handover to the lead partner

After a project is approved and before it can be contracted the lead applicant needs to hand the project over to the lead partner. This step in the workflow is optional and can be turned off for the entire programme (cannot be turned off for single projects) – for details please see below.

After the project is approved, the next time the lead applicant accesses the project, he/she sees a notification 'Please hand over the project to the future lead partner'. It is displayed in the upper right corner of the page.

Figure 58 Handover notification

The lead applicant needs to access the Handover menu item, by clicking on the left side on the section "lead partner".

Figure 59 lead partner menu

The lead applicant needs to indicate a user name of the future lead partner. The user needs to be already registered in the eMS. It is possible to indicate his/her own user.

Figure 60 Handover

The handover needs to be accepted by the JS, only then it is valid. If it is accepted, the project changes its state to "Startup" and the lead partner can fill out the Supplementary Information section.

Acceptance of lead partner by the JS

In order for the Handover to be valid, the JS needs to accept the proposed lead partner. Any user having a privilege 'JTS' can access the list of handed over projects waiting for approval under 'Handing Over to LP' menu item.

Figure 61 JS handover view

The JS can see who the lead applicant was and who is proposed as a lead partner user. The JS can accept or reject the lead partner.

Figure 62 Accepting the lead partner by JS

If the JS rejects the proposed lead partner, the entire Handover process needs to be repeated. The lead applicant needs to propose a different user and request approval by JS.

Figure 63 Acceptance by JS

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After acceptance the lead applicant (if not appointed a lead partner) loses access to most functionalities of the project. It only keeps read-only access to the version of the Application Form valid at the moment of Handover. The lead applicant has no access to the reporting dashboard, cannot see supplementary information and project history or modification requests.

Skipping Handover

Some Programmes want to skip the Handover as obligatory step in the workflow. It can be deactivated for the entire programme, cannot be skipped for single projects.

The configuration file "programme.properties" contains a configuration automaticHandoverToLeadPartner. If this is set to "true", the handover is skipped for the users. Technically the system automatically hands over the application form to the same user as the lead applicant.

Contracting

Logged in as "ADMIN" or as a user with the privilege "MG_CONTRACT", you can enter contracting in the section "Handover And Contracting" → "Contracting".

- ▼ Handover And Contracting
  - 🏛 Approved Projects
  - 🏛 Reserve List
  - 🏛 Handed Over To L P
  - 🏛 Contracting
  - 🏛 Contracted

Then you have to choose a project to contract by clicking on it. On the left side there will be the section "Application And Contract". By clicking on "Subsidy Contract" you will enter contracting.

- ▼ Application And Contract
  - 🖹 Subsidy Contract
  - ⓘ Supplementary Information

How to manage contracting

In "Subsidy Contract" you will see an overview of the project identification, list of partners and some important budget summary tables. You can also enter a comment in the text box and in "Body Issuing The Subsidy Contract".

It is also possible to print the subsidy contract. After clicking on "print" an html form of the contract will show up. This form can still be modified before clicking on print again

and creating the contract as pdf. 🖨 Print ⊘ Save

🖨 Print   ⊘ Save   ⊘ Approve Contract

By clicking "Approve Contract" and confirming it, the project receives the state "Contracted".

Projects which are contracted are listed in the section "Handover And Contracting" → "Contracted"

How to change/adapt the contract template

The contract template is (like any other template in eMS) based on Apache Velocity. Please check out the "Adaptations" chapter for more details.

Contracting checklist

In the eMS version 3_4.1 a contracting checklist was introduced. It is visible only for the projects that are handled in a call with call option 'Use contracting checklist' enabled and there is at least one contracting checklist allocated to the call.

Figure 64 'Use contracting checklist' call option

Figure 65 Allocation of contracting checklist to the call

It is another checklist type – for more information how to create such checklist please see chapter 'Checklists'.

The checklist needs to be allocated to the user role (typically JS) and then can be filled out.

The checklist is available in the left-side menu of a project view from the moment a project is approved and is editable until it is contracted. It needs to be finalized in order for the project to be contracted.

Figure 66 Contracting checklist

After the project is contracted, the contracting checklist can be accessed in read-only mode.

Supplementary information

Supplementary information represents a way of providing additional data by a lead partner.

How to insert supplementary information

Needed user rights / privileges

The user who wants to add supplementary information needs the privilege MG_STARTUP. The user might insert additional information after being approved as lead partner.

How to insert supplementary information

Supplementary information may be filled in by a lead partner after LP is confirmed by a JTS. For inserting supplementary information you need to navigate to the section "Application And Contract" → "Supplementary Information" in the left-side Menu.

Supplementary information enables inserting data concerning Project Management, Bank Information, FLC, User Assignment and Documents.

Figure 67 Supplementary Information

The supplementary information section is not locked. The lead partner is free to change the information at any time.

How to see and approving changes done in the supplementary information

As the lead partner is always free to change the data in the supplementary information, eMS allows seeing the changes.

In order to trace what was modified, the JTS can see in a comparing view, which elements have been changed. Changes can be confirmed by the JTS directly in the particular section.

Figure 68 Compare changes and confirm

Hiding not used forms for lead partner in supplementary information

The eMS allows to configure, if the lead partner has access to certain sections of the application form. This configuration hides the respective forms. For example this might be useful in case your programme has a centralized FLC. You might not need the FLC section then.

The configuration can be done in a configuration file "programme.properties" by setting the following configuration elements:

```
#Project Management
subLP_PM=true
#Bank Information
subLP_BI=true
#FLC Requests
subLP_FLC=true
#User Assignment
subLP_UA=true
#Documents
subLP_DC=true
```

Setting the properties to "true" makes the respective elemens visible for the lead partner, "false" hides them. All other tabs are not ment to be used by the lead partner – only privileged users should get access.

Access restrictions for privileged users

Each section in the supplementary information has read and read/write privileges, which can be assigned to user roles.

Project Management	Bank Information	FLC	State Aid	User Assignment	Outputs	Codes	Partnership Agreement	Additional Information
Procurements Above The Thresholds								

SU_AI_R	Additional Information read access
SU_AI_W	Additional Information write access
SU_BI_R	Bank information section read access
SU_BI_W	Bank information section write access
SU_FLC_R	FLC section read access
SU_FLC_W	FLC section write access
SU_OU_R	Output trail section read access
SU_OU_W	Output trail section write access
SU_PM_R	Project management section read access
SU_PM_W	Project management section write access
SU_SA_R	State aid section read access
SU_SA_W	State aid section write access
SU_UA_R	User assignment section read access
SU_UA_W	User assignment section write access
SU_CO_R	Codes section read access
SU_CO_W	Code section write access

Sections available to the lead partner

Project Management

Project Management includes information concerning Project Manager, Financial Manager of the Project and Communication Manager of the Project. Details on partner institution and accredited person responsible for the particular position are to be provided in these sections.

Figure 69 Supplementary information concerning Project Manager

Bank Information

Bank information includes details on the Bank of the Lead Partner such as name and full address. Further data involve specific bank connection data including Account Number, IBAN, SWIFT, Nat Bank Code, Internal Reference and Holder of the account.

FLC

Supplementary information contains details on the contact person of the FLC institution as well as the name and full address of the FLC.

User Assignment

The User Assignment section enables the Lead Partner to assign specific user(s) to all project partners. Only users assigned to a PP are allowed to create and submit reports for partner reports.

Documents

In the Documents section, the location of the official project documentation has to be provided. This information can be entered by a partner.

Sections available to the authorities

State aid

In case of state aid, the authorities can make notes and upload documents. These notes can be added per partner.

Figure 70 State aid

Outputs

The authorities (usually the JTS) can make notes on the outputs of a project. For example, they can add the address of the output, upload attachments or mark the output as available in the final version.

Here they can mark an output as being publishable. eMS does not publish outputs automatically. But external systems could use this information and e.g. provide the output on the programme website.

Figure 71 Outputs

Codes

The codes section needs to be filled in by the authorities as well. Here the different categories of intervention are visible. The different dimensions of codes are visible. Only the codes are visible, which have been selected in "Manage Programme" under the priority axes.

Codes

Partners

Partners	Nuts	Fund
Group of Archeologists	Wien (AT130)	ERDF
Hrvatski restauratorski zavod	Istarska županija (HR036)	ERDF

Priority Axis: Environmental Protection

Dimensions

	Dimensions I
☐	Research and innovation processes in large enterprises
☐	Generic productive investment in small and medium –sized enterprises ('SMEs')

	Dimensions T
☐	Large Urban areas (densely populated >50 000 population)
☐	Small Urban areas (intermediate density >5 000 population)

	Dimensions M
☐	Other integrated approaches to sustainable urban development
☐	Integrated Territorial Investment — Urban

	Dimensions F
☐	Non-repayable grant

Figure 72 Codes

Partner Report

Once a project is contracted, the reporting section becomes available to project partners. Partner reports cover activities and expenditure of individual project partners and need to be verified by national controllers (called FLC in the eMS). All partner reports need to be created for reporting periods as they are defined in the application form.

Access a partner report

Needed user rights / privileges

Users do not need any special privilege to create and/or submit a partner report. The access to a partner report is granted via assigning users as partners by the Lead Partner in the "Supplementary Information" → "User Assignment" section.

Lead Partners can access the 'User assignment' section of the Supplementary Information and allocate users. For this, a person/institution needs first to become an eMS user (for more information please see chapter 'User creation'). Each partner can have multiple users and they will all have the same access to the partner report.

Please note that it is possible to also allocate users to the Lead Partner and they will have access to the Lead Partner report. Those users will not be able to create a project report as currently only one user (the one accepted by JS in handover phase, or in case of automatic handover the same as Lead Applicant) has the Lead Partner role in the eMS.

Figure 73 Partner User assignment – Supplementary Information

User privileges that can be especially useful for reporting by project partners include:

R_FINANCE_REPORT_DETAILS_PROCESSING; gives access to the right-hand side of the financial report (see below)

R_FLC_CERTIFICATE; allows viewing of the finalised FLC certificate

SU_XX_R; SU_XX_RW; provides write and/or read access to individual tabs of the supplementary information. XX is a placeholder for abbreviations of supplementary information tabs such as 'SU_PROCUREMENT_RW', which provides read and write access to the public procurement tab.

All privileges need to be assigned to the 'applicant' role.

Generating partner reports

Partner reporting technically starts with the signature of the subsidy contract. You can immediately tell that the status of your project has changed into 'contracted' because the Lead Partner and all other partners, when accessing their project, are automatically directed to the overview of partner and project reports ('Reporting overview'). Previously, before signing, you were directed to the application form.

Figure 74 Reporting overview

It is of course still possible to see the project application form, which is accessible from the left-side menu under a menu item 'Project'. This menu item always leads to the latest approved application form. Older versions of the application form are available in the 'project history'.

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If a user has multiple roles in the system (e.g. Lead Partner and partner and/or programme authority at the same time[1]), it is necessary to select the role from the dropdown menu at the top of the interface called 'Select role'.

> **Note**
> Lead Partners must create their own partner reports as 'PP', not as 'LP'. The LP role is exclusively for creating 'Project progress reports'.

For creating a new partner report, you need to click "Create New Report" under the table displaying an overview of partner reports. Afterwards, you are redirected to a partner report corresponding to chosen reporting period.

Figure 75 'Select role' drop-down and create new report

Please note that from the eMS version 3_4.1 partners can generate a report for any period and it is not necessary to generate and submit reports for all periods (e.g. it is possible to generate a report for period 2 even if there is not report for period 1 submitted).

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[1] This is a rare case but possible in test environments or in case of TA institutions (e.g. JS user is a TA project partner and JS at the same time)

Figure 76 Generating partner report for selected period

Please note that only the periods for which the report can be generated are listed (e.g. if partner can generate only 1 report per period and there is already 1 report for period 1 submitted, period 1 will no longer be listed).

Each partner report is given a number that consists of a period number and a report number.

Figure 77 - Partner report number showing reporting period and report number

> **Attention!**
> By default, partner can create just one report per period, but programme may decide to allow projects to create more reports. In order to do that please adjust the programme property numberOfPartnerReportsPerPeriod=1
> The JS may open additional reports at any time.

It is possible to delete a partner progress report as long as it is not submitted to the FLC. In order to delete the report, please click on 'Delete report' in the report menu to the left. All users assigned to the partner are able to create and to delete a partner report.

Figure 78 Deleting partner reports

Lead partners can view reports of all project partners, once they have been created by the partner. Lead partners can view also not submitted partner reports.

Figure 79 To view partner reports, lead partners need to select the role 'lead partner'.

In case the lead partner wants the right to also edit and submit partner reports, the lead partner user must be added to the partner as a user in the user assignment of the supplementary information.

Figure 80 To edit partner reports, lead partners need to assign their user in the 'user assignment'

Filling-in a partner report

Partner reports consist of several sections (i.e. 'Partner report', 'List of expenditure', Contribution and forecast' and 'Attachments'), each of which must be filled with information.

Fields in the partner report depend on the application form of the project and are in line with call setup of the AF (see below for examples).

Figure 81 Partner report – Sections

'Partner report' Tab

The 'Partner report' section focuses on activities implemented throughout the reporting period. It contains general descriptions of activities as well as reporting per Work Package.

This section asks you to describe activities during the reporting period ('Summary of partner's work in this reporting period').

To provide information on specific outputs, please select each applicable output from a drop-down which lists all outputs included in the AF. It is possible to upload documents for each output under 'Output evidence'.

Figure 82 Reporting on activities – summary and description of outputs

Partner reports also contain a section to provide information on the target groups reached. For each target group selected in the AF, information can be provided.

Figure 83 Reporting on target groups – Open fields by pressing 'Add Targetgroup'

Below you can report on individual work packages. The list of work packages depends on the work packages included in the approved application form. The example report shown below has the work package management and one implementation work package. You will see all work packages, even if you have not been assigned to a work package in the AF.

Reports of individual work packages should contain descriptions of activities, problems (if any) and information on individual deliverables with evidence in the form of an attachment.

Deliverables are reported by clicking on 'Add deliverable' under the relevant work package. The drop-down shows all deliverables listed in the AF.

Figure 84 Reporting per Work Package – add deliverable by pressing 'Add deliverables'

List of Expenditures (LoE)

Figure 85 Navigation bar – List of Expenditures

Financial reporting is done through the List of Expenditures (LoE) section. Every programme can decide how detailed partner financial reporting in the eMS should be. The minimum required by the system is reporting per partner/period/work package and budget line. The system however supports also reporting on a single invoice level. Partner and period are determined by the partner report itself (each report refers to just one partner and one period), the work package and budget line must be selected for every item in the LoE.

Functionalities of LoE depend on the call setup and application form. If in the call the programme allows the use of flat rates, lumps sum and/or standard scales of unit costs, related fields will be activated in the LoE.

Figure 86 Call setup – cost types

If the call options 'Standard Scales of Unit Cost Invoices' and/or 'Lump Sum Invoices' are activated in the call setup, the system will propose the appropriate input forms. 'Real cost' is always available.

Figure 87 List of Expenditure – cost types

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Real cost items

After clicking on 'Add real cost' a pop-up appears, where the system asks you to give basic information on the cost item. It is necessary to allocate each expenditure item to one budget line and one work package. It is also obligatory to indicate 'Total Value of Item in Original Currency' and 'Declared amount in Original Currency'. Other fields are not obligatory by default and can be left empty. A programme may decide to oblige partners to fill out other fields by adding a validation plugin which is called each time Partner clicks on 'Add' button.

The 'Purchase of Land' tick box is optional and is visible only if a call option 'Enable Purchase Of Land' is activated.

It is possible to upload one or multiple attachments to each of the expenditure items by clicking the 'Upload' button. Once a button is clicked, a dialogue box is shown where it is possible to upload different items. Starting from eMS version 3_1.0, the uploaded files are always visible in the dialogue box, not only in the List of Expenditure. It is also possible to download all the attachments related to one expenditure item at once, using 'download all attachments' option.

Figure 88 uploading/downloading attachments in the List of Expenditure

It is possible to introduce expenditure in different currencies and the system converts it automatically into EUR using the currency conversion rate applicable at the moment of entering the information into the pop-up. Please see below 'Currency exchange'.

Figure 89 Adding Expenditures – Real Cost

Flat Rates

If you have Staff cost and/or Office and administration flat rates approved in the application form, the system will automatically calculate flat rates based on relevant inputs into the List of Expenditures.

Attention!
It is not possible in the eMS to have flat rates for Staff Costs without also having flat rates for Office and administration! Staff cost flat rates should be based on project direct cost and in case Office and administration is reported on real cost basis it can include both direct and indirect cost and the system cannot calculate Staff costs flat rate.

Technically, the system adds artificial flat rate invoices per Work package, calculating the flat rate percentage from inputs in other relevant budget lines.

Please note, it is not possible to add real cost invoices to budget lines covered by flat rates. It is also not possible to modify the amount claimed based on flat rates (neither by project partner nor by any of the authorities verifying the report).

Figure 90 Adding Expenditures – Flat rates

Lump Sums

If lump sums are activated in the call setup, the 'Add Lump Sum' button is available in the List of Expenditure. After clicking on it, a relevant pop-up appears. You need to allocate the lump sum to a budget line and work package and indicate the declared lump sum in EUR. Other fields are not obligatory to be filled out. Similarly, to real cost input form, there can be a validation plugin installed which is called when 'Add' button is clicked.

Figure 91 Adding Expenditures – Lump Sums

Standard Scales of Unit Costs

If standard scales of unit costs are activated in the call setup, an 'Add Standard Scales of Unit Costs' button is available in the List of Expenditure. After clicking on it, the relevant pop-up appears. You need to allocate costs to a budget line and work package and give the unit cost in EUR and number of units. Declared amount in EUR is calculated automatically. Other fields are not obligatory to be filled out but there is additional field 'Definition of Unit' applicable only to 'Standard Scales of Unit Costs'. Similarly to real cost input form, there can be a validation plugin installed which is called when 'Add' button is clicked.

Figure 92 Adding Expenditures – Standard Scales of Unit Costs

Additional options

In the LoE you should mark any expenditure spent outside (the Union part of) the programme area. These will be summed up in the appropriate report summary table and taken over to project and programme statistics. Please note that it is possible to change this checkbox also during management verifications, if FLC considers it was checked incorrectly.

If the call option 'Budget: Enable In-Kind Contribution' is activated, the relevant checkbox is available in the pop-up. In case any of the expenditure is financed as in-kind contribution, it should be marked in the pop-up when adding the item.

If the programme allows for purchase of land to be eligible cost and the call option 'Enable purchase of land' is activated, additional checkbox 'Purchase of land' will be available in all the input forms.

Figure 93 additional options in the List of Expenditure

Scrolling the LoE from left to right

The LoE can be scrolled by pressing the middle-mouse-button (press it and move around in the table). This was already possible previously but feature is hard to detect.

Figure 94 Scrolling the LoE

Currencies other than Euro

Amounts introduced into the eMS in currencies different than EUR will automatically be re-calculated into EUR based on available exchange rates of the European Commission (http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/index_en.cfm).

The system recalculates the amounts several times – first time when the expenditure item is created and each time it is modified before submission. The value is updated when clicking on 'check saved report' and once more at the moment of submission of the report to the FLC. It is not modified ever again, even if the report is reverted to the

partner and re-submitted the exchange rate from the moment of submission is the valid one.

Linking expenditure to public procurement

From the eMS version 3_4.1, it is possible to link an invoice to a public procurement. If there is a public procurement introduced in supplementary information (tab 'Procurements above the threshold') for the project and partner in question, the system will show additional dropdown menu in the List of Expenditure.

Figure 95 Supplementary information tab 'Procurements above the thresholds'

The partner can select relevant procurement from the dropdown list in the LoE.

Figure 96 Link between invoice and procurement in the LoE popup

Figure 97 Link between invoice and procurement in the LoE table

The link can be established either in the popup or in the table. In the future more features are planned for the procurements (e.g. overview tables of all invoices linked to one procurement).

Skipping work packages in reporting

With eMS version 3_2 eMS contains an option to not use work packages in the financial reporting. Programmes can decide per call, if project partners need to assign expenditures to work packages, or if they are only linked to the partner and the budget line.

Technically (invisible to the user), the software links all costs to the management work package.

In the popup for the list of expenditure, the dropdown for work package selectin is hidden.

As well all overview tables showing expenditures per work package (and other dimensions are hidden.

Contribution and Forecast

Figure 98 Navigation bar – Contribution and Forecast

In the Contribution and Forecast section, you are asked to forecast spending for the next partner report and you need to provide information on the financial contribution. Moreover, in case of in-kind contribution, you are requested to specify the in-kind contribution.

Figure 99 Spending Forecast

The system calculates the total In-kind contribution reported in the List of Expenditure (summing up all invoices where the checkbox 'in kind' is selected), only the description should be given by the partner here.

In-kind contribution fields are only visible if the programme allows for reporting in-kind and the relevant call option is activated.

Figure 100 In-kind contribution

In this section you need to specify the source(s) of partner contribution matching the ERDF (or other funds). The eMS gives the partner target amount (i.e. the total contribution calculated by deducting the fund co-financing from total eligible expenditure introduced in the List of Expenditures). The system proposes the same sources of contribution as specified in the application form. New sources can also be added by clicking on the 'Add contribution' button.

The total value of contribution from all sources needs to match the target value. The exact information on sources of partner contribution is necessary to calculate the total public expenditure at CA level.

Figure 101 Follow-up of Partner Contribution

> **Attention!**
> The system has a built-in check, which does not allow submitting a report where the sum of all sources of partner contribution does not match the target value.

Report Attachments

Figure 102 Navigation bar – Attachments

Partners are also allowed to upload additional attachments related to the entire report. A list of all attachments uploaded in this section is shown here, including information on who uploaded which document and when.

In order to upload a document, please click on the button 'Upload', the upload pop up will appear.

Figure 103 Report attachments.

Partner Finance Report

Under the 'Partner finance report' menu item (left-side menu) you will find various financial tables summing up the declared expenditure. The tables are updated live with every new expenditure item.

Please note that 'Currently reported' column changes over time. Initially (when you are preparing the report), it is 'amount to be declared to FLC'. After submission to FLC it becomes 'amount declared to FLC'. It changes into 'amount certified by FLC' after the FLC certificate is issued and finally changes into 'amount included in project finance report' once the Lead Partner submits the project progress report with the relevant certificate to the JS.

Figure 104 Partner finance report

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Tables in the partner finance report have several columns on the right hand side that require a special user privilege (R_FINANCE_REPORT_DETAILS_PROCESSING)_to view. Users (e.g. project partners) with this privilege rights, can follow the processing of the reports through JS, MA and CA.

Figure 105 Partner finance report. The left side is visible to project partners, the right side is only visible with the user privilege (R_FINANCE_REPORT_DETAILS_PROCESSING).

Submitting a Partner Report

Before submitting a partner report, the saved report needs to be checked (analogically to checking the saved application form prior to submission) by clicking 'Check Saved Report' in the left-side menu.

Figure 106 Checking Saved Report

When clicking on 'Check saved report' a validation plugin is called, where programmes can set different validation rules to make sure that the report follows the programme rules. In case some of the rules are not fulfilled, an error message will appear and the partner needs to correct information.

Each time a report is saved, it needs to be checked again before submission. Only after the check is successful, the system will allow for the report to be submitted. The 'Checked saved report' button will be replaced with the 'Submit report' button.

Figure 107 Submitting checked report

To avoid errors related to the submission of the Partner report, there is limitation of a time set when validation „Check saved report" is valid e.g. 30 min. The timespan can be configured in the application.properties file by declaring the timeout in minutes. If no timespan is defined in the application.properties file, a „Check saved report" will be valid without time limitation by default.

If time spell between "Check saved report" and "Submit Partner" is longer than the one set in the application.properties.file, pop up with warning "Submitting of partner-report failed! Check timed out or check was done in another session, please check partner report again" will appear. If it happens, user has to "Check saved report" repeatedly and if validation rules set for the programme are followed and check is successful, "Submit Partner" to FLC.

A submitted report is locked and the partner cannot modify it anymore. After submission, the partner report is forwarded to the FLC of the partner in question. The partner can see the status of the report on the reporting overview dashboard.

Figure 108 Reporting overview – partner reports in various stages

A new partner report can be opened once the previous one has been submitted. It is currently not possible for the partner to open more than one report at the same time. It is however possible that the JS opens another report for the partner, even if there is already a report open.

Figure 109 Reporting overview – After certification of reports by FLC, a magnifying glass appears to the right of the reports to access the FLC certificate.

In the eMS version 3_3.1 a new column was introduced to the partner overview table – namely 'Date of partner report first submission'. The partner report first submission date is saved at the moment of submission of the report to the FLC for the first time and never changes even if the report was reverted and resubmitted. Users can always see two dates – the date of last submission and date of first submission. If the dates differ, the report was reverted and resubmitted.

Figure 110 Date of partner report first submission

Partner living tables

Partner living tables are financial tables at the partner level that summarise partner expenditure processed through all partner reports. Like all other living tables (i.e. project level and programme level), partner living tables grow over time as expenditure is declared by the project partner and processed by the various authorities.

You can use living tables to keep an overview on expenditure declared in partner reports. To access partner living tables, press the button under the partner report overview table.

Figure 111 Accessing partner living tables

Like financial table of the partner reports, the user privilege R_FINANCE_REPORT_DETAILS_PROCESSING is needed to view the right hand side of the living tables. Users (e.g. project partners) with this privilege rights, can follow the processing of the reports through JS, MA and CA.

Figure 112 Partner living tables: the left side is visible to project partners, the right hand side is only visible with the user privilege (R_FINANCE_REPORT_DETAILS_PROCESSING).

Submission of partner reports to Lead Partner (in case of no expenditure)

If applicant role has user privilege 'PARTNER_ZERO_REPORT' it is possible to generate a zero partner report, which will be submitted to the LP and not to the FLC. This functionality was added to the eMS in version 3_3.1 and is not available in previous versions.

The partner generates a report the same way as any other partner report and as long as the List of Expenditure remains empty he/she can see a button 'Submit to lead partner'.

Figure 113 Submit to lead partner button

Partner can fill out all the content fields of the report as well as forecast and submit to LP. Pressing 'Submit to lead partner' button calls a validation plugin (if not defined otherwise, the same plugin as for the normal partner report).

Submission to Lead Partner means that the report is not validated by the FLC and no certificate is created, it cannot therefore be attached to the project report. Lead Partner has access to partner content information and forecast and can use it when preparing the project report.

Submitted partner report is not editable but can be reverted by LP if needed.

Partner Reports

Figure 114 Report submitted to LP

Figure 115 LP can revert partner report (submitted to LP) back to the partner

Automatic calculation of partner contribution (call option)

In the eMS version 3_4.1 a new call option (Calculate contribution in partner report automatically) was added.

Figure 116 'Calculate contribution in partnerreport automatically' call option

When this option is activated, partner cannot introduce contribution sources freely in the partner report. The eMS calculates the contribution sources automatically based on the sources from the project application form.

Figure 117 Automatic calculation of partner contribution

In order for the total of all contribution sources to match the target value and not to have any rounding issues the calculation is done in the following way:

1. First the total of all private contributions is calculated and rounded down.

2. The total for all public contributions is a total contribution minus total private contributions.

3. Then for each of the sub-category (public/private contribution) different sources are calculated based on the ratio from the Application form. If there are e.g. 4 sources of public contribution, the first 3 are calculated as a percentage (rounded arithmetically half_up) and the last one as total public-sum of the first three.

Thanks to this approach, the sum of all contributions always matches the target contribution.

Example of calculations:

Application form contribution sources							
Name	Public/Private	Amount	Percentage	Total public	2,500.00	Ratio private	0.6666666667
1	Public	1,000.00	0.4000000000	Total private	5,000.00		
2	Public	1,500.00	0.6000000000				
3	Private	2,000.00	0.4000000000				
4	Private	500.00	0.1000000000				
5	Private	1,500.00	0.3000000000				
6	Private	1,000.00	0.2000000000				
Total		7,500.00					

Partner report total contribution target 1.765,98					
Name	Public/Private	Amount		Total public	588.66
1	Public	235.46		Total private	1,177.32
2	Public	353.20			
3	Private	470.93			
4	Private	117.73			
5	Private	353.20			
6	Private	235.46			
Total		1,765.98			

Custom documents in partner reports

Like in the application form and in the project report, the custom document can generate PDF documents. Template files need to be put on the server in the folder EMS_HOME/customVMs/partnerProgressReport. Users can generate PDF documents based on the partner report data.

Users with the privilege "CUSTOM_DOCUMENT" have access to this section.

Figure 118: Custom Documents in the partner report

FLC Assignment

General remarks

Countries could have centralised and de-centralised approaches to national controls (FLC). eMS concentrates on the de-centralised approach, but it can handle the centralized approach as well.

'FLC assignment' in eMS means to assign an FLC Institution and connected FLC user(s) to FLC Institutions and to project partners. In some programmes this is done by the JS in others this is done by representatives of the member states or a mix of both. In the eMS FLC assignment depends on the user privileges.

Currently, FLC assignment works at the level of countries. Therefore, there could be several "FLC assigning units" in one installation of the eMS.

The general process of assigning FLC to project partners follows these steps:

1) Create a user with the user privilege to manage FLC for one or more countries (MG_FLC_XX).

2) Enter information on FLC institutions and assign FLC users to these institutions.

3) Assign FLC users(s) to project partners.

Create (country-specific) FLC assigning units

Needed user rights / privileges

For each selected NUTS 0 region in the setup of the programme (section "Manage Programme"), the system generates a separate privilege that allows a user to assign FLCs to project partners of this country.

Figure 119 Selected NUTS Regions in "Manage Programme"

The generated privileges follow the format "MG_FLC_*NUTSID*" where *NUTSID* is replaced by the two letter country code (e.g. "MG_FLC_AT", "MG_FLC_HU"). These privileges can be assigned to different users (like e.g. JS or NCPs).

Users with this privilege usually do not work as FLC so typically they do not get the FLC role in the system. They only create and manage FLC units for their country.

Manage FLC institutions

FLC assignment users (below referred to as 'you') can create/edit/delete FLC institutions for their country.

In the same interface (see below), you can assign FLC users to FLC institutions. To assign an FLC user, the user needs to be available in the system first. To see how to registering or create an eMS user, please see 'User Creation'. Afterwards, the FLC user can be assigned to the FLC institution.

Figure 120 Interface for adding FLC institutions and FLC users associated with this institution

Please note that in order to be able to actually fulfil the FLC tasks, the FLC user needs to have the FLC role with a set of relevant privileges (e.g. FLC). For details, please see the chapter 'FLC'.

FLC assignment

This is the process of assigning FLC users to project partners. Each project partner should have an FLC assigned to in the eMS before the first partner report is submitted to FLC.

To do this, you can access a table, which shows all project partners from the country for which this user has the right to assign FLC (i.e. Austria in the example below).

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Figure 121 Assigning FLC institutions and users to project partners

You first select an institution from the dropdown list 'FLC institution'. Naturally only institutions that were created in the previous step are available now in the drop-down.

When selecting an FLC Institution, all the users assigned to this institution are automatically assigned to the partner.

If you wish to assign just some of the users, you need to de-select the non-relevant ones in the 'assign user' view.

Figure 122 Assigning FLC users to project partners

FLC assignments are only stored when clicking the save button!

Figure 123 FLC assignments must be saved.

FLC assignment – decentralized FLC systems

In some decentralized FLC systems, project partners can suggest their FLC body.

For this reason, the eMS offers the possibility to allow users (e.g. lead partners) with the user privilege SU_FLC_W to enter information on the FLC body they suggest to assign to each project partner. The corresponding interface then appears in the supplementary information section ('FLC' tab). The user privilege needed to be able to read this information is SU_FLC_R.

This section indicates a wish only and does not result in any direct assignment. To support assigning FLC, the eMS also shows information on the 'FLC requested by the project partner' in the 'FLC Institution Assignment Table'.

Management verification – national controls (FLC)

Needed user rights / privileges

Initially FLC users (below referred to as 'you') do not need any special user privilege. The access to a partner report is granted via the assignment performed by the FLC assigning unit (see Chapter 'FLC Assignment'). FLC users can only access reports of project partners that have been assigned to them.

Additional user privileges for FLC can include:

- DASHBOARD

- SHOW_APPLICATIONS, to view project applications (only those to which the user is assigned).

- FLC, to view overview tables and FLC documents.

- FLC_CHECK, to check FLC work.

- FLC_SUBMIT, to issue FLC Certificate (to submit FLC work). In case the submission in an FLC organization is done by another user than the one preparing the FLC work, the controller allowed to submit must have this privilege while the other one does not.SUBMIT_EVALUATION, to finalise the FLC checklist

- FLC_REVERT_REPORT, to re-open a partner report for editing by the project partner

- ENABLE_ATTACHMENTS_PAPREPORT, to allow FLC to re-open the 'attachment' section of the partner report for uploading of additional attachments by the partner.

- ENABLE_ATTACHMENTS_EXPENDITURE_LIST, to allow FLC to reopen the List of Exenditure (LoE) of the partner report for uploading of additional documents by the partner.

- DOCUMENT_LIBRARY, gives access to the eMS - document library.

- DUPLICATE_CHECKLIST, to allow FLC to duplicate parts of the checklist, e.g. in case of checking more than one public procurement.

Additional user privileges that are relevant to the FLC section can be granted for other users (institutions) as well, for example:

- R_FLC attachment, grants read only access to the FLC attachment section after a partner report has been certified by FLC.

- R_FLC_checklist, grants read only access to the FLC checklist after a partner report has been certified by FLC.

- R_FLC_control_risk_assessment, grants read only access to the control risk assessment checklist after a partner report has been certified by FLC.

- R_FLC_expenditure, user can access the FLC forms after a report was certified by FLC (read only).

- R_FLC_inherent_risk_assessment, grants read only access to the Inherent risk assessment checklist after a partner report has been certified by FLC.

- R_FLC_Partner_Information, grants read only access to the partner information section after a partner report has been certified by FLC.

- R_FLC_report, grants read only access to the FLC report section after a partner report has been certified by FLC.

In addition, programmes can consider providing (read-only access) for FLC to some of the supplementary information. Read-only access to the 'Partnership agreement' and 'procurements above threshold' tabs is granted automatically when a user is assigned to a project partner as an FLC. For read-only access to other Tabs, the FLC role needs additional privileges.

Figure 124: FLC can be given (read-only) access to some or all of the supplementary information

Currently the FLC role must be manually assigned to all FLC users.

FLC access to User Account

By accessing the User Account, you can change your personal information (first name; last name; title) as well as introduce the name of Department you are working in and define your Mail Signature that will be shown by default when using the Mailbox.

Also you can choose the view of your Dashboard by ticking or unticking checkboxes that are introduced for defining the items to be visible on your dashboard ("Show Projects", "Show Mailbox", "Show calendar").

Figure 125: User Account

FLC access to partner reports

After login, you see the FLC dashboard with a list of all projects, which have at least one project partner assigned to you. The dashboard also shows the mailbox and a calendar if configured like this in the User Account.

Figure 1264: FLC users can use the dashboard to access projects

Alternatively, you can also access projects via the 'My project partners' table under 'FLC' in the left-hand menu. To view this list, the FLC user role needs the privilege 'FLC'.

A list of all open partner reports (i.e. all reports ready to be verified) can be accessed via the 'Open FLC partner progress reports' menu item under 'Reporting'. To view this list, the FLC user role needs the privilege 'FLC'.

Figure 1275: FLC users can access projects via the 'My project partners' table or open partner reports via the 'Open FLC Partner Progress Reports' menu item

If you access the project from the 'My project partners' list, you will be directed to the partner report section and - where available- reports can be selected. In the example below - as you can see from the 'State' of the reports - two reports are already FLC certified and one has been submitted to FLC but not yet FLC certified.

Figure 106: The report overview can be used to access partner reports

If you access the report from 'Open FLC partner progress reports', by pressing the magnifying glass in the column 'view' for the report in question, you will immediately be directed to the selected report.

Verification of a partner report – List of Expenditure

Selection of a partner report leads to the partner report view. Near the top, Tabs to access the Partner Report (i.e. content section), the List of Expenditure, Contribution and Forecast and Attachments to the report made by the project partner are available.

Figure 1287: FLC view – partner report

List of Expenditure - Overview

You can directly access the list of expenditure and verify expenditure items. Items ticked as 'Verified by FLC' are highlighted in orange.

List Of Expenditures

Item Id ⬍	Budget Line ⬍	Declared Amount Euro ⬍	Uploads	Verified By FLC ⬍	Difference FLC ⬍	Amount Certified FLC ⬍	Comment FLC ⬍
1.1	Staff costs	€ 1.98	0 Attachments	☐	€ 0.00	€ 0.00	
1.1	Staff costs	€ 3.28	eMS-Logo.pdf (FLCHR1, 10.06.2016) 1 Attachments	☑	-€ 0.53	€ 3.81	
2.1	Office and administration	€ 0.29	0 Attachments	☐	€ 0.00	€ 0.00	
2.1	Office and administration	€ 0.49	0 Attachments	☑	-€ 0.08	€ 0.57	
3.1	Travel and accomodation	€ 16.43	0 Attachments	☑	-€ 2.67	€ 19.10	
5.1	Equipment	€ 9.92	0 Attachments	☐	€ 0.00	€ 0.00	

Export Save Columns Columns ▾

Figure 1298: FLC section of the List of expenditure - Items ticked as 'Verified by FLC' are highlighted.

In the 'List of Expenditure', you can view all expenditure items. By clicking on an item, a pop- up window opens in which expenditure can be corrected.

Edit Expenditure
Partner Report 1 LVPartner Period 2 List of Expenditures   ✖

P P	Budget Line	Infrastructure and works	Description1	
	Work Package	P Preparation		2000 Characters Remaining
	Internal Reference Number	125	Description2	
	Invoice Number	33		2000 Characters Remaining
	Invoice Date	25.11.2016	Partner Comment	
	Date Of Payment	27.11.2016		2000 Characters Remaining
	Currency	EUR - EURO		
	Conversion rate	(1)		
	Total Value Of Item In Original Currency	15.26		
	VAT	0.00		
	Declared Amount In Original Currency	15.26		
	Declared amount in Eur	15.26		
	Expenditures Outside (The Union Part Of) The Programme Area?	☐		
	In Kind	☐		
	Purchase Of Land	☐		
F L C	Verified By FLC	☐	Comment Flc (pp,flc,js,ma,ca,aa)	
	Difference FLC	€ 2.00		255 Characters Remaining
	Amount Certified FLC	€ 0.00		
	Flc Correction Type	Incorrect public procurement		

⊕ Upload

Uploaded
No records found

Figure 1309 FLC can correct expenditure items in a pop-up that can be accessed via the List of expenditure

Expenditure items can also be edited directly in the List of Expenditure (LoE). Items that are edited directly in the LoE are saved only by pressing the button 'Save'.

Figure 13110 Alternatively, FLC can also correct expenditure items directly in the List of expenditure

Both positive and negative corrections are possible in the 'Difference by FLC' field. Since negative corrections are more frequent, the eMS assumes that by introducing positive number in the 'Difference by FLC' field a correction is negative. **If you want to make a positive correction, please enter the negative amount.**

The corrected amount is shown as 'Amount certified by FLC' if the checkbox 'Verified by FLC' is ticked.

If you enter an amount in the 'Difference FLC' field, but do NOT tick the checkbox 'Verified by FLC', the eMS considers this amount as not verified and the 'Amount Certified FLC' field stays empty. The concerned expenditure item will NOT be included in the FLC certificate. Only by ticking checkbox 'Verified by FLC', the item will be included into the FLC certificate.

To make FLC work easier, a 'Tick all as verified by FLC' button is available, which allows you to tick all expenditure items as 'Verified by FLC' with one tick.

Figure 111 FLC can tick all items as verified by ticking 'Tick all as verified by FLC'.

> **Caution!**
>
> If you want an expenditure item to be included into the FLC certificate, the item needs to be marked as 'Verified by FLC' (the corresponding checkbox needs to be ticked).

For expenditure calculated using Flat rates (Staff costs, Office and Administration), the difference and certified amount are calculated automatically. They also do not need to be marked as 'Verified by FLC', as they are marked when expenditure that is the base for calculated Flat rate is checked as verified. Direct corrections in of flat rate budget lines are not possible.

Please note that in case a flat rate is based on multiple expenditure items and only some of them are ticked as 'verified by FLC' the flat rate will split into multiple items to make sure that only the part of the flat rate referring to the verified items is included in the FLC certificate.

Any supporting documents uploaded by the project partner to the LoE (i.e. documents attached by the project partner to specific expenditure items) can be accessed via the 'Uploads' section.

As an FLC, you can also upload documents to the LoE. Documents uploaded by FLC to the LoE cannot be viewed by the project partner.

Cuts in original currency

If any of the expenditure to be adjusted was declared in a currency different than EUR, you may decide to cut it in EUR or cut it in original currency. In order to cut in the original currency, you need to check the box 'edit amount in original currency'. Then you can enter the difference in the original currency and the system will calculate the difference and the new eligible amount in EUR using the exchange rate of the time when the item was submitted to the FLC.

Figure 112 FLC (and all subsequent authorities) can cut or increase amounts in original currency.

Caution!
Cuts in original currency are only possible in the single expenditure pop-up. All edits done directly in the List of Expenditure are by default in EUR.

FLC 'Comment section' in List of Expenditure

There are three FLC comment fields available for your purposes. They can be accessed from the LoE and also from the pop-up of individual expenditure item. These comment fields can be turned on/off by the administrator, so not all of them might be available in every eMS instance.

Text in the FLC comment fields are visible to different actors in the system:

1.) Information introduced in the first comment field is visible to all users – project partner, Lead partner, FLC, Joint Secretariat, Managing authority, Certifying authority, Audit authority.

2.) Information introduced in the second comment field is visible only to the FLC user (any FLC user assigned to a particular partner meaning not only the one who introduced the comment). This comment field can for example be used for the notes that justify or explain the reasons behind the decisions made or notes that should be taken into account when checking the same kind of expenditure in the next reports but are not shared with project partner or further authorities.

3.) Information introduced in the third comment field is visible to the FLC user and all further authorities (Joint Secretariat, Managing authority, Certifying authority, Audit authority) but NOT to the Project partner or Lead partner. This comment box can be used to save a notes or additional information for further authorities.

Information introduced in the comment fields become available to other users only after the FLC certificate is issued!

Figure 1323 FLC comment fields can be filled in the 'Edit Expenditure' Pop-up window of LoE and seen by different authorities

Figure 1334 Alternatively, FLC comment fields can also be filled in directly in the LoE and seen by different authorities

<u>**Visibility of FLC corrections to the project partner**</u>

Project partners can see corrections done by the FLC. The fields 'Difference FLC', 'Amount certified FLC' and 'Comment FLC (pp, flc, js, ma, ca, aa) become visible to the partner after the FLC certificate is issued.

Figure 1345 FLC cuts are visible to the project partner

'Column Select' Feature of the List of Expenditure

The List of expenditure is very wide as it contains many columns and you might find one or the other column not necessary. Programmes can hide columns globally (i.e. at the programme level – this option is available in the programme.properties). You can hide columns locally (i.e. each user can hide columns as needed). For more information, please see the Section 'Column Selector').

Please note that some columns are especially useful for FLC to deal with left-over – not yet verified - items from previous reports ('Sitting ducks' – see below) namely: 'Report Number' and 'Date of Certificate'.

The LoE table can be exported to Excel. Only columns that are not hidden will be exported.

Figure 116 Column Selector feature – Date of Certificate

Scrolling the List of expenditure

It is possible to scroll the List of expenditure to the left or right by using the middle-mouse-button (press it and move around in the table). This feature can be used as an alternative to the existing scroll bar.

Downloading documents (LoE Attachments)

Attachments by the project partner to items in the LoE are shown in the LoE and in the 'Edit Expenditure' pop-up window.

There are two types of attachments available: the ones that are visible only to you as controller of particular partner report and attachments that will become visible to the project partner after the FLC certificate is issued. To upload documents that should not be seen by project partner, use the "Upload button". To upload documents that can/should be seen by project partner, use the "Upload files also for project partners" button.

All uploaded documents are positioned in the order of uploading time and you can easily determine which documents are seen to project partners by mark on the right side of the list.

A 'download all attachments' button is available to download all attachments associated with one expenditure item.

Figure 1357 Accessing attachments in the LoE

You can add attachments to individual expenditure items. It is clearly visible that it was added by FLC (see below: user FLCAT added the last attachment). Attachments uploaded by an FLC user can be seen by all other FLC users that are assigned to the same project partner as well as JS, MA and CA. They currently cannot be seen by the project partner.

Declared Amount Org Currency ⇕	Declared Amount Euro ⇕	Uploads	Date Of
1 000.00	€ 1 000.00	Lighthouse.jpg (matthilda, 13.06.2016) Tulips.jpg (matthilda, 13.06.2016) Chrysanthemum.jpg (FLCAT, 13.06.2016) 3 Attachments	
150.00	€ 150.00	0 Attachments	
1 000.00	€ 1 000.00	0 Attachments	

Figure 1368 FLC can upload attachments in the LoE

FLC Documents

The eMS handles the following FLC documents:

- FLC expenditures
- Partner information
- FLC Checklist
- FLC Report
- Attachments
- Risk assessments (inherent and control risks)

Figure 119 In the report view, the FLC Documents section can be accessed through the menu to the left.

Checklists included in the FLC Section (i.e. 'FLC checklist', 'Inherent Risk Assessment' and 'Control Risk Assessment') can be defined by Programmes. Interact provided a script to insert the HIT FLC checklists (i.e. FLC checklists and checklists for 'inherent risk assessment" and 'control risk assessment") with eMS version 3_0.6. Those checklists are an optional step in the update and can be inserted with later versions as well.

FLC Expenditures

This overview table shows – per budget line – how much was declared in the current report and how much of this was already ticked as 'verified by FLC' in the LoE. It can be used, e.g. to keep track of the FLC work. It can also be used to verify along cost categories (budget lines) as expenditure items can be opened per cost category via this view.

Figure 120: 'FLC expenditures' shows amounts declared by the partner and certified by FLC per cost category (budget line)

This view is also used to access any open expenditure items from other partner reports (see Section 'Open Expenditure Items from Other Reports' below).

Note: the column: 'Total' has no use for the default view, it only makes sense for the 'sitting ducks view' (see below). Without 'sitting ducks', it just repeats what is listed under 'current report'.

Partner Information

This interface can be used to enter important information about a project partner such as VAT and bank account.

It is assumed that information entered here does not usually change over time. For this reason, information entered once in this section is shown as well in all subsequent reports.

If it does change, however, it can be updated. If updated, the new information will be shown in all subsequent reports, but not in already submitted reports.

Some or all of this information entered here can be used in the printed versions of the FLC report or certificate as needed.

Figure 121 'Partner information' shows information that usually does not change over time

FLC Checklists

The FLC checklist is provided by the programme and lists all verifications expected from national controllers.

The FLC checklist can be defined by Programmes. Interact provided a script to insert the HIT FLC checklists with the eMS version 3_0.6. Those checklists are an optional step in the update and can be inserted with later versions as well.

As the HIT FLC checklists contain controls for both real costs and simplified cost options, programmes will need to adjust the checklist to their requirements. Programmes can either remove them from the script, so that they will not appear in eMS, or delete the not needed checklists from eMS in the 'Manage Checklists" section.

After executing the script, the checklists appear in the 'Manage Programme' section. The checklists behave like any other checklist – you can add/remove/change questions or wordings and you need to assign the checklists to calls and the user privileges to user roles.

Figure 122 'FLC checklist' shows the checklist to be filled in by controllers

In order for controllers to be able to see and edit the checklist, they need to have the correct user role with associated user privileges:

To do this, administrators first create or import the checklists in the section 'eMs Management'/ 'Manage Checklists'. There are three types of checklists:

- FLC Checklist
- Inherent Risk
- Control Risk

In the section 'eMs Management'/ 'Manage Roles', administrators define the role 'FLC' (or any other name for this role) and assign privileges to see and edit FLC checklists to this role.

Figure 123 An FLC role must be created and associated with privileges to see and edit checklist(s)

Additionally, the checklists must be allocated to the call for proposals in which the project applied for funding.

Then, in the section 'eMS Management'/ 'Manage Users', the FLC role needs to be assigned to the controllers.

All users with these checklist privileges, can view and edit the FLC checklist (as well as checklists for 'inherent risk assessment" and 'control risk assessment").

In order to finalise the FLC checklist, another user privilege (SUBMIT_EVALUATION) is needed. Checklists on inherent and control risks can be finalised without this privilege.

Figure 124 Checklists should be finalised before submission of FLC work

The privilege to finalise checklists (SUBMIT_EVALUATION) can be assigned to all FLC roles or just to a separate FLC supervisor role.

Country-specific Checklists

Through these features it is also possible to assign country-specific checklists if needed. First administrators define the checklists (one for each country). Then - for each country – they create user roles with privileges to see country-specific checklists (e.g. FLC_XX, FLC_XY, etc). Then they assign the users to the country-specific roles.

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Figure 125 The FLC role must be assigned to all FLC users

> **Caution!**
> If administrators define country-specific FLC roles, administration of the eMS could become time consuming as each FLC user will need the correct country-specific user role. Also, if there is a separate FLC supervisor role (to finalise the FLC checklist) then management of FLC users will also require more administration.

FLC Report

The section 'FLC Report' contains information on the current report. It is assumed that this information changes over time. The information to be provided in this section includes Type of report, details on the designated project partner controller, Methodology of the verification, Description of Findings, Conclusions and recommendations and follow-up measures for the next partner report.

Figure 126 'FLC Report'

Unlike to the 'Partner Information' section, information entered in FLC Report section is not shown in all subsequent reports as well. It should be filled from the scratch for every report with exception of 'Conclusions and recommendations', 'Follow up measures for the next partner report' and 'Comment' sections that are copied from the previous report and shown in the subsequent reports in editable form.

Figure 127 'FLC Report' sections that are copied from the previous reports and shown in the subsequent reports in editable form

Information under 'Designated Project Partner Controller' is pre-filled. The eMS derives this information from the following sources:

FLC institution set-up (see 'Manage FLC Institution'):

- o FLC body responsible for the verification
- o FLC organization doing the verification (if applicable)
- o Address
- o Country
- o Telephone number
- o Email

User account of the logged-in user:

- o Name of the controller
- o Job Title
- o Email of the controller
- o Controller Reviewer (if applicable) – manually filled in field

It is always the logged-in FLC user shown in these fields. In the FLC certificate, the user that finalized FLC work (submitted) will be shown.

Caution!

If you change information in the user account, you need to logout and login again to see these changes also in the FLC report.

There are two overview tables available – 'Expenditures declared and certified by budget line' and 'Description of finding, observation and limitations'/'FLC corrections'.

Table 'Expenditures declared and certified by budget line' shows information on declared and ticked as "verified" amounts in particular report. Basically it is the copy of the table under 'FLC Expenditures' section described before just it shows only information on the current report and does not provide a possibility to show all waiting to be verified expenditures from previous reports.

The table 'Description of finding, observation and limitations'/'FLC corrections' summarizes all corrections according to the type of correction. See also chapter on Monitoring types of FLC/JS/MA corrections.

Information changes until finalization of the FLC work (submission), after finalization of the FLC work, information in these fields and tables does no longer change.

Attachments

This is a section for FLC to upload documents. Several documents can be uploaded at once by selecting documents (ticking the tickbox) and pressing 'Download selected files'. Additionally, you can upload documents also for individual budget items in the LoE. Documents uploaded here cannot be seen or accessed by project partners.

Figure 128 'Attachments' Download of several documents at once

Inherent risk assessment

This section is used to assess the risks inherent to a project type, a project partner or types of activities/expenditures. Information entered here will be copied from one report to the next, but can be changed in each report. Usually changes are only needed, if something changed in the partnership, the organization, or the activities.

Information entered into this checklist is thus transferred to subsequent reports in editable form.

The checklist for the Inherent risk assessment is a HIT tool that can be imported and modified as needed.

Figure 129 Inherent risk assessment

The checklist can be finalized by pressing the button to the bottom left. After finalization and before submission of the FLC work, it can still be unlocked and edited.

Control risk assessment

The Control risk assessment provides information on the quality of each report. It can be used as a basis for sampling: if the quality of information in a budget line has been good in the past, sampling can be justified.

The Control risk assessment is intended to be done with every verification of a report (last step before submission of the FLC work).

Nevertheless, information entered into this checklist is transferred to subsequent reports in editable form. The purpose of this is to make it easier to view results of the previous Control risk assessment.

Within the Control risk assessment, quality of the expenditures when originally reported and quality of the expenditures after clarifications is evaluated and the number of clarification rounds with the beneficiary are recorded.

The checklist for the control risk assessment is a HIT tool that can be imported and modified as needed.

Figure 130 Control risk assessment

The checklist can be finalized by pressing the button to the bottom left. After finalization and before submission of the FLC work, it can still be unlocked and edited.

Open Expenditure Items from Other Reports

'Sitting Ducks' (open items from previously certified reports)

You can choose NOT to verify an expenditure item (e.g. in case verification takes a long time or needs further clarification). Any item that is NOT ticked 'Verified by FLC', is NOT included in the current FLC certificate.

This means that – by not ticking 'Verified by FLC'-, you generate an item that is neither accepted nor rejected and waits in the system to be verified ('Sitting Duck').

Sitting ducks are highlighted in pink color (see below) and can be verified with later reports.

Other open expenditure items (open items from not yet certified reports)

In the eMS it is possible to also access expenditure items from other open reports. If you have more than one open reports (i.e. submitted to FLC but not yet finalized by FLC)

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from the same partner and project, it is possible to see all expenditure items in one view and certify all items within one Certificate.

To access all open items, open 'FLC documents' and then 'FLC expenditure' and tick 'Show all waiting to be verified, including expenditures from other reports'.

Finding out if there are open expenditure items

To find out if there are 'sittings ducks' or other open expenditure items, open 'FLC documents' and then 'FLC expenditure' and tick 'Show all waiting to be verified, including expenditure from other reports'.

This view shows sums per budget lines:

- 'Declared by Partner' – 'Current Report': all items included in the current report.
- 'Declared by Partner' – 'Other reports (open expenditure)': all items currently open in other reports (i.e. reports previously finalised by FLC as well as not yet finalised).
- 'Total': Sum of the two above.

In the example below, there are open items from other reports of EUR 1000 in the budget line 'external expertise and services' and of EUR 4000 in the budget line 'equipment'.

Figure 131 FLC expenditure view – overview by budget line in the 'show all waiting to be verified including expenditure from other reports' view.

Accessing open expenditure items

It is possible to view all relevant expenditure items by pressing the magnifying glass at the bottom left of the table shown above. Items shown in this view are:

- Items of the CURRENT report – already verified (orange).

- Items of the CURRENT report – not yet verified (white).

- All not yet verified items from OTHER OPEN reports (i.e. reports submitted to FLC but not yet finalized by FLC) (white).

- All not yet verified items from CLOSED reports (i.e. reports submitted to FLC and already finalized by FLC) Sitting ducks (pink).

This means that this view can be used to immediately see if there are any left-over items from previously certified reports (marked in pink).

Figure 137 LoE accessed via the 'FLC expenditures' view - 'show all waiting to be verified including expenditure from other reports'.

By ticking 'Verified by FLC', the item that was left-over from previously certified reports will be included into the current FLC certificate.

Caution!

Sitting ducks are shown in this view only. If you enter the LoE via the Partner report, only items of this report are shown.

Caution!

If you want an expenditure item from another report to be included into the FLC certificate, the item needs to be marked as 'Verified by FLC' (the corresponding checkbox needs to be ticked) AND the button 'Show all waiting to be verified, including open expenditure from other reports' has to be ticked when pressing the button 'Check FLC work' and 'Submit FLC work'.

Reopening the Partner Report or the Document Upload Section

Sometimes you might need to receive additional information from project partners for verification of expenditure. The eMS currently handles three ways of reopening the partner report for editing:

1) It is possible to re-open only the <u>attachment section of the partner report</u> by clicking on the 'Attachment upload Closed' button. As a result, the button turns to "Attachment Upload Allowed". Now it is possible for the Partner to upload attachments for report that is already submitted to FLC. For this the FLC role needs the user privilege ENABLE_ATTACHMENTS_PAPREPORT.

2) It is possible to re-open only the <u>attachment section of the LoE</u> by clicking on 'Expenditure attachment upload closed'. As a result, the button turns to "Expenditure attachment upload allowed". Now it is possible for the Partner to upload attachments for expenditure items that are included in already submitted report. For this the FLC role needs the user privilege ENABLE_ATTACHMENTS_EXPENDITURE_LIST.

3) <u>The entire report can be re-opened</u> for editing by pressing 'Revert from FLC to PP'. In order to be able to do this, the FLC role needs the user privilege FLC_REVERT_REPORT. Whilst report is re-opened for editing, FLC still can access such a report via partner reporting dashboard.

When the entire report is reverted to the project partner, expenditure items already ticked 'verified by FLC' in the LoE cannot be edited by the project partner. Only expenditure items not yet ticked 'verified by FLC' can be edited. Attachments can be attached only to the expenditure items that are not yet ticked as 'verified by FLC'.

FLC Certificate and Finalising FLC work

To finalize FLC work, you have to press the 'Check FLC work' button. In order to access the 'Check FLC work' button, you need to be in the 'FLC expenditure' tab. After pressing 'Check FLC work', button 'Finalize FLC Work' is available for finalizing the work of FLC. You see the pdf of the FLC certificate after pressing 'Finalise FLC work' button. So there is no need to generate the FLC certificate manually.

Figure 133 The 'Check FLC work' button is available in the 'FLC expenditure' tab

'Check FLC work' runs the error check plugin. Programmes can add error checks to this plugin according to their needs (see below). eMS has no default error checks for FLC.

Figure 134 The 'Finalise FLC work' button opens the FLC Certificate

The FLC certificate can be edited at this point. Edits will be saved when pressing 'Finalize FLC work and Issue certificate'. Please bear in mind that edits will only be saved at the point of 'Finalizing FLC work'. There is no automatic saving of edits prior to that. FLC Certificates can also be generated and printed. Some FLC systems require signing the FLC certificate. The signed FLC certificate can be uploaded to the eMS in the 'Attachments' section.

In order to submit FLC work, you have to scroll down in the Certificate and press 'Finalize FLC work and issue Certificate'.

Figure 135 The 'Finalise FLC work and issue Certificate' button is located at the bottom of the FLC

Error Checks for FLC

eMS has two validation plugins for checking FLC work against errors:

- One when editing the LoE entries: The LoE 'save' button triggers a plugin, which can (dependent of the role) include different validations for different users.

- A second one at submission of the FLC work (check & submit)

eMS has no default error checks for FLC since requirements differ among programmes. Depending on what your programmes expects from controllers, useful error checks could include:

- Has the Control Risk Assessment been updated?
- Has the FLC Report been updated?
- Has the FLC verified at least one item in the List of Expenditures?

Project Report

Project reports are created by the Lead Partner based on partner reports previously certified by FLC.

Needed user rights / privileges

Project reports can only be created by the Lead Partner of a project, starting from the moment the project status is changed to 'contracted'.

Please see the chapter 'Handover' for information on how a user becomes the Lead Partner of a project.

From the eMS version 3_3.1 it is possible to give multiple users the Lead Partner role. Only the main Lead Partner (approved in Handover) can manage the assignment of Lead Partner role to other users. It is done in the Supplementary Information tab 'User Assignment' on top of the form under 'Leadpartner user'.

Figure 136 Lead partner users assignment

Please note that there is a difference between users assigned to the Partner role for Lead Partner institution (those users have only the right to manage partner reports of the Lead partner) and Lead Partner users who can also manage project report and e.g. request modifications.

The additional Lead Partner users cannot add or remove lead partner users, user assignment for Lead partner role is always reserved for the main Lead partner.

Generating project reports

Only Lead partners can generate and submit project reports.

After the project has been contracted, the 'Reports overview' is the default view when accessing the project. In order to generate a project report, the Lead Partner needs to select the role 'LP' from the role dropdown. Each Lead Partner has two roles to select from 'PP' for creating own partner reports and 'LP'. The LP role allows to see reports of all project partners and to create and submit the project report.

Figure 137 Reporting overview - Generating a project report

If the Lead Partner user is not assigned to other partners as a user in the supplementary information, he/she can only see reports of other partners and cannot create, modify, delete or submit them.

All partner reports have statuses from which users can find out if the report was already certified by the FLC and if yes, whether it was included in the project report. Lead Partner can access the reports and the certificates of all partners (See Chapter Partner Report')

Figure 138: Partner progress reports overview

For creating a new project report, you need to click "Create Report For" and select a period for which you wish to create a report. The system redirects you to the project report corresponding to the selected reporting period.

Each project report is given a number which consists of the period number and the report number (see example below).

Figure 139 Project Report showing reporting period and report number

Caution!
It is currently not possible to have two open project reports at the same time. You can open another report only once the previous one has been submitted to the JS.

It is possible to delete the report only as long as it has not been submitted to the JS. In order to do this, the Lead Partner needs to click on the 'Delete Report' button in the left-side menu.

Figure 140 Project Report: deleting a report

Filling-in Project Reports

Project reports consist of a financial part and a content part. The financial part is compiled automatically by the system based on available FLC certificates included in the project report by the Lead Partner. The content part of the report needs to be filled out manually by the Lead Partner. It is also possible to upload attachments to a project report.

Some items in the project report depend on the call setup and approved application form (e.g. which work packages are available).

Figure 141 Project Report: Sections of the report

'Report' Tab

The 'Report' section focuses on activities implemented throughout the reporting period. It contains general descriptions of activities as well as reporting per Work Package.

This section first asks you to describe activities during the reporting period ('Highlights of main achievements') in this reporting period and to include FLC certificates of project partners.

An overview of project main indicators ('project main outputs achievement') is also provided (see framed in green below). This table is automatically generated from information provided in the 'Workpackages' section of the report.

Figure 142 Project Report: Top part of the 'Report' Tab

You are then asked to provide information on the target groups reached as well as problems encountered and solutions found.

Figure 143 Project Report: Middle part of the 'Report' Tab

At the bottom you will find an interface to provide information on horizontal principles and a tick box which can be used to indicate that the project has been fully implemented.

The section 'reporting per workpackages overview' can be used to access individual work packages.

Figure 144 Project Report: Bottom part of the 'Report' Tab

Work packages

Reporting per work package is the second part of the project report.

Report sections of individual work packages can be accessed either from the navigation bar 'Work packages' or from the table at the bottom of the page under the section 'Report'.

Figure 145 Navigation bar – Work packages

Figure 146 Reporting per Work package Overview table

In this section you can describe the implementation of each work package in detail, incl. information on activities carried out and contributions by the project partners as well as information on any problems or deviations from the initial plan.

Here you also provide information on project output indicators and activities and deliveries. Reporting on deliverables, incl. upload of evidence of achievement is also part of reporting on work packages.

Figure 147 Reporting on work packages

Adding FLC Certificates to the Project Report

Financial reporting is done based on FLC certificates. All FLC certificates of all project partners, which were not yet included in any project report, are available to be included in the project report.

You can decide which of the available FLC certificates to include in the project report under 'Include in project finance report'. Only the selected FLC certificates will be taken into account for project report.

FLC certificates, which are not included in one project report, can be included in another project report. The eMS does not check whether all the FLC certificates included in a project report by the LP refer to the same reporting period. This means that FLC certificates could originate from different reporting periods. It is possible for programmes, however, to add error checks in the validation plugin.

Figure 148 - Including Partner FLC Certificates in a Project Report

Once the FLC certificates are selected to be added to the project report, they can be accessed from two places in the project report: navigation toolbar tab 'Certificates' or table 'List of Partner FLC Certificates' under 'Reports' tab. Under 'Certificates' only those selected will be visible.

Figure 149 Navigation bar – FLC Certificates

You can access individual expenditure items of project partners in the List of Expenditure (LoE) and decrease the amount of single items if necessary. The LP can also decrease single expenditure items to zero, which means that the expenditure claimed by the project partner for this items, will completely be excluded from the project report.

Figure 150 Editing Expenditures by the Lead Partner

Expenditures can be edited by a Lead Partner directly in the item view form by setting the difference in the corresponding field (see Figure 9). The values previously inserted by a partner and by FLC (Budget Line, Work package, Internal Reference Number, Invoice Number, Invoice Date, Date of Payment, Currency, VAT) cannot be modified anymore.

Attention!
The Lead Partner can only decrease items certified by FLC and cannot increase them.

Caution!

If a programme does not allow the Lead Partner to decrease or exclude expenditure of other partners, it is necessary for a programme to implement a validation in the plugin which is called at saving time of the expenditure element or at the validation step before submission of a report.

The Lead Partner can also revert partner reports back to the FLC or to the partners. This might be necessary in case he/she notices a mistake, which is not in his/her authority to correct. In order to do this, the applicant user role needs to have the user privilege 'LP_REVERT_REPORT'.

Figure 151 - Reverting Partner Reports from the Lead partner to FLC or project partners

Reverting the report to a project partner means that the project partner needs to correct and re-submit the report to the FLC and then the FLC needs to re-certify the report.

Reverting the report to FLC means that the FLC needs to re-certify the report but no corrections from the Partner are necessary.

Caution!

Lead Partner cannot revert his own report neither to FLC nor to the PP. If he does, the eMS displays error message at the top of the page and no action is performed by the system.

Project Report Tables

Figure 152 Navigation bar – Project Report Tables

Here you can find various summary tables of the expenditure included in the project report. Please note that the tables are updated before the report is submitted. All the cuts done by the LP should be immediately visible in the tables.

Project report tables follow the same logic as those in the partner report but take into account all certificates included in the project report.

Please note that the 'Currently reported' column changes its values (and name) each time a project report changes a status. Before the report is submitted it is 'amount to be declared to the JS' and once it is submitted it changes into 'amount declared to the JS'. Likewise, the column 'Previously reported (certified by CA) also changes if new CA confirmations become available. After submission of the report to the JS, the values do not change anymore.

Figure 153 - Project Report Tables

Attachments

Figure 154 Navigation bar – Attachments

It is possible to upload additional attachments relevant for the entire project report. In order to do so, please use the 'Attachments' tab.

Submitting a Project Report

Before submitting a project report, the saved report needs to be checked (analogically to checking saved projects when submitting the application form) by clicking "Check Saved Report" in the left-side menu. When clicking this button, the system will call a plugin where programmes can include validation rules for the project report.

Once the report is successfully checked, it can be submitted by clicking 'Submit Report', which will appear instead of 'Check Saved Report' button.

Figure 155 - Checking and submitting project report

The project report is submitted to the JS. The report state is changed from In' into 'Report Submitted' and a submission date is displayed in the overview table.

Figure 156 - Report submitted

After submission, the Lead Partner can see the report but can't modify it anymore.

A new project report can be opened once the previous one has been submitted to JS. More than one project report can be submitted per period.

In the eMS version 3_3.1 a new column was introduced to the partner overview table – namely 'Date of project report first submission'. The project report first submission date is saved at the moment of submission of the report to the JS for the first time and never changes even if the report was reverted and resubmitted. Users can always see two dates – the date of last submission and date of first submission. If the dates differ, the report was reverted and resubmitted.

Project Reports

Report	Report Start	Report End	State	Date Of Project Report Submission	Date Of Project Report First Submission
Period 1 06.10.2017 - 05.04.2018					
Report 1.1	06.10.2017	05.04.2018	Report submitted to C A	06.10.2017	06.10.2017
Period 2 06.04.2018 - 05.10.2018					
Period 3 06.10.2018 - 05.04.2019					
Period 4 06.04.2019 - 05.10.2019					
Period 5 06.10.2019 - 05.04.2020					
Period 6 06.04.2020 - 05.10.2020					
Period 7 06.10.2020 - 31.10.2020					

Figure 157 Date of project report first submission

Compare report with previous version

The system does not contain versioning of reports, like implemented for the application form. Reports are always only available as one version – if the report is reverted and changed, the system cannot revert changes.

eMS contains a functionality to support the detection of changes after reverting and resubmitting the report. The system generates an HTML file on reversion of a report. This HTML file is based on the PDF printout of the project progress report and uses the file configured as template for this report.

Programme.properties contains a configuration, which determines, which template file is used:

projectProgressReport.templateFile=templateProjectProgressReport.vm

The generated HTML file is stored in the database at the time of reversion. After resubmission, eMS can re-generate the HTML file and compare the stored version to the new version.

The comparison button is visible only in reports, which have been reverted at least once.

Figure 158: Comparison button and comparison dialog

Custom documents for project report

The software allows the generation of custom documents based on project reports. This feature works in the same way like the application form or partner report custom documents.

To make templates available in the form, they need to be put in a specific folder on the server. This folder is usually EMS_HOME/customVMs/projectProgressReport.

This section is only available to users having the "CUSTOM_DOCUMENTS_PROJECT_REPORT" privilege.

Project report monitoring (JS)

Access to reports

Needed user rights / privileges

The first authority to monitor the project report is the Joint Secretariat (JS). Typical user privileges for the JS role during monitoring include:

- JTS for accessing JS functionalities in the reporting phase

- JTS_CHECK allows to check the JS work before approving and submitting the report to MA

- JTS_SUBMIT allowed submitting checked JS work (Project report) to MA

- LP_REVERT_REPORT for reverting the project report to the LP and the FLC

- JS_REVERT_REPORT_TO_PP for reverting the report to the PP

- ENABLE_ATTACHMENTS_JTS for re-opening the attachment section for additional uploads by the LP.

- JTS_ATTACHMENT for attaching internal JS documents

- R_FINANCE_REPORT_DETAILS_PROCESSING; gives access to the right-hand side of the financial report (see below)

- R_FLC_CERTIFICATE; allows viewing of the finalised FLC certificate

- R_ FLC_XX; allows viewing of individual Tabs of the FLC section such as FLC checklist of FLC risk assessments.

- SU_XX_R; SU_XX_RW; provides write and/or read access to individual tabs of the supplementary information. XX is a placeholder for abbreviations of supplementary information tabs such as 'SU_PROCUREMENT_RW', which provides read and write access to the public procurement tab.

- Read/write to privilege for the JS Monitoring checklist.

- SUBMIT_EVALUATION to consolidate and finalise the monitoring checklist. Can be used for supervisors for approval of the monitoring work and submission of the report to MA.

- PROGRAMME_LIVING; shows the programme-level living table

- LOEXP shows a list of all expenditure items of all projects

- PROJECTFINANCE_CA; shows a programme-level list of all submitted project reports

How to access project reports

You can enter the project reports in the "Reporting" section of the left-side menu by clicking on "Open JTS Project Progress Reports".

All the project reports, which were submitted by Lead Partners and not yet processed (i.e. finalized) by the JS, are listed here.

By clicking on magnifying glass under 'View' column, you will be redirected to the project report in question.

Figure 159 – Accessing open project reports

Project report monitoring

You can see the report itself, including all the tabs and attachments as well as all the attached FLC certificates of partners' expenditure. You can access partner reports in two places 1) in the Report Tab 'Certificates' and 2) as well in the 'List of Partner FLC Certificates' table. You can access and edit the List of Expenditures (LoE) of each of the partners. The content part of the report cannot be edited by the JS, only the List of Expenditures can.

List of Expenditures (LoE)

Figure 160 Access to Partner FLC Certificates included in the project report.

When clicking on one of the certificates, you will be redirected to the List of Expenditure in question.

Figure 161 List of Expenditure, JS view

You can also open the generated FLC Certificate (pdf template, generated by the FLC when approving the partner report), by clicking on the 'Show FLC Certificate' under the 'FLC Certificate' column of the 'Partner FLC Certificates' table.

Figure 162 - Access to the printed FLC Certificate

Figure 163 printed FLC certificate view

From the general view of the List of Expenditure, you can open any single item verified by FLC and deduct or add amounts and make comments. It is also possible to edit the item directly in the List of Expenditure table. You can see all the details of declared amounts as well as all the cuts done by previous authorities (i.e. the FLC and the Lead Partner). Only JS columns are editable at this point.

Verified By FLC ⇕	Difference FLC ⇕	Amount Certified FLC ⇕	Comment FLC ⇕	Difference LP ⇕	Amount Certified L P ⇕	Comment LP ⇕
✔	€ 20.00	€ 10.00		€ 0.00	€ 10.00	
✔	€ 0.00	€ 30.00		€ 0.00	€ 30.00	
✔	€ 0.00	€ 20.00		€ 0.00	€ 20.00	
✔	€ 0.00	€ 145.00		€ 0.00	€ 145.00	
✔	€ 3.00	€ 1.50		€ 0.00	€ 1.50	
✔	€ 0.00	€ 4.50		€ 0.00	€ 4.50	
✔	€ 0.00	€ 3.00		€ 0.00	€ 3.00	
✔	€ 0.00	€ 21.75		€ 0.00	€ 21.75	
✔	€ 100.00	€ 50.00		€ 0.00	€ 50.00	
✔	€ 0.00	€ 100.00		€ 0.00	€ 100.00	
✔	€ 0.00	€ 150.00		€ 0.00	€ 150.00	
✔	€ 0.00	€ 725.00		€ 0.00	€ 725.00	

Figure 164 Cuts by previous authorities seen in the main List of Expenditure

Normally expenditure items will be framed in orange colour (see above), indicating that the items have been verified by FLC. In some cases, an expenditure item can be framed

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in pink colour, indicating that the item was originally submitted to FLC in a different partner report. Please refer to the FLC chapter for more information on FLC certification.

Figure 165 Pink rows indicate that expenditure items originates from a different partner report

The LoE is a very wide table with many columns. You can hide columns that you do not need through the column selector feature (see below).

Figure 166 Hiding columns of the LoE

Figure 167 Cuts by previous authorities seen in the single expenditure pop-up

If you find an amount partially or completely ineligible, you can decrease it either in the pop-up or in the List of Expenditure directly.

It is also possible to increase amounts by entering negative numbers into the 'Difference JS' field.

Figure 168 JS can change amounts in the popup

Difference JS ⇕	Amount Certified JS ⇕	Comment JS ⇕
€ 0.00	€ 10.00	
€ 0.00	€ 30.00	
€ 3.00	€ 17.00	
€ 0.00	€ 145.00	
€ 0.00	€ 1.50	
€ 0.00	€ 4.50	
€ 0.45	€ 2.55	
€ 0.00	€ 21.75	
€ 0.00	€ 50.00	
€ 15.00	€ 85.00	15 EUR is not eligi
€ 0.00	€ 150.00	
€ 0.00	€ 725.00	

Figure 169 JS difference in the List of Expenditure

Please note that flat rates will be adjusted automatically. It is not possible to manually cut the flat rates.

If any of the expenditure to be adjusted was declared in a currency different than EUR, you may decide to cut it in EUR or cut it in original currency. In order to cut in the original currency, you need to check the box 'edit amount in original currency'. Then you can enter the difference in the original currency and the system will calculate the difference and the new eligible amount in EUR using the exchange rate of the time when the item was submitted to the FLC.

Figure 170 Cuts in original currency

Attention

Cuts in original currency are only possible in the single expenditure pop-up. All edits done directly in the List of Expenditure are by default in EUR.

Project report approval

Assessment

You can assess and approve the report by filling out a checklist. The checklist is accessible from the left-side menu item 'Checklist'.

Figure 171 Access to the JS checklist

The checklist needs to be pre-defined by the programme and have the 'JTS progress report' type. It has to be assigned to a specific call for proposal as well as to the JS user role. Only if all these conditions are fulfilled, the JS user can see and fill out the checklist. Please see more information on the checklists in the chapter 'Checklists'.

Figure 172 Example of a JS checklist

JS approval of Project Report

Once the JS checklist is filled out and all the questions are confirmed, it must be consolidated by a privileged user (user privilege: SUBMIT_EVALUATION). For more information please see the chapter 'Checklists'. Only after consolitdation is done and confirmed it is possible to finish the JS check. The user who does the consolidation needs to click on 'Finish JS check' at the bottom of the consolidation view to submit the report to MA.

Figure 173 JS checklist consolidation view with a possibility to finalise the JS check

Caution!

The 'Finish JS Check' button is only visible if all the question in the consolidated view are confirmed and the checklist is saved.

○ Checklist
○ Js Submit Report
○ Application Form
○ Print Project Report
○ Attachment Upload Closed

Figure 174 Submitting the Project Report by JS to MA

After the project report is submitted by the JS (i.e. approved) it disappears from the list of 'Open project reports' and moves to the similar list of the Managing Authority.

Reverting project reports to LP, FLC or PP

If you are not satisfied with the quality of the report, you can revert the report to the LP, FLC or PP for further improvements. When reverting a report, information already entered into the JS checklist is not lost, even if the checklist had not been consolidated prior to reverting.

Reverting the Project Report to the Lead Partner

You can revert the project report to the Lead Partner by clicking the 'Revert from JS to LP' button in the left-side menu. Please note that this menu item requires that the user privilege 'JS_REVERT_REPORT' is allocated to the JS user role.

○ Exit

○ Help
○ Revert From JS To LP

○ Contacts

Figure 175 JS option to revert the entire Project Report to the LP

If a project report is reverted to the LP, it can be modified by the lead partner and re-submitted to the JS.

Reverting FLC Certificates of single partners to the FLC of the partners or to the project Partner

If you are not satisfied with one or more FLC certificates and find it necessary to correct the FLC job, you can revert individual FLC certificates to the FLC of the corresponding project partner. In such a case the FLC needs to modify their certificate and resubmit it to the Lead Partner. The Lead Partner subsequently needs to resubmit the Project Report to the JS. You can revert the FLC Certificate to FLC by clicking 'Revert from JS to FLC' in the list of certificates (see below). Please note that this type of reverting requires that the user privilege 'JS_REVERT_REPORT' is allocated to the JS user role.

It is also possible to revert the certificate from the JS directly to the project partner. In such a case, the partner needs to correct the partner report and resubmit it to the

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FLC. The FLC subsequently needs to reissue the certificate and resubmit it to the Lead Partner, who in turn needs to resubmit the project report to the JS.

You can revert the partner report to the project partner by clicking 'Revert from JS to PP' in the list of certificates (see below). Please note that this type of reverting requires that the user privilege 'JS_REVERT_REPORT_TO_PP'. These options are available in the 'List Of Partner FLC Certificates' table in the project report overview.

Figure 176 JS option to revert the Certificate of a project partner to the FLC or to the Project Partner

Reopening the attachment section for the LP

In case you require additional documents to be provided by the LP, but otherwise no changes to the project report, you can simply re-open the attachment section of the project report for the LP. For this the user privilege 'ENABLE_ATTACHMENTS_JTS' is necessary.

Figure 177 JS option to reopen the attachment section of the project report for the LP

Requesting additional project and partner reports

In general, each of the partners is able to generate just one partner report per period. If needed, you can enable additional partner reports for any of the existing periods. In order to do this, you open the report overview of the project in question, select the relevant period and click on 'Create report for' in the reporting table of the relevant partner. The partner is then able to modify and submit the report.

Figure 178 Requesting additional partner reports

Similarly, the Lead Partner is able to create just one Project Report per period. If needed, the JS can enable additional project reports for any of the existing periods. In order to do this, you open the report overview of the project in question and select the relevant period and click on 'Create report for'. The Lead Partner is able to modify and submit such a report.

Figure 179 Requesting additional project report

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Monitoring types of FLC/JS/MA corrections

Based on request of programmes, starting from eMS version 3_2, FLC, JS and MA can indicate a type of corrections each time they cut costs in partner List of Expenditure. The system also supports statistics on such corrections.

Only the authorities that are considered management verifications bodies have the possibility to indicate a type of correction.

FLC corrections

FLC works as previously in the List of Expenditure and makes necessary corrections. Each time, the 'Difference FLC' field contains amount other than 0 the dropdown in the column 'FLC correction type' becomes active.

FLC can select a type of correction for correcting the invoice from a dropdown.

Figure 180 List of Expenditure - FLC cuts

As it is not possible to correct the flat rates, it is also not possible to select a correction type for flat rates. The system however calculates the relevant share of flat rates and adds it to the cut in the statistics on reasons for correction.

Statistics on FLC cuts are shown in the FLC Report.

Description Of Finding,# Observation And Limitations

Flc corrections

	Staff costs	Office and administration	Travel and accomodation	External expertise and services	Equipment	Infrastructure and works	Net Revenue	Total per budgetline
Incomplete audit trail, missing evidence	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Incorrect public procurement	€ 1.00	€ 0.15	€ 0.00	€ 0.00	€ 5.00	€ 0.00	€ 0.00	€ 6.15
State aid-related error	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Revenue generating operation	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Information and publicity error	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Incorrect use of simplified cost option	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
VAT not eligible	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
No or insufficient link to project	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Miscalculation	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Cost declared twice	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Double funding	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Breach of sound financial management principle	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Other ineligible expenditure	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Positive correction	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Other	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Total	€ 1.00	€ 0.15	€ 0.00	€ 0.00	€ 5.00	€ 0.00	€ 0.00	€ 6.15

Figure 181 FLC Report - FLC corrections overview table

JS corrections

Similar to the FLC, JS works as previously in the List of Expenditure and makes necessary corrections. Each time, the 'Difference JS' field contains amount other than 0 the dropdown in the column 'JS correction type' becomes active.

Figure 182 List of Expenditure - JS cuts

The flat rates are added to the overall statistics on correction types, not allocated to single expenditure item in the List of Expenditure.

The project report statistics on JS corrections are available from the report view (left side menu 'JS corrections').

Figure 183 Access to JS corrections overview tables

There are multiple tables under this menu item. One summary table of project report and one table per partner report included in the project report.

ITP80   [Show More]   **Js corrections**

| Report | Workpackages | Certificates | Project Report Tables | Attachments |

Cummulative corrections

	Incomplete audit trail, missing evidence	Incorrect public procurement	State aid-related error	Revenue generating operation	Information and publicity error	Incorrect use of simplified cost option	VAT not eligible	No or insufficient link to project
Staff costs	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 2.50	€ 0.00	€ 0.00	€ 0.00
Office and administration	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.50	€ 0.00	€ 0.00	€ 0.00
Travel and accomodation	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
External expertise and services	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 10.00	€ 0.00	€ 0.00	€ 0.00
Equipment	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Investment	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Net Revenue	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Total	**€ 0.00**	**€ 0.00**	**€ 0.00**	**€ 0.00**	**€ 13.00**	**€ 0.00**	**€ 0.00**	**€ 0.00**

⬒ Export

Certificate 2.1, Partner 1 MLP

	Incomplete audit trail, missing evidence	Incorrect public procurement	State aid-related error	Revenue generating operation	Information and publicity error	Incorrect use of simplified cost option	VAT not eligible	No or insufficient link to project
Staff costs	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 2.50	€ 0.00	€ 0.00	€ 0.00
Office and administration	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.50	€ 0.00	€ 0.00	€ 0.00
Travel and accomodation	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
External expertise and services	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 10.00	€ 0.00	€ 0.00	€ 0.00
Equipment	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00

Figure 184 JS corrections overview tables

MA corrections

Similarly, to the FLC and JS, MA works as previously in the List of Expenditure and makes necessary corrections. Each time, the 'Difference MA' field contains amount other than 0 the dropdown in the column 'MA correction type' becomes active.

Figure 185 List of Expenditure - MA corrections

The data is transferred to the overview MA corrections tables. They are accessible from the report view, left-side menu item 'MA corrections'. MA can also see JS corrections accessible from the menu item 'JS corrections'.

Figure 186 Access to MA corrections and JS corrections

MA sees cumulative values for the entire project report and a table per partner report included in the project report.

ITP80 [Show More] **Ma corrections**

Report 〉 Workpackages 〉 Certificates 〉 Project Report Tables 〉 Attachments

Cummulative corrections

	Incomplete audit trail, missing evidence	Incorrect public procurement	State aid-related error	Revenue generating operation	Information and publicity error	Incorrect use of simplified cost option	VAT not eligible	No or insufficient link to project
Staff costs	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 3.49	€ 0.00	€ 0.00
Office and administration	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.69	€ 0.00	€ 0.00
Travel and accomodation	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
External expertise and services	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Equipment	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 13.98	€ 0.00	€ 0.00
Investment	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Net Revenue	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Total	**€ 0.00**	**€ 0.00**	**€ 0.00**	**€ 0.00**	**€ 0.00**	**€ 18.16**	**€ 0.00**	**€ 0.00**

Export

Certificate 2.1, Partner 1 MLP

	Incomplete audit trail, missing evidence	Incorrect public procurement	State aid-related error	Revenue generating operation	Information and publicity error	Incorrect use of simplified cost option	VAT not eligible	No or insufficient link to project
Staff costs	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 3.49	€ 0.00	€ 0.00
Office and administration	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.69	€ 0.00	€ 0.00
Travel and accomodation	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
External expertise and services	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Equipment	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 13.98	€ 0.00	€ 0.00

Figure 187 MA corrections overview tables

Programme level overview tables 'Management verification overview'.

Based on FLC, JS and MA corrections a programme overview table 'Management verification overview' is generated. The table is accessible from the left side menu item 'Management verification overview' under 'Programme tables'. The menu item is only visible to users with privilege CORRECTIONS_OVERVIEW.

Figure 188 Access to the Management verification overview

The user can decide what data should be shown in the table by selecting corrections of which authorities to take into account (multiple selections possible) and the time period to include. The system takes the data from reports approved by the authority. This means that for example the JS corrections are shown in the table only if the report was already approved by the JS and submitted to MA.

Management verification overview

	Incomplete audit trail missing evidence	Incorrect public procurement	State aid-related error	Revenue generating operation	Information and publicity error	Incorrect use of simplified cost option	VAT not eligible	No or insufficient link to project	Miscalculation	Cost declared twice	Double funding	Breach of sound financial management principle	Other ineligible expenditure	Positive correction	Other	Total per budgetline
Staff costs	€ 200.00	€ 1 251.00	€ 0.00	€ 254.00	€ 0.60	€ 0.00	€ 6.25	€ 0.00	€ 0.00	€ 3.05	€ 0.04	€ 0.00	€ 200.00	€ 0.00	€ 0.00	€ 1 914.94
Office and administration	€ 30.00	€ 250.14	€ 0.00	€ 75.05	€ 0.09	€ 0.00	€ 1.25	€ 0.00	€ 0.00	€ 0.45	€ 0.00	€ 0.00	€ 30.00	€ 0.00	€ 0.00	€ 386.98
Travel and accomodation	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 7.18	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 17.15	€ 0.00	€ 0.00	€ 0.00	€ 24.33
External expertise and services	€ 0.00	€ 0.00	€ 0.00	€ 1 000.00	€ 0.00	€ 10.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.22	€ 0.00	€ 1 000.00	€ 0.00	€ 0.00	€ 2 010.22
Equipment	€ 1 000.00	€ 5 000.00	€ 0.00	€ 20.00	€ 0.00	€ 0.00	€ 25.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 6 045.00
Infrastructure and works	€ 0.00	€ 4.00	€ 0.00	€ 0.00	€ 3.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 15.26	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 22.26
Net Revenue	€ 0.00	€ 0.00	€ 0.00	€ -2.00	€ 0.00	€ 5.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 3.00
Total	€ 1 230.00	€ 6 505.14	€ 0.00	€ 1 347.05	€ 10.87	€ 15.00	€ 32.50	€ 0.00	€ 0.00	€ 18.76	€ 0.26	€ 17.15	€ 1 230.00	€ 0.00	€ 0.00	€ 10 406.73

Export As Xls   Export As Pdf

Figure 189 Management verification overview programme table

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Final Report

As not all programmes use a final report, this feature is included in the community eMS, but it doesn't need to be used.

Project partners cannot create a final report themselves; usually it is the JS allowing the lead partner of a project to see and fill out the final report.

In this version of eMS only the lead partner can see and fill out the final report, other partners do not have an access.

Granting access to the final report

The final report contains by default only one text input field. Customizable questions of the final report checklist can be defined by the programme via configuration.

To do this, an administrator needs to insert data into the technical database. The provided script is an example of which values need to be inserted in the database. Please modify the script and add all questions needed for your programme before execution.

```
INSERT INTO `finalreport_question` (`id`, `nr`) VALUES ('1', '1');
INSERT INTO `finalreport_question_mlc` (`finalreport_question_id`, `language`, `criteria`, `description`) VALUES
('1', 'EN', 'Criteria1', 'This is my question');
```

Adding text fields to the final report

The eMS allows adding up to 20 additional text input fields to the final report. For this purpose, the needed elements need to be available in the translation tree ("Configure eMS" section). The elements can be configured in the section "additionalTIF.FR". The elements need to be introduced via a script.

After they are inserted to the system, the configuration can be done via the user interface.

The items with round icons configure the text of the question and contain the configuration on visibility of this question.

Figure 190 Question visibility configuration

The elements with the square icon contain the configuration for the user input.

Figure 191 Configuration for answers

Figure 192 Final report form

Granting access to the final report

Needed user rights / privileges

The user, who enables the final report, needs to have the userprivilege "ENABLE_FINAL_REPORT".

If this privilege is available, a user can enable the final report.

Figure 193 Enable final report for the lead partner by a privileged authority

After making the report available to the lead partner, the privileged user can decide to hide the report again. Doing so hides the report and makes it not accessible by any user again.

Figure 194 Disable final report

Access to the final report by the lead partner

After the final report is enabled for this project, the lead partner can access the final report from the list of reports.

Figure 195 Access to the final report by the lead partner

Figure 196 Final report input form

Access to the final report by authorities

Any authority, who should have read only access to the final report (JS, MA, CA, …) need to have the "FINAL_REPORT_R" privilege.

Assigning Officers

Assigning an officer to a project

Needed user rights / privileges

For assigning officers to be in charge of individual projects, users (JS/MC/Admin) need to have the privilege "OFFICER_IN_CHARGE".

How to assign an officer

Assigning Officers can be entered after selecting the corresponding item in the left side menu→ Applications.

Figure 197 Assign Officer Menu Item

Afterwards, you are redirected to the section "Assign Officer to a Project". First, the user to be assigned as officer has to be chosen. Afterwards the projects have to be specified. The process needs to be confirmed by clicking the button "Save Assignment Changes" on the left bottom of the page.

Only users with assigned "JTS" privilege show up in the dropdown for selection.

Figure 198 Assigning Officer to a Project

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Browsing the assigned projects

Access to the assigned projects is via the left side menu→ Applications→ "My Officer Applications".

▼ Personal

- Dashboard
- Generated Files
- User Account

▼ Applications

- My Applications
- Bookmarked Applications
- Application Browser
- Modification Requests
- Assign Officer
- My Officer Applications
- Saved Notifications
- Sent Notifications

Figure 199 My Officer Applications - Menu Item

After clicking the corresponding item, you are redirected to the list of "My Assigned Applications", where you can see the applications assigned to you.

Assigning external experts for quality assessment

eMS contains currently no functionality for direct assignment of external experts to quality assessment. Existing functionalities can be used as a workaround.

Used functionalities

The following functionalities are used in this workaround.

- User management
- User roles/privileges
- JTS assignment

If you wish to read more about the different functionalities, please check out the specific chapters of this manual.

User privileges needed for external experts

privilegekey	Explanation
CHECKLIST_*	Every checklist to which the external expert needs access should be assigned
DASHBOARD	Access to the dashboard
EVALUATE_PROJECT	Allows access to the quality assessment from the "in-project" view
OFFICER_LIST	See all personally assigned application forms in "My officer applications"

Workflow to assign external experts

1. Set users "active" checkbox to "false" for users, who should be external expert – the user will not be able to login temporarily.

2. Assign the JTS user role to this user (only with assigned JTS privilege he will show up in the "Assign officer" user list.

3. Assign the relevant projects to this user in the "Assign officer list" section

Assign Officer To Project

ExExpert ▾

	Project_id ⬍	Assigned Officer ⬍	Name ⬍	Acronym ⬍	Start ‹	
☐	ITP74	JTS1 - Jts1 JTS1Lastname; admin - Admin eMS	MyProject-eMS title	MyProject-eMS	03.10.2014	31.10.
☐	ITP76	JTS1 - Jts1 JTS1Lastname	Spreading worst practises to the Central Baltic area	WORP	03.10.2014	03.10.
☐	ITP77		Restoring habitats	RESTORE	17.10.2014	16.10.

4. Remove the JTS user privilege from this user (otherwise the user would have access to much more functionality than needed)

5. Set the user to active again – he will be able to login to the system again.

For de-assignment, please follow the same logic. To assign/de-assign users in the "assign officer" functionality, the user has to have during the assignment JTS privileges.

MA Project Report Monitoring

Access to project reports

Needed user rights / privileges

The Managing Authority (MA) is a part of the obligatory monitoring workflow. The following user privileges are typically used for the MA role during monitoring:

- MA is the basic MA privilege

- PROJECT FINANCE MA is needed to access to view the list of reports waiting for MA approvals as well as the list of reports already approved by MA. This privilege is also needed to submit reports to CA.

- MA_REVERT_REPORT for reverting the report to the JS

- R_FINANCE_REPORT_DETAILS_PROCESSING; gives access to the right-hand side of the financial report (see below)

- R_FLC_CERTIFICATE; allows viewing of the finalised FLC certificate

- R_ FLC_XX; allows viewing of individual Tabs of the FLC section such as FLC checklist of FLC risk assessments.

- SU_XX_R; SU_XX_RW; provides write and/or read access to individual tabs of the supplementary information. XX is a placeholder for abbreviations of supplementary information tabs such as 'SU_PROCUREMENT_RW', which provides read and write access to the public procurement tab.

- Read/write to privilege for the MA Monitoring checklist.

- SUBMIT_EVALUATION to consolidate and finalise the MA monitoring checklist. Can be used for supervisors for approval of the MA monitoring checklist. If such a step is not needed, the privilege does not need to be assigned to any MA user.

- PROGRAMME_LIVING; shows the programme-level living table

- LOEXP shows a list of all expenditure items of all projects

- PROJECTFINANCE_CA; shows a programme-level list of all submitted project reports

How to access project reports

You can enter project reports in the "MA Project Progress Reports" section of the left-side menu by clicking on "MA approvals". This list shows all project reports waiting for approval by MA.

Figure 200 MA Access to the Project Progress Reports

Project report monitoring

Under 'MA Approvals' all the reports approved by the JS are listed. You can use this list to access reports, and attached FLC Certificates. You also use this list to approve reports.

Figure 201 List of all Project Reports waiting for MA Approval

You can access project reports by clicking on magnifying glass in the 'View' column of the overview table.

Figure 202 Access to a Project Progress Report

By clicking on the magnifying glass under 'View' column, you will be redirected to the project report in question. You can view the report itself, including all the tabs and attachments as well as all the attached FLC Certificates of partners' expenditure. Via the FLC Certificates, you can also access and edit the List of Expenditure of individual partners. The content part of the report cannot be edited by the MA, only the List of Expenditures can.

Figure 203 MA view of the Project Progress Reports and Partners' FLC Certificates

List of Expenditures

You can access the partner reports and List of Expenditures of individual project partners either via the tab 'Certificates' or a table 'List of Partner FLC Certificates'.

Figure 204 Access to the Partner FLC Certificates of the project progress report.

When clicking on one of the certificates available in the tab 'Certificates' or on any place in the row listing the relevant certificate in the 'List of Partner FLC Certificates' you will be redirected to the List of Expenditure in question.

Figure 205 MA view of the List of Expenditure

You can also open the generated FLC Certificate (pdf template, generated by the FLC when approving the partner progress report), by clicking on the 'Show FLC Certificate' under the 'FLC Certificate' column of the 'Partner FLC Certificates' table.

Figure 206 - access to the printed FLC Certificate

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Figure 207 printed FLC certificate view

In order to verify and possibly edit the expenditure, you need to access the List of Expenditure of one of the partners. From the general view of the List of Expenditure, you can open any single item verified by the FLC and approved by the JS and edit it. It is also possible to edit the item directly in the List of Expenditure table. Only the fields, which the MA can edit are editable.

You see all the details of declared amounts as well as all the cuts done by previous authorities (i.e. the FLC, Lead Partner and JS).

Difference FLC	Amount Certified FLC	Comment FLC	Difference LP	Amount Certified L P	Comment LP	Difference JS	Amount Certified JS	Comment JS
€ 4.00	€ 366.00		€ 0.00	€ 366.00		€ 12.00	€ 354.00	
€ 6.00	€ 382.00		€ 0.00	€ 382.00		€ 13.00	€ 369.00	
€ 7.00	€ 383.00		€ 0.00	€ 383.00		€ 14.00	€ 369.00	
€ 7.00	€ 395.00		€ 0.00	€ 395.00		€ 11.00	€ 384.00	
€ 2.00	€ 50.72		€ 0.00	€ 50.72		€ 1.00	€ 49.72	
€ 8.00	€ 47.29		€ 0.00	€ 47.29		€ 1.00	€ 46.29	
€ 8.00	€ 47.57		€ 0.00	€ 47.57		€ 1.00	€ 46.57	
€ 4.00	€ 53.28		€ 0.00	€ 53.28		€ 2.00	€ 51.28	
€ 4.00	€ 407.00		€ 0.00	€ 407.00		€ 15.00	€ 392.00	

Figure 208 Cuts by previous authorities seen in the main List of Expenditure

Figure 209 Cuts by previous authorities seen in the single expenditure popup

If you find an amount to be completely or partially ineligible, you can decrease it either in the popup or in the List of Expenditure directly.

Figure 210 - difference MA in the popup

Figure 211 MA difference in the List of Expenditure

Please note that in both cases, if the project has any flat rates they will be adjusted automatically. It is not possible to manually cut the flat rates.

If any of the expenditures to be cut was declared in a currency different than EUR, you may decide to cut it in EUR or cut it in original currency. In order to cut in the original currency, you need to check the box 'edit amount in original currency'. Then you can write the difference in the original currency and the system will calculate the difference in EUR and new eligible amount in EUR using the exchange rate of the time when the item was submitted to the FLC.

Figure 212 Cuts in original currency

Attention!
Cuts in original currency are only possible in the single expenditure popup. All edits done directly in the List of Expenditure are by default in EUR.

Project Report approval

Assessment

You can fill out a checklist for every Project Report you assess. The checklist however, is not an obligatory step in the workflow and the report can be approved by the MA without even opening the checklist.

In order to access the checklist, it needs to be pre-defined by the programme and have the 'MA checklist' type. It has to be assigned to a specific call for proposal as well as to the user role. Only if all these conditions are fulfilled, the MA user can see and fill out the checklist. Please see more information on the checklists in the chapter 'Checklists'.

The checklist is accessible through a pencil icon at the end of the 'MA Approvals' table.

Figure 213 Access to the MA checklist

Figure 214 MA checklist view

Once the MA checklist is filled out and all the questions are confirmed, it can be consolidated by a privileged user (user privilege SUBMIT_EVALUATION) For more information please see the chapter 'Checklists'. As the checklist is not obligatory step in the workflow, there is no need to finalise it and the consolidated view is only saved.

Ma Checklist

Question				
Weight	Value	Average	Weighted Value	Comm
⊕ MA_Does_The_Check			0.00	
This is the MA question1				
1	Yes **No**	N A	0.00	
	Yes **No**		0.00	
Total Assessment Value **Max 1.00**			0.00	

Save   Print Preview   Back To Previous Step   Back To Overview   Reset All Answers

Figure 215 Consolidated view of the MA checklist

> **Attention!**
>
> Currently it is not possible to see which of the checklists are filled out, without opening them one by one. In the future, the filled out checklists will be marked with a colour code. Additionally, it will not be possible to modify the checklist after approval of a report.

MA approval of the Project report

In order to approve project reports, you need to check the box in the column 'Approve current report' directly in the 'MA Approvals' table. You can approve one or multiple reports at the same time. Once all the reports to be approved are marked, you need to confirm the approval by clicking on 'submit' button.

Project Finance Report MA

Figure 216 Approving Project Progress Reports by MA

Once the report is approved, it disappears from the 'MA Approvals' list and can be found in the other list under 'MA Project Progress Reports' menu item, i.e. 'MA Approved'.

Figure 217 View of project progress reports approved by MA

Through this view (magnifying galss to the right), you can access the project reports and relevant FLC Certificates but in read-only mode. Also the checklists are accessible.

Reverting from MA to JS

If you are not satisfied with a Project Report, you can revert it to the JS by clicking the corresponding item at the bottom of the left-side menu. In order to do this, the MA role needs to have the user privilege 'MA_REVERT_REPORT'.

Application Form

Print Project Report

Report Lead Partner 1 Period 1

Exit

Help

Revert From MA To JS

Figure 218 Reverting the Project Progress Report from MA to JS

Certifying Authority

There is a number of user privileges giving access to all or only some parts of the CA workflow.

Privilege	Description
CA	Gives access to all CA sections and the entire workflow.
CA _MG_Confirmation	Allows generating CA Confirmation. Gives access to 'Generate CA confirmation (view and edit all elements available in the section like reports, CA sitting ducks or findings) as well as access to overview of existing CA confirmations with a possibility to delete them.
CA_generate_draft_interimpaymentapplication	Gives access to the following menu items: CA confirmations (read only), Generate draft interim payment claim to EC (read/write), Draft interim payment claims to EC (with a possibility to delete or modify but NOT approve them) and Interim payment applications to EC (read only).
CA_MG_interimpaymentapplication	Gives access to the following menu items: CA confirmations (read only), Draft interim payment claims to EC (with full possibilities – modify, delete AND approve drafts) and Interim payment claims to EC (read/write).
CA_MG_finalpaymentapplication	Gives access to the following menu items: CA confirmations (read only), Interim payment claims to EC (read only), Generate final interim payment application to EC (read/write) and Final payment application to EC (read/write)
CA_generate_draft_accounts	Gives access to the following menu items: CA confirmations (read only), Final interim payment applications to EC (read only), Generate draft account for accounting period (read/generate) and Draft accounts for accounting period (with a possibility to modify and delete drafts but NOT approve them) and Accounts for accounting period (read only) and all reports on irregularities (withdrawals, etc.) (read only).
CA_MG_accounts	Gives access to the following menu items: CA confirmations (read only), Final interim payment application to EC (read only), Draft accounts for accounting period (with full possibilities – modify, delete AND approve drafts), Accounts for accounting period (read/write) and all reports on irregularities (withdrawals, etc.) (read only).
CA_projectpayment_R	Gives access to the menu item Payments to projects (read only)
CA_projectpayment_W	Gives access to the menu item Payments to projects (read/write)
CA_ECpayments_R	Gives access to the menu item Payments from EC (read only)
CA_ECpayments_R	Gives access to the menu item Payments from EC (read/write)

MG_financialcorrecions	Gives user access to 'Corrections and Audits' menu item from the project reporting dashboard and left-side menu item 'Add correction'.

The CA functionalities in the eMS are meant to support the entire CA workflow, including confirming the amounts, recording payments, requesting payments from EC and submission of annual accounts as well as reporting on irregularities.

CA Confirmation

CA Confirmation in the eMS is meant as CA approval of reports and financial corrections. It is NOT the certification in SFC! It is simply a step by CA to bundle reports into a 'Confirmation' and forward them to the next step of the workflow.

Figure 219 Generating CA Certificates – accessing CA checklists

Verification of a project report

In the section 'generate CA Confirmation' the CA will find a list of all project reports approved by MA as well as a list of all financial corrections (findings, not controls) introduced in the eMS (including the closed ones and the ones which are not yet closed). The lists are divided per fund and different funds are accessible via tabs in the top of the page.

> **Attention!**
>
> From the eMS version 3_2.1 the CA Confirmation is single-fund based. Before this version, it was possible to generate a CA Confirmation with multiple funds included and the funds were separated at the level of 'Interim payment application to EC'.
> Such confirmations are not valid in the new version and must be removed and re-created respecting the single-fund principle.

The CA can access the reports and financial corrections from the lists and can fill out a checklist (per report) which is an optional step in the workflow.

I total ution	To be included public partner contribution	To be included private partner contribution}	View Project Report	Checklist
27.68	€ 27.68	€ 0.00	🔍	✏
134.55	€ 89.70	€ 44.85	🔍	✏
579.36	€ 8 610.99	€ 68.37	🔍	✏
€ 0.00	€ 0.00	€ 0.00	🔍	✏
86.72	€ 86.72	€ 0.00	🔍	✏
597.39	€ 43 011.71	€ 28 585.68	🔍	✏
22.96	€ 22.96	€ 0.00	🔍	✏
23.07	€ 17.13	€ 5.94	🔍	✏
809.92	€ 14 580.27	€ 10 229.65	🔍	✏
76.00	€ 76.00	€ 0.00	🔍	✏
12.50	€ 12.50	€ 0.00	🔍	✏

Figure 220 CA checklists

Many CAs use checklists for approving project reports. These checklists can be accessed directly from the table by clicking the 'Checklist' button. They can be filled out, saved and finalised. Finalised checklist can be reopen and further edited by the CA user as long as the report is not included in the CA Confirmation. Later, only the admin user can unlock the checklist. Once a checklist is finalised, the checklist icon in the 'Finance reports' table changes color to green. To see how to create a checklist and allocate it to the relevant call and user please see the chapter 'Checklists'.

> **Attention!**
>
> The checklist is only available to CA if created in 'Manage checklists' section with a type CA checklist and allocated to the call and to the CA user role.

Via the 'Finance reports' table, the CA has access to all the project reports and to the List of Expenditure included in each of the FLC certificates (via 'View Project Report' button). CA can decide on deducting or increasing some costs or excluding some invoices from the CA Confirmation and keeping them for further processing (Please see – 'CA Sitting ducks' below). In order to do this, the CA should open a relevant report and access the FLC certificate in question. From the List of Expenditure, the CA can open any item and introduce changes. The CA can also see changes and approvals done by all the previous authorities.

Note on financial corrections by CA: The CA will typically correct reports that have not yet been included into a CA Confirmation via the interface shown below (List of expenditure). At later stages (i.e. expenditure already included in a payment application to EC), the CA

uses the financial corrections interface (for more information please see the chapter 'Financial Corrections').

Figure 221 List of expenditure – Interface for financial corrections by CA

Figure 222 List of expenditure – Interface for financial corrections by CA (single item popup)

The CA can correct the invoices in two ways, directly in the List of Expenditure table (Figure 3) or in the popup opened for each invoice separately (Figure 4). If the project uses flat rates, they cannot be corrected separately but get adjusted with any other correction by CA. Please note, that if you correct the amounts directly in the List of Expenditure, the flat rates will get adjusted only after the corrections of other invoices are saved.

If necessary, the CA can also revert a report to MA or JS for further verification. In order to do this a following user privileges need to be assigned to the CA user role: JS_REVERT_REPORT and/or MA_REVERT_REPORT. You will see these options in the left-side menu of a project report.

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Figure 223 CA has the option to revert reports to MA or JS. This re-opens the report for these authorities.

Excluding invoices from the CA Confirmation (CA Sitting Ducks)

If necessary, the CA can decide not to process some of the invoices right away and temporarily exclude them from the CA Confirmation. This process is referred in the eMS as CA Sitting Ducks.

Unlike sitting ducks at FLC level, at CA level all the invoices from the LoE by default are marked 'to be included in CA Confirmation'. If any item should be excluded, it needs to be unticked manually in the List of Expenditure.

Figure 224 Excluding invoices from CA Confirmation (CA Sitting Ducks)

If the excluded invoice generates flat rates, they will automatically be excluded from the CA Confirmation and saved for later processing.

Technically an item becomes a sitting duck once the report in which it was reported to the CA is included in a CA Confirmation and an item is excluded. The CA Sitting Ducks are marked brown in the List of Expenditures.

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Date of ca confirmation ⇕	Difference MA ⇕	Amount Certified MA ⇕	Comment MA ⇕	To be included in ca confirmation ⇕	Already Included In C A Confirmation ⇕	Difference C A ⇕	Amount Certified CA ⇕	Comment C A ⇕
28.11.2016	€ 10 000.00	€ 68 006.15		✔	✔	€ 0.00	€ 68 006.15	
28.11.2016	€ 0.00	€ 9 590.00		✔	✔	€ 0.00	€ 9 590.00	
28.11.2016	€ 0.00	€ 16.19		✔	✔	€ 0.00	€ 16.19	
	€ 0.00	€ 16.19		☐	☐	€ 0.00	€ 16.19	
28.11.2016	€ 1 500.00	€ 10 200.92		✔	✔	€ 0.00	€ 10 200.92	
28.11.2016	€ 0.00	€ 1 438.50		✔	✔	€ 0.00	€ 1 438.50	
28.11.2016	€ 0.00	€ 2.42		✔	✔	€ 0.00	€ 2.42	
	€ 0.00	€ 2.42		☐	☐	€ 0.00	€ 2.42	
28.11.2016	€ 0.00	€ 30.76		✔	✔	€ 0.00	€ 30.76	
28.11.2016	€ 0.00	€ 47 950.00		✔	✔	€ 0.00	€ 47 950.00	
28.11.2016	€ 50 000.00	€ 340 000.00		✔	✔	€ 0.00	€ 340 000.00	
	€ 0.00	€ 80.99		☐	☐	€ 0.00	€ 80.99	CA sitting duck

Figure 225 CA sitting ducks at the List of Expenditure

The excluded invoices can be accessed and processed from the 'Generate CA Confirmation' view 'Invoices previously not included in ca-confirmation (CA Sitting Ducks)' table.

Invoices previously not included in ca-confirmation

Select	Project Number ⇕	Project Acronym ⇕	Name Of The Lead Partner ⇕	Country Of The Lead Partner ⇕	Name Of The Partner ⇕	Country Of The Partner ⇕	Programme Priority Axis ⇕	Progress Report Number ⇕	Budgetline ⇕	Workpackage ⇕	T
☐	13	ATP	Institute for cooperation	POLSKA	Institute for cooperation	POLSKA	ITP Priority 1	1	External expertise and services	M Management	
☐	13	ATP	Institute for cooperation	POLSKA	Institute for cooperation	POLSKA	ITP Priority 1	1	Staff costs	M Management	
☐	13	ATP	Institute for cooperation	POLSKA	Institute for cooperation	POLSKA	ITP Priority 1	1	Office and administration	M Management	
☐	59	MasterOfTheScenarios	My lp1	LATVIJA	My Project partner2	LATVIJA	ITP Priority 1	1	Travel and accomodation	P Preparation	

Figure 226 CA Sitting Ducks at 'Generate CA Confirmation' view

The sitting ducks can be accessed and further processed (e.g. additional cuts can be applied by the CA). They can be included in any further CA Confirmation by simply selecting them from the list of 'Invoices previously not included in CA confirmation'.

Closing Financial Correction/Control

In order to include a financial correction in the CA Confirmation, the CA needs to close the finding first. As long as the finding is not checked as 'closed' it cannot be selected for the CA Confirmation.

> **Caution!**
>
> Please note that from version 3_2.1 single findings and not the entire controls are included in the CA Confirmation. For more information on financial corrections, please see the relevant chapter of the manual.

Only CA can close finding/control. The CA can access the financial correction module directly from the 'Generate CA Confirmation' view by clicking on 'View control' in the relevant row of the Financial corrections (findings) table.

The link will always lead to the control view but with the focus on finding in question. Other findings of the control are collapsed and can be also accessed.

Figure 227 Generating a CA certificate – Controls need to be 'closed' before they can be included in the certificate

CA should check the finding, fill out missing data and then click on 'Finding confirmed by CA' tick box in the finding section. It is possible to confirm the entire control (including all findings) by checking the 'Control confirmed by CA' box in control section – this will confirm all the findings at once. It is possible to re-open the finding/control only as long as it is not included further in the workflow, i.e. in the CA Confirmation. Once the control is confirmed by CA there is no possibility to add additional findings to that control.

Some of the fields (i.e. data on repayment by project) stay editable also after confirming the finding.

Figure 228 Financial Corrections Interface – Closing Findings/Controls

Please note that in case the finding should be reported to the European Commission (reporting on recoveries, withdrawals, etc.) it is necessary to select a scenario the irregularity should follow. Findings with scenarios need to be handled separately and cannot be combined with other items. For more information, please see the chapter on 'Financial corrections'.

Generation of a CA Confirmation

In order to include one or more project report(s) in the CA Confirmation, the CA user needs to select the relevant report(s) from the list and click on the 'submit' button. The report(s) will disappear from the current list. Please note that also financial corrections (findings) and single invoices left behind from earlier CA Confirmations need to be included in a CA Confirmation. One CA Confirmation can therefore contain:

- One or more project reports
- One or more findings
- One or more invoices previously excluded from the CA Confirmation (CA Sitting Ducks)
- Project reports AND/OR findings AND/OR CA Sitting Ducks

Attention!

Findings following Scenarios have to be handled separately and cannot be combined with other items. If you select any finding with Scenario the system will not allow you to select any other item not following the same scenario for the CA Confirmation.
For more information, please see description of Scenarios Financial corrections chapter.

	13	ATP	Institute for cooperation	POLSKA	ITP Priority 1	1	€ 55 000.00	€ 46 167.00	€ 46 750.00	€ 8 833.00	€ 6 222.23	
	13	ATP	Institute for cooperation	POLSKA	ITP Priority 1	1	€ 94 812.47	€ 70 062.63	€ 80 590.59	€ 25 753.86	€ 15 129.62	
☑	26	TESTPROJ	HULP	MAGYARORSZÁG	ITP Priority 1	1	€ 98 400.00	€ 83 640.00	€ 83 640.00	€ 14 760.00	€ 14 760.00	
	13	ATP	Institute for cooperation	POLSKA	ITP Priority 1	1	€ 17 333.68	€ 14 730.16	€ 14 733.62	€ 2 774.69	€ 795.34	

|◄ ◄◄ 1 2 ►► ►|

🔲 Export

Invoices previously not included in ca-confirmation

Select	Project Number ⇕	Project Acronym ⇕	Name Of The Lead Partner ⇕	Country Of The Lead Partner ⇕	Name Of The Partner ⇕	Country Of The Partner ⇕	Programme Priority Axis ⇕	Progress Report Number ⇕	Budgetline ⇕	Workpackage ⇕	Total eligible to be included ⇕	ERDF cofin inclu
☑	13	ATP	Institute for cooperation	POLSKA	Institute for cooperation	POLSKA	ITP Priority 1	1	External expertise and services	M Management	€ 2 452.50	
☑	13	ATP	Institute for cooperation	POLSKA	Institute for cooperation	POLSKA	ITP Priority 1	1	Staff costs	M Management	€ 490.50	
☑	13	ATP	Institute for cooperation	POLSKA	Institute for cooperation	POLSKA	ITP Priority 1	1	Office and administration	M Management	€ 73.57	
	59	MasterOfTheScenarios	My lp1	LATVIJA	My Project partner2	LATVIJA	ITP Priority 1	1	Travel and accomodation	P Preparation	€ 40.27	

Financial corrections (findings)

Select	Scenario ⇕	Project number ⇕	Project acronym ⇕	Control number ⇕	Date of final control report ⇕	Controlling / auditing body ⇕	Control / audit type ⇕	Partner number and name ⇕	Report number ⇕	Period ⇕	Finding number ⇕	Budgetline ⇕	Workpa
☑	None	ITP52	AFCheck	ITP52_1	02.12.2016	First level control	Desk-based	1 APartnerERDF	1	1 / 30.11.2016 - 29.05.2017	ITP52_1_1_1	Net Revenue	Managem
☐	None	ITP53	TestBeforePublishCoreGroup	ITP53_1	05.12.2016	First level control	On the spot	1 My Lead Partner1		0 / 01.12.2015 - 01.12.2016	ITP53_1_1_1	Staff costs	Preparatic
☐	None	ITP13	ATP	ITP13_1	06.12.2016	First level control	Desk-based	1 Institute for cooperation	1	2 / 28.04.2017 - 27.10.2017	ITP13_1_1_3	Equipment	Managem

◉ Generate Ca-confirmation

Figure 229 Generate CA Confirmation – Generate button

Please note that – in case of financial corrections via adjustment of subsequent payments to projects (i.e. correcting sums to be paid to projects), CA certificates must contain a report AND a correction of the SAME project partner. Otherwise, the system will generate a negative payment for the project and treat it as repayment by project. For more information, please see chapter 'Financial Corrections'.

Note on multi-fund: Please note that CA certificates are single-fund so in case one report contains partner reports of multiple funds (e.g. ERDF and IPAII), the reports will be separated and available for CA Confirmations of each fund separately. Different funds are managed via

different tabs at the top of the page. The same approach is used in all CA sections. The list of available funds is based on programme data.

> **Caution!**
>
> If any programme generated a multi-fund CA Confirmation with an eMS version earlier than 3_2.1, it is necessary to remove it and redo with single fund approach.

Figure 230 Different funds at CA level

All the generated CA Confirmations can be accessed through the 'CA Confirmations' menu point.

Figure 231 Overview of CA Confirmations

In the overview table of the CA Confirmations, you can see if the confirmation was already included in the Interim payment application to EC, Final interim payment application to EC and Accounts for accounting period and access the relevant applications and/or accounts.

Existing CA Confirmations can be deleted by clicking on 'Remove CA Confirmation' button. Please note that CA Confirmations can only be removed as long as they are not included further in the workflow. If the CA Confirmation is removed the reports and controls appear again in the list under 'Generate CA Confirmation' section and can be included in a new CA Confirmation.

Please note that in case a CA Confirmation is removed and there were some invoices left behind (CA sitting ducks), they will be integrated into the report again UNLESS they were already included in a different CA Confirmation, then they will stay handled separately.

Details of CA Confirmations can be displayed by clicking on 'View CA Confirmation' column. It is also possible to print the CA confirmation to pdf. This template can be adjusted to programme needs.

Accounts for the accounting period accounting year	Date Of The Ca Confirmation	View Ca Confirmation	Remove Ca Confirmation	Print Pdf
	28.11.2016 11:25:52	🔍	↩	🖨
	15.11.2016 10:26:10	🔍	↩	🖨
	04.11.2016 13:45:31	🔍	↩	🖨
↩ 01.07.2015 - 30.06.2016	04.11.2016 11:47:07	🔍	↩	🖨
↩ 01.07.2015 - 30.06.2016	04.11.2016 11:44:45	🔍	↩	🖨
↩ 01.01.2014 - 30.06.2015	03.11.2016 13:58:17	🔍	↩	🖨
↩ 01.01.2014 - 30.06.2015	03.11.2016 13:49:07	🔍	↩	🖨
	03.11.2016 11:36:14	🔍	↩	🖨
	03.11.2016 11:12:04	🔍	↩	🖨
	31.10.2016 13:34:12	🔍	↩	🖨
↩ 01.07.2016 - 30.06.2017	31.10.2016 11:20:58	🔍	↩	🖨

Figure 232 Overview of CA Confirmations

All the checklists finalized before generating a CA Confirmation are accessible here (in read-only form), under 'Checklist' button next to the relevant project report.

Figure 233 Details of one CA Confirmation, including checklists

Payment to projects

After the generation of a CA certificate, the CA should introduce information on payments to projects. The actual payment is carried out outside of the system (i.e. the eMS does not handle payments like a banking software would) but basic information about payments need to be entered in the eMS. The list of CA certificates paid/to be paid is available under 'payments to projects' menu item. Similarly, to other sections of the CA module, the payments to projects are handled per fund.

Figure 234 Payments to Projects Overview – Table shows all reports already paid as well as to be paid

The default view in the Payments to projects is per CA Confirmation, but it is possible to see payments per project report by clicking on 'Show payments per Report'.

Figure 235 Payments to projects overview per Report

Note on Priority axes co-financing: The overview of payment to projects shows two values for co-financing for each fund. In the case of ERDF this is:

- 'partner co-financing': The ERDF value calculated based on the actual co-financing rates of the partners. This value is needed as it shows the actual amount to be paid to the project.
- 'priority axis co-financing': The ERDF value calculated based on the co-financing rate of the priority axis. This value is shown here for informational purposes as SCF calculates reimbursements to programmes on the basis of priority axes.

In case a programme applies the priority axes co-financing rate to all projects in a CA Confirmation, the two ERDF values mentioned above match.

Each CA Confirmation is listed separately and in order to modify or view payment details please click on 'View paymentclaim details' button.

In each 'Payments to project' interface all the project reports included in a CA Confirmation are listed separately and shown per partner. Payment information must be introduced per partner even if programmes are usually paying to the Lead Partner only.

Figure 236 Payments to Projects – Payment details of one CA Confirmation

It is possible to either pay in full the due amount or to pay in installments. If the project is paid in full, the CA needs to check the relevant tick box, introduce a date of payment and save the information.

Figure 237 Payment to projects - payment in full

In order to record data on payment in installments please click 'Add installment'. Each installment needs a payment date. It is possible to add multiple installments (as long as the full amount is not paid). The system proposes the full amount as the first installment, which can be modified. It is possible to add installments as long as the full amount is not reached. Each time an installment is added, the system proposes the remaining amount as the payment value.

Figure 238 Payments to Projects – Payment in installments

Figure 239 Payments to Projects – Last installment

When there is no more remaining amount to be paid, the system will not allow to add any more installments and the date of last installment (when the full amount is paid) is taken automatically as a final date of payment.

It is possible to upload documents per payment (per project report payment, not per partner payment) and generate pdf with payment details. Pdf are based on templates and can be adjusted to programme needs.

It is also possible to notify project Lead Partners about payments. The system automatically generates the message with details about payments the sending should be triggered manually for all Lead Partners of one CA Confirmation or for each project separately.

Figure 240 Payments to projects, notifying Lead Partners

Handling financial corrections in 'Payments to projects'

If there are any financial corrections (findings) included in the CA Confirmation, they will be handled also in the 'Payment to projects' section. There are two ways to handle financial corrections at the project level:

1. Adjustment in the next ERDF payment: This means that the financial correction will be corrected by adjusting a subsequent payment to the project partner.
2. Repayment by the project: This means that the amount to be corrected will be shown in the 'payment to projects' interface as a separate item. Negative amounts to be corrected will not be automatically deducted from any positive amount.

Please note that financial corrections can be negative (and most frequently are) or positive (e.g. in the case of advance payments to projects – see the chapter 'Financial corrections). So technically the 'repayment by the project' could also be a payment by the programme to the project.

The way the financial corrections are handled at the 'Payments to projects' module does not depend anymore (from version 3_2) on the action selected in the 'Financial correction' module. No matter if 'adjustment in the next ERDF payment', 'repayment by the project' or any action other action is selected in the 'Financial corrections' interface, the system will always generate a separate negative (or positive in case of positive correction) payment item. In case you wish to reduce a payment of a report, please include both the report and the finding in the CA Confirmation, fill out both the payment and repayment separately as paid in full and introduce relevant comments.

Repayment similarly to all other payments can be done in full or in installments.

Figure 241 Payments to Projects – Financial corrections are shown separately from reports.

In case there are any CA sitting ducks in the CA Confirmation, they are shown as a part of their initial report – just the amount to be paid is adjusted to the remaining invoices exclusively.

Once all reports and/or financial corrections from a CA Confirmation are paid / repaid, the CA can close the payment by clicking the 'Confirm ERDF/IPA/ENI payment process' button. Once a payment is marked as closed it is not possible to modify it anymore. However, the payment can be re-opened for further modifications if needed by clicking 'Reopen ERDF/IPA/ENI payment process'.

You can always see the CA Confirmation payment status in the 'Payments to projects' section. The system shows 'Not paid' in case no item is paid, 'Partially paid' in case only some items are paid or there are any payments in installments and 'Fully paid' if all items are paid. It can also be traced per report under 'Show Payments per Report'.

Figure 242 CA Confirmation payment status

Please note also that it is possible to include the CA Confirmation in the Interim payment application to EC regardless of the payment to project status. Many CAs first pay the project partner and then include the amount in the Interim payment application to EC. Since there could be exceptions, the eMS does not require payments to projects prior to including the amount in the Interim payment application to EC.

Attention!

Only full CA Confirmations are taken into account for the Interim payment application to EC and therefore even if the project is paid just partially (e.g. in case of payments in installments or withholding of one partner share) the system will calculate the entire amount for the payment application to EC.

If you do not wish to include part of the report in the Interim payment application to EC (e.g. in case of doubts regarding eligibility of costs), exclude those invoices from the CA Confirmation (i.e. generate CA sitting ducks).

Generate Draft Payment application to EC

In the eMS the generation of Interim payment applications is subdivided into two steps namely:

- Generation of draft Interim payment applications
- Approval of one draft Interim payment application

In the menu item 'Generate Draft Interim Payment Applications to EC' the CA can select one or more CA Confirmations to be included into draft interim payment applications to EC. It is possible to generate multiple drafts: The CA Confirmations do not immediately disappear from the list and can be included in many drafts at the same time.

Figure 243 Generate Draft Payment Applications to EC – List of CA Confirmations waiting to be included

In order to generate a draft please select one or more items and click on 'Generate draft Interim payment application to EC' button. The system will ask you to select the accounting year in which the Interim payment claim is handled.

Regular ca-confirmations

Include In Interim Payment Application To Ec	Number Of The Ca Confirmation	Payment Status	Date Of The Ca Cofirmation	Total Eligible In Euro	ERDF Partner Cofin	ERDF Priority Axis Cofin	View
☐	1	Not Paid	15.12.2016 16:29:49	€ 106 910.49	€ 90 873.92	€ 90 873.92	🔍
☑	2	Not Paid	15.12.2016 10:28:06	€ 507.20	€ 431.12	€ 431.12	🔍
☑	37	Fully Paid	07.12.2016 10:33:02	€ 24 598.77	€ 20 908.95	€ 20 908.95	🔍
☐	34	Fully Paid	05.12.2016 16:37:37	€ 128.79	€ 94.85	€ 109.47	🔍
☐	31	Fully Paid	05.12.2016 15:01:11			€ 210.80	🔍
☐	29	Not Paid	01.12.2016 09:45:43			€ 104 550.00	🔍

Select Accounting Year ✖

01.07.2019 - 30.06.2020 ▼

01.07.2019 - 30.06.2020
01.07.2020 - 30.06.2021
01.07.2021 - 30.06.2022
01.07.2022 - 30.06.2023

Scenario ca-confirmations

Include In Interim Payment Application To Ec	Number Of The Ca Confirmation	Scenario	Payment Status	Date Of The Ca Cofirmation	Total Eligible In Euro	ERDF Partner Cofin	ERDF Priority Axis Cofin	View
☐	35	1	Not Paid	06.12.2016 13:45:15	€ -246.00	€ -209.05	€ -209.10	🔍

⊕ Generate Draft Interim Payment Application To Ec

Figure 244 Generating draft interim payment application to EC

Please note that only accounting years for which no final interim payment application to EC was generated are available on the list.

Each fund is treated separately in this section, there is a separate tab available on the top of the page. The tabs are generated for all the funds used in the programme.

The Interim payment application to EC can also include some findings following certain scenarios. The Scenario CA Confirmations are shown separately and need to be added manually to the draft. For more information, please see the chapter 'Financial corrections'.

Draft Interim payment applications to EC

The 'Draft Interim payment application to EC' menu item shows a list of all generated drafts. CA can analyse different drafts and choose one to accept and create the actual interim payment application to EC (i.e. press: 'Create Interim payment application to EC' below the selected draft).

The amounts are calculated based on included CA Confirmations. For detailed explanations on how the amounts are calculated, please see the section below 'Interim payment applications to EC'.

At this point it is still possible to change the accounting year in which this interim payment application to EC is handled.

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Figure 245 Draft Payment Applications to EC – List of all available drafts, one of which is selected for further processing

Once a draft is accepted (and accordingly all included CA Confirmations), all included CA Confirmations are removed from the list in 'Generate draft interim payment application to EC' and can no longer be included in new drafts. Also, once a draft is accepted (and accordingly all included CA Confirmations), it is no longer possible to accept any other drafts that contain overlapping CA Confirmations.

After accepting one of the drafts, it is recommended to remove all other drafts by clicking on 'Remove all draft interim payment applications to EC'.

Interim payment applications to EC

All the Interim payment applications to EC are shown in the section 'Interim payment applications to EC'. The data is displayed per fund (to change between funds please use different tabs on the top of the page) and per accounting year (to select accounting year, please mark the relevant checkbox). By default, the current accounting year is displayed when entering this section.

Figure 246 Interim payment applications to EC

After the interim payment applications to EC are generated (i.e. at least one draft is accepted), the Programme should manually transfer the information to the Commission via SFC. Information on the SFC transfer (date, number and comments) should be entered into the eMS and saved.

Figure 247 Interim payment Applications to EC – SFC information

Please note that all the figure reported to EC are total expenditure as SFC automatically applies the priority axis co-financing rate to calculate the actual amounts to be transferred to the programmes. Accordingly, the eMS tables also show total amounts.

The amounts are shown per one Interim payment application to EC as well as cumulative amounts per accounting year. This means that in first Interim payment application to EC of the given accounting year the amounts of the left side and right side of the table will be the same and in any further Interim payment applications of the same accounting year they will

accumulate in the right side of the table. The programmes should transfer to SFC the cumulative amounts.

For information purposes the system shows all payment applications to EC also broken down per type of cost (real cost/flat rates/lump sums/standard scales of unit cost). The data is taken from partner reports. In case programmes do not allow for some of the types of costs or none of the projects is using simplified cost options, the corresponding columns in the tables will remain 0 EUR. The breakdown per type of cost is by default shown for one Interim payment application to EC, if you wish to see cumulative amounts (from all Interim payment applications to EC from one accounting year), please click on 'Show cumulative amounts' above the table.

The Total amount of 'Total Amount Of Eligible Expenditure Incurred By Beneficiaries And Paid In Implementing Operations' is calculated as a sum of total eligible expenditure of all the CA Confirmations included in the Interim payment application to EC +/- total of all the financial corrections included.

The 'Total Amount Of Private Contribution Incurred In Implementing Operations' is a calculated amount to ease calculation of Total public expenditure. This figures should not be transferred to SFC. The system calculates the private expenditure as a sum of all private contributions. The information on how which part of the contribution is public and which one is private comes from partner report and the final amount (after cuts of all the authorities) is calculated using a ratio private contribution/total contribution from the partner report and it is calculated for each partner report separately (=ROUNDDOWN(total contribution*ratio, 2) and then summed up for the Interim payment application to EC.

The 'Total Amount Of Public Expenditure Incurred In Implementing Operations' is calculated as a difference between 'Total Amount Of Eligible Expenditure Incurred By Beneficiaries And Paid In Implementing Operations' and 'Total Amount Of Private Contribution Incurred In Implementing Operations'.

In case a mistake was made, the CA can remove the Interim payment application to EC by clicking the 'Remove' button. The Interim payment application to EC can be removed as long as no Final interim payment application to EC is generated for the given accounting year. Removing always reverts the action by one step and therefore, removed payment applications will become drafts again.

Generate Final Interim payment application to EC

At the end of accounting year programmes must submit to SFC Final Interim payment application to EC. It should not contain any additional expenditure but can include some additional findings. The system supports generation of the final interim payment application.

Figure 248 Generating Final interim payment application to EC

You need to select the accounting year for which one you wish to generate the Final interim payment application to EC (only accounting years for which no final interim payment application to EC were ever generated are available on the list), the system sums up all the Interim payment applications to EC from the given year and gives a possibility to add some of the findings. Findings are presented in two tables, the regular findings and the ones that should be manually added to the final interim payment application to EC according to the selected Scenario.

For accounting years where no interim payment application to EC was generated, it is possible to generate 'Zero' final interim payment application to EC, i.e. application not including any expenditure. It is still possible to include findings in such an application.

Figure 249 Generating 'zero' final interim payment application to EC

Final Interim payment application to EC

Overview of all Final interim payment applications to EC can be found under 'Final interim payment applications to EC' menu item. The applications are presented per accounting year and fund. By default, the current accounting year is pre-selected.

Figure 250 Final interim payment applications to EC

CA should transfer the Final interim payment application to EC data manually to the SFC system of the European Commission. The number and date of submission should be recorded in the eMS.

Generate draft accounts for accounting period

In the eMS the generation of accounts for the accounting period is subdivided into two steps namely:

- Generation of draft account for the accounting period
- Selection of final account for the accounting period

The accounts are calculated one to one from the Final interim payment to EC.

Please note that at this point in the workflow, it is also possible to add **additional financial corrections**, which might be necessary prior to closing the account for the accounting year. For this reason, the eMS shows a list of all financial corrections that were not previously included in any CA Confirmation and Interim/Final interim payment application to EC. These financial corrections are shown in a separate table. Similar to the 'Generate CA certificate' interface, only corrections which are closed can be selected from the list. Once you select any finding to be added to the accounts, the system will automatically generate a CA Confirmation with these findings.

The findings following Scenarios, which should be added to the accounts are listed in a separate table and should be manually added.

It is possible to create multiple drafts including the same or different findings. The findings available for draft generation as long as they are not included in a final account for the accounting period.

Figure 251 Total national contribution paid to Beneficiaries in implementing operations

As the system does not trace payment of national contribution, this data must be manually introduced to the system in order to calculate the 'Total Amount Of Corresponding Payments Made To Beneficiaries Under Article132(1) Of Regulation(EU) No1303/2013(A)'. It can be introduced at this stage or later to the final accounts as well.

Draft accounts of the accounting period

In the 'Draft accounts for the accounting period' menu item a list of draft accounts is shown. There could be several drafts including different financial corrections. CA selects the draft which should become the final and approves it by clicking 'Generate Final Account for the Accounting Period'.

Figure 252 Draft accounts for the accounting year

Once one draft is accepted for the given accounting year it is no longer possible to generate or accept another draft for the same year.

After accepting one or more of the drafts, it is recommended to remove all other drafts by clicking on 'Remove all accounts drafts'.

Accounts for the accounting period

Under the 'Accounts for the accounting period' menu item, list of all accounts generated so far is listed per fund and per accounting year. As there is no direct link to SFC system of the European Commission, the accounts need to be manually transferred to the SFC. Information from SFC2014 on the date of submission of the accounts should be recorded in the eMS manually.

Figure 253 Accounts for the accounting period

The accounts are calculated automatically by the system from the final interim payment application of the given year +/- any financial corrections included. The total national contribution must be introduced manually and it is added to the total ERDF paid to give the 'Total amount of corresponding payments made to beneficiaries'.

It is possible to correct the amounts calculated by the system and submit different values to the Commission (e.g. in case of doubts to legality of some expenses). In order to do this, please check the box 'Correct values' at the top of the table.

Figure 254 Accounts for the accounting period - correcting calculated amounts

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The second row will appear with editable amounts (by default matching the calculated values). You will need to calculate all the columns and correct all the values manually. The system will treat the corrected values as final once saved. The calculated values will always be shown. It is possible to reset the amounts back to calculated ones by unchecking the 'correct values' checkbox. Please note that all the manual inputs will be lost if you uncheck the 'correct values' field.

Priority	Total eligible expenditure included in payment application submitted to the commission		Expenditure declared in accodance with Article 137(1)(a) of Regulation (E U) No 1303/2013		Difference		Comments (obligatory in case of difference)
	Total amount of eligible expenditure incurred by beneficiaries and paid in implementing operations	Total amount of public expenditure incurred in implementing operations	Total amount of eligible expenditure entered into the accounting system of Certifying Authority and which has been included in the payment applications submitted to the Commission	Total amount of the corresponding public expenditure incurred in implementing operations	(E=A-C)	(F=B-D)	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
ITP Priority 1	€ 3 141 613.38	€ 2 720 128.45	€ 3 000 000.00	€ 2 000 000.00	€ 141 613.38	€ 720 128.45	
ITP Priority 2	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	
ITP TA Priority	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	
Grand total	€ 3 141 613.38	€ 2 720 128.45	€ 3 000 000.00	€ 2 000 000.00	€ 141 613.38	€ 720 128.45	
	Out of which amounts corrected in the current accounts as a result of audits of operations according to Article 127(1) of Regulation (E U) No 1303/2013				€ 0.00	€ 0.00	

Figure 255 Accounts for Accounting period, consolidation with final interim payment application to EC

The values are compared to the values from the final interim application for payment in the second table of the accounts. Columns A and B come from the final interim application for payment to EC and columns C and D from the accounts (IF checkbox 'correct values' is checked the manual input is treated as final values). Columns E and F and a difference between final interim payment application to EC and accounts for accounting period. Any difference should be justified in column G.

Figure 256 Accounts for accounting period - submission of accounts

The accounts should be saved and submitted. Submission of accounts creates a version, if account is open and resubmitted a new version will be generated. Old versions are stored as pdfs and accessible from the user interface.

Figure 257 Accounts for Accounting period - reopening accounts

Figure 258 Accounts for accounting period - previous versions of accounts

In case a mistake was made, the CA can remove existing accounts for the accounting period by clicking the 'Remove account' button. Destroying always reverts the action by one step, therefore removed accounts will become drafts again. Please note – removing accounts removes ALL versions of the accounts.

Payments from EC

Under the 'Payments from EC' menu item, information on payments received from the European Commission should be recorded. The system is not linked to a programme banking system so the transfers are executed outside of the eMS. The CA should just record information about received funds.

Figure 259 Payments from EC – Interface to enter received payments

The payments from EC are stored separately for each of the funds (accessible through tabs on the top of the page). Once a payment from the EC is received a CA should click on 'Add payment from EC' button and introduce information about the payment.

There are several types of payments from European Commission and based on the type selected more or less information can be introduced into the table.

Figure 260 Payments from EC – Types of payments can be specified in a drop-down

If a type 'interim payment' is selected, additional fields appear in the form and you should select which Interim payment application to EC you are referring to. The system will automatically show the date of submission of the payment application to the SFC and reported amount. Please note that the amount actually received from the Commission will usually differ from the reported one, as the balance is calculated based into account certain factors. The requested amount and related fund amount (based on priority axes co-financing rates) are displayed for information purposes only.

Figure 261 Payments from EC, Interim payment application

Both positive and negative transfers can be recorded. The overview table can be exported to Excel.

Accounting year overview reporting on withdrawals, recoveries, recoveries according to art. 71, amounts to be recovered and irrecoverable amounts.

The eMS supports reporting on withdrawals, recoveries, recoveries according to art. 71, amounts to be recovered and irrecoverable amounts. The process of reporting is described in details in 'Financial corrections' chapter.

List of all financial corrections

Two programme level overview tables are available – one listing all controls ever introduced in the eMS and the other one listing all findings. Both are available under 'Corrections and audits' menu and are privilege-based.

Figure 262 - Financial corrections programme level overview tables

Financial corrections/Findings is available for users with privilege R_GLOBAL_FINDINGS

Financial corrections/Controls is available for users with privilege PROJECTFINANCE_CA

Corrections and Audits

The corrections and audits module allows corrections to already submitted, processed or paid project reports. It is meant for correction of invoices/reports OUTSIDE of the normal reporting workflow.

The corrections and audits module can be used to:

- Store data on different controls and audits with or without financial impact
- Store data on individual findings
- Manage reporting on irregularities

Typically, the JS will introduce information on controls and findings into the eMS using this module. (Financial) corrections also can be associated – for example - with Audit Authority audits or Commission audits.

For each control/audit one or many 'findings' can be introduced into the system. The total value to be corrected results from the total sum of all findings.

```
                         Control/audit 1
                               |
        _____
       |                       |                    |
   Finding 1-1            Finding 1-2          Finding 1-3
```

Figure 263 Each control/audit is given a sequential number and can be associated with 'findings'

Needed user rights / privileges

A user who wants to work with (financial) corrections currently must have the 'JTS', 'MA' or 'CA' user privilege. JTS and MA privileges give access to some of the fields of the findings form. Full access is reserved to users with CA or MG_financialcorrections user privileges.

It is possible to introduce (financial) corrections to a project, which was already finalized. In order to do this, a programme authority (MA, JS or CA) needs to have the user privilege FINAL_CORRECTIONS allocated.

Introducing a (financial) correction

Any user having one of the above mentioned user privileges can add a control to any project which is in the status 'contracted' or any later status. 'Finalized' projects can also be corrected (i.e. (financial) corrections are possible also after the project is closed) but the user needs additional privilege to do this (see above).

(Financial) corrections are accessible from a separate menu item 'Add Correction' under left side menu item 'Corrections and audits' or from inside the project view, via the overview of project reports. In the left side menu click on a button 'Add correction'.

Figure 264 Accessing the corrections and audits module from general user view

In case (financial) correction is added from the general view, the user needs to first select a project in question and later proceed the same way as described below. Access to this menu item is reserved to users having JTS, MA, CA or MG_Financialcorrections user privilege.

Figure 265 Accessing the corrections and audits module from reporting overview

After accessing the module, an overview table of all controls previously introduced in the eMS for this particular project is displayed. In order to add a new control, click the 'Add' button.

Figure 266 Corrections and audits overview for selected project – adding a new control

Information about the control/audit: Introduce general information on the control/audit itself such as the control/audit body, the control/audit type, the time period of the control/audit, total amount controlled/audited. The system gives each control/audit a unique number which consists of the project ID and the sequential number of the control/audit.

Figure 267 Saving the control/audit

Please note that the 'Control confirmed by CA' tick box can be activated only by CA users and remains inactive for JS and MA users. The fields 'Total ineligible expenditure' and 'Error rate' are calculated automatically based on information given about the control/audit and 'findings'.

It is possible to upload attachments (e.g. control reports or letters sent to beneficiary). In order to upload a file, you need to save the control first by pressing the 'Save' button.

Once the control is saved an upload function is activated and can be accessed through the 'Attachments' hyperlink.

Clicking on the 'Attachments' button will activate the upload form. You may upload multiple documents and see all the files uploaded before.

Figure 268 Financial Corrections Interface – Uploading files

Attention!

Attachments are only visible and accessible in the dialogue box 'Attachments'. It is not possible to see if there are any attachments for the control without clicking on 'Attachments' button.

Adding findings

Each control/audit can contain one or several finding(s). It is possible to add multiple findings to one control and the system will sum up the total financial impact of a control. One control can include different findings relating to different partners of the same project but one finding can only relate to one partner. Findings are added by clicking the 'Add Finding' button.

Attention!

Findings usually have financial impact on the project. If you want to add a finding without financial impact, we recommend to open a new control and do NOT add any findings.

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Figure 269 Adding individual findings

The system gives each finding a unique number. The number consists of the project ID, control number, partner number and sequential number of the finding.

A finding usually is recorded for a single invoice. Should it not be possible to assign a finding to a single invoice, a finding must at least be associated to the project partner, budget line, work package and period. This information is necessary to make overview tables of the eMS work (e.g. total spending per budget line).

Findings per invoice

If a finding affects one single invoice, please tick the box 'For Invoice'. The system then proposes a list of all invoices of the project in question. The list can be filtered by the following criteria: Partner, Period, Work package and/or Budget line.

Figure 270 Adding findings per invoice

The list by default does not show the flat rate 'invoices' as usually they are not cut on their own. But in case such cut is necessary, it is possible to display and correct them by marking 'Show flatrates' checkbox.

Once the invoice in question is marked, the system will record the finding for this particular invoice. The system will know whether the invoice in question was already included in a CA Confirmation, Interim/Final interim payment application to EC and Accounts for the accounting period.

The system also knows whether the invoice in question generated flat rates. If there were flat rates related to the invoice, the system will add them to the corrected amount.

Financial Correction Partner Level

Amount corrected in Eur
(flatrates excluded)

€ 5 000.00

	Total	Corresponding ERDF	Corresponding Partner Contribution
Correction	€ 5 000.00	€ 4 249.00	€ 751.00
Corresponding Flatrates	€ 1 150.00	€ 977.27	€ 172.73
Total Correction	€ 6 150.00	€ 5 226.27	€ 923.73

Corresponding Partner Contribution

Private ▼

Date Of Sending Information To Benificiary

Comment

2000 Characters Remaining

Correction type

Figure 271 Findings - correcting flat rates together with an invoice

If the invoice was introduced to the eMS in currency other than EUR, it is possible to correct it in the original currency. Once such an invoice is selected, the system will show a check box 'Edit amount in original currency'. If selected, you need to introduce a cut in original currency and the system will recalculate it into EUR using the same exchange rate as was used when the invoice was initially reported.

Figure 272 Cuts in original currency

Findings not for a single invoice

If no single invoice is affected by a finding, e.g. in case of flat rate cuts; it is possible to introduce a finding for a combination of the following criteria: Partner, Period, Budget line and Work package. In order to do this, please make sure that the 'For Invoice' tick box is not selected. Use the available drop downs to make the right combination of the above mentioned criteria.

Figure 273 Financial Corrections Interface – Adding findings not for a single invoice

In case the finding is not related to a specific invoice, the system does not know if the affected expenditure was already included in a CA Confirmation, Interim/Final interim payment application to EC and Accounts for the accounting period. In order to include such a finding in the reporting on recoveries and withdrawals CA must manually allocate

a CA Confirmation to the finding (for more information see chapter CA functionalities). The system will list all the CA Confirmations where expenditure for the project in question were included.

General information about findings

It is possible to add attachments to findings. In order to do this, please click on the 'Attachment' button and follow the same logic as described above.

Information on each finding needs to be provided on three levels:

- Partner
- Project
- Programme level

It is important to indicate the source of contribution (the system does not take this information from partner report, it must be included manually in the finding form). In case contribution has both public and private source, the user needs to inform the system about the exact amounts of public and private contribution. There is a built in validation, which checks whether introduced amounts sum up to the total contribution corresponding to the finding.

Some of the information is foreseen to be introduced by the JS or MA and other can be filled out by CA only. The JS/MA sees and can modify the partner level and part of the project level information. If according to programme rules any user other than CA should be able to see/modify the entire form, please use the privilege MG_Financialcorrections.

The remainder of the project level information and the entire programme level information of the finding is only visible to users having CA or MG_Financialcorrections privilege. CA users have access to all fields of the financial correction form and can also confirm (i.e. close) the finding/control.

Figure 275 Findings form - additional fields in findings visible to CA only

CA should check the control and/or relevant findings, fill out missing data and then confirm single finding(s) or entire control. The CA Confirmation (from eMS version 3_2) works with single findings, it is therefore possible to close just one/some of the findings and process them further in the workflow.

Figure 276 Financial Corrections – Closing controls

Only confirmed findings/controls can be included in the CA Confirmation and later on in the Interim/Final interim payment application to EC and Accounts for the accounting period. For more information, please see the 'CA functionalities' chapter.

By confirming the control, ALL findings related to particular control are automatically confirmed.

Confirmed finding is locked and cannot be modified anymore. Some of the fields remain editable as usually they are filled out later (i.e. data on actual repayment by project partners).

Please note that technically it does not matter which action in the Financial Correction project level section is selected. No matter if the finding is a repayment by the project or adjustment of the next ERDF payment, the eMS will generate a separate payment line in the 'Payments to projects' form.

If you wish to decrease the payment of some report to the project, please include both the finding and the report in one CA Confirmation, record data on both payments and write comments explaining that the actual payment decreased and there was no actual repayment.

Reporting on irregularities

Only findings related to expenditures already claimed from the European Commission (i.e. included in an Interim payment application to EC) can be taken into account for the Accounting year overview reporting on withdrawals, recoveries, recoveries according to art. 71., amounts to be recovered and irrecoverable amounts.

In order to include a finding in the above mentioned reporting, please make sure that the appropriate CA Confirmation is selected (in case of findings for an invoice, the system will propose the right CA Confirmation and inform whether it was already claimed from the Commission; in case of other findings the CA Confirmation must be

selected manually from a dropdown list of all Confirmations already available for the project in question).

If the certificate was already included in the Interim payment application to EC, the tick box 'To be reported to EC' will become active.

It is also possible to mark the amount as finding 'Amount below 250 EUR'. This check box is only active if the finding is below 250 EUR.

Please note that according to the Regulations this limit applies to the entire project within one year and not to a single finding. **The system does not monitor and sum up amounts from other findings**. It must be monitored manually by the CA.

It is a decision of the CA to mark such finding as 'Amount below 250 EUR'. Such findings only go to the 'Generate CA Confirmation' but neither to Payments to project nor to Interim/Final Interim Payment Application to EC as they do not have to be recovered from project or reported to the Commission.

It is possible to uncheck the tick box 'Amount below 250 EUR' later and to process the finding in a normal workflow. This is necessary if e.g. another finding for the same project was discovered and the regulatory limit of 250 EUR was exceeded.

When the 'To be reported to EC' is ticked additional actions are available: according to the 'Guidance for Member States on Amounts Withdrawn, Recovered, to be Recovered and Irrecoverable Amounts' there are several Scenarios how the finding should be reported to the Commission depending on when it was discovered and to which amount it relates. We have identified and implemented in the eMS five different Scenarios. All other cases should be reported without Scenarios and should follow the entire CA workflow.

Figure 278 Reporting to EC - selection of Scenarios

No-Scenario findings

If the irregularity does not match any of the Scenarios listed below, it should be reported as non-Scenario finding. In such a case after clicking on 'To be reported to EC' please select only action and <u>do not select any of the scenarios</u>.

Figure 279 Non-Scenario finding

In such a case the finding will go through the entire workflow and will be reported to the Commission in the reporting on Recoveries, Withdrawals, Amounts to be recovered,

etc. according to the action selected in the accounting year in which it is included in the Accounts for the accounting period.

How will the workflow work?

- In case of recovery, the system will add interest on late repayment (if any) to the irregular amount. The interest will be added only if the amount in field 'Total interest on late repayment' is different than zero. The interest will be added to the total amount corrected and reported together to the Commission. It will be added when confirming the finding or control and the user will be informed about it by information popup.

- Irregularity will be available on the list of findings to be included in the CA confirmation. In order to include it, it must be confirmed by CA first. The finding needs to be manually selected for the CA Confirmation. Please note that the non-scenario findings can be included in one CA Confirmation together with other items. This means that you can include in one CA Confirmation one or multiple non-Scenario findings together with finance reports and CA Sitting Ducks.

- CA confirmation including this irregularity will go to Payments to projects. Please note that in case of Recovery, the repayment from project must be introduced retrospectively because the recovery data in the finding form must be filled out before it is transferred into a CA Confirmation and goes to Payments to projects interface.

- CA confirmation with this irregularity should be included in the Interim payment application (it needs to be included manually by the user).

- In case the non-Scenario finding is not yet included in any CA Confirmation, it will be available to be included in the Interim payment application to EC or Final interim payment application to EC from a separate table 'Regular findings'. If the item is selected, the system will automatically generate CA Confirmation for the item and transfer it to 'Payments to projects'.

- The Final interim payment application to EC including the relevant findings will be transferred to the Accounts for accounting period for the accounting year N.

- The irregularity will be reported according to the action selected in the finding form.

Scenario findings

Each Scenario is described directly in the finding interface. The CA should select relevant scenario only if all the criteria listed in the description are met. In cases different than described please report the irregularity without any scenario.

Figure 280 Scenario description

Scenario 1

Should be used for:

- Irregularity detected in year N linked to expenditure included in the Iinterim payment application to EC in <u>the same accounting year (year N)</u>.

- Irregularity detected <u>before</u> the Final interim payment application to EC of accounting year N.

- Irregularity can be a withdrawal or a recovery (incl. "recovery according to art. 71"). The option needs to be selected manually from the dropdown 'Action'.

Financial Correction Programme Level

Ca Confirmation Number	Payment Application	Account	Accounting Year
27 - 30.11.2016	Number: 1	Number: 8	01.01.2014 - 30.06.2015

Olaf Report	Irregularity	Amount Below250 Eur	To Be Reported To E C
☐	☐	☐	✔

Scenario

1

Description

Descriptions of the Scenarios

Scenario 1

Should be used for:

- Irregularity detected in year N linked to expenditure included in the "interim payment application" in the same accounting year (year N).
- Irregularity detected <u>before</u> the "final interim payment application" of accounting year N.
- Irregularity can be a withdrawal or a recovery (incl. "recovery according to art. 71")

How will the workflow work?

- In case of recovery, the system will add interest on late repayment (if any) to the irregular amount.
- Irregularity will be available on the list of findings to be included in the CA confirmation.
- CA confirmation including this irregularity will go to "Payments to projects".
- CA confirmation with this irregularity should be included in the "interim payment application" <u>or</u> directly in the "final interim payment application" for the accounting year N (it needs to be included manually by the user).
- The "final interim payment" will be transferred to the "accounts for accounting period" for accounting year N.
- The irregularity will be reported as withdrawal <u>or</u> recovery <u>or</u> "recovery according to art. 71" for the accounting year N.

Action

Withdrawal

Withdrawal
Recovery

Cleared ☐   Future ☐

Figure 281 Scenario 1 finding (withdrawal or recovery)

How will the workflow work?

- In case of recovery, the system will add interest on late repayment (if any) to the irregular amount. The interest will be added only if the amount in field 'Total interest on late repayment' is different than zero. The interest will be added to the total amount corrected and reported together to the Commission. It will be added when confirming the finding or control and the user will be informed about

it by information popup. If introduced later (i.e. after the finding is confirmed), it will not be added anymore.

- Irregularity will be available on the list of findings to be included in the CA Confirmation. In order to include it, it must be confirmed by CA first. The finding needs to be manually selected for the CA Confirmation. Please note that the scenario findings cannot be included in one CA Confirmation together with other items. This means that you can include in one CA Confirmation multiple findings of Scenario 1 but you cannot include Scenario 1 findings together with a report, CA Sitting duck or any other finding.

  Scenario findings are always marked with the Scenario number.

- CA confirmation including this irregularity will go to Payments to projects. Please note that in case of Recovery, the repayment from project must be introduced retrospectively because the recovery data in the finding form must be recorded already before it is transferred into a CA Confirmation and to Payments to projects interface.

- CA confirmation with this irregularity should be included in the Interim payment application or directly in the Final interim payment application to EC for the accounting year N (it needs to be included manually by the user).

  The CA Confirmation with Scenario 1 finding(s) will be available to be included in the Interim payment application to EC or Final interim payment application to EC from a separate table 'Scenario CA Confirmations'. If it is included in Interim payment application to EC it gets transferred automatically to the Final Interim payment to EC and is no longer available on the list of Scenario CA Confirmations in Generate final interim payment application to EC view.

Figure 282 Generate Draft Interim payment application to EC - Scenario CA Confirmations available to be included in the claim

- The Final interim payment application to EC including the relevant findings will be transferred to the Accounts for accounting period for the accounting year N.

- The irregularity will be reported as withdrawal or recovery or "recovery according to art. 71" for the accounting year N.

Figure 283 Reporting on Withdrawals and Recoveries for the accounting year N

Figure 284 Workflow Scenario 1

Scenario 2

Should be used for:

- Irregularity detected in year N linked to expenditure included in the Interim payment application to EC in <u>the same accounting year (year N)</u>.

- Irregularity detected <u>after</u> submission of the Final interim payment application to EC of year N and <u>before</u> submission of the Accounts for the accounting period for accounting year N.

- Irregularity should <u>not be reported to the Commission</u> and therefore there is no dropdown for recovery/withdrawal/amount to be recovered, etc.

Financial Correction Programme Level

Ca Confirmation Number	Payment Application	Account	Accounting Year
27 - 30.11.2016 ▼	Number: 1	Number: 8	01.01.2014 - 30.06.2015
Olaf Report	Irregularity	Amount Below250 Eur	To Be Reported To E C
☐	☐	☐	✔
Scenario	Description		
2 ▼			

Scenario 2

Should be used for:

- Irregularity detected in year N linked to expenditure included in the "interim payment application" in the same accounting year (year N).
- Irregularity detected <u>after</u> the "final interim payment application" of year N <u>and</u> <u>before</u> the "accounts for the accounting period" for accounting year N.
- Irregularity should not be reported to the Commission.

How will the workflow work?

- Irregularity will be available on the list of findings to be included in the CA confirmation.
- CA confirmation including this irregularity will go to "Payments to projects".
- The CA confirmation with this irregularity will be available at "generate draft accounts for accounting period" and should be manually added to the accounts for year N.
- Irregularity does not go to reporting on recoveries, withdrawals, etc.

Figure 285 Scenario 2 finding

How will the workflow work?

- Irregularity will be available on the list of findings to be included in the CA confirmation. In order to include it, it must be confirmed by CA first. The finding needs to be manually selected for the CA Confirmation.

  Please note that the scenario findings cannot be included in one CA Confirmation together with other items. This means that you can include in one CA

Confirmation multiple findings of Scenario 2 but you cannot include Scenario 2 findings together with a report or other finding.

Scenario findings are always marked with the Scenario number.

- CA confirmation including this irregularity will go to "Payments to projects". Payments should be manually introduced in the eMS.

- The CA confirmation with this irregularity will be available at Generate draft accounts for accounting period and should be manually added to the accounts for year N. You will be able to see the difference between the Final interim payment application to EC and the Accounts and you will have to explain the difference.

Correct values: ☐

Priority	Total Amount Of Eligible Expenditure Entered Into The Accounting Systems Of The Certifying Authority And Which Has Been Included In The Payment Applications Submitted To The Commission		Total Amount Of The Corresponding Private Contribution Incurred In Implementing Operations	Total Amount Of The Corresponding Public Expenditure Incurred In Implementing Operations	Total Amount Of ERDF Paid To Beneficiaries In Implementing Operations	Total national contribution paid to Beneficiaries in implementing operations	Total Amount Of Corresponding Payments Made To Benificiaries Under Article132(1) Of Regulation(E U) No1303/2013(A)	Show Details
ERDF								
ITP Priority 1	Calculated value:	€ 22 235.76	€ -386.93	€ 22 622.69	€ 20 560.35	€ 0.00	€ 20 560.35	🔍
ITP Priority 2	Calculated value:	€ 289.07	€ 143.74	€ 145.33	€ 140.53	€ 0.00	€ 140.53	🔍
ITP TA Priority	Calculated value:	€ 128.79	€ 20.88	€ 107.91	€ 94.85	€ 0.00	€ 94.85	🔍
Grand Total		€ 22 653.62	€ -222.31	€ 22 875.93	€ 20 795.73	€ 0.00	€ 20 795.73	

Priority	Total eligible expenditure included in payment application submitted to the commission		Expenditure declared in accodance with Article 137(1)(a) of Regulation (E U) No 1303/2013		Difference		Comments (obligatory in case of difference)
	Total amount of eligible expenditure incurred by beneficiaries and paid in implementing operations	Total amount of public expenditure incurred in implementing operations	Total amount of eligible expenditure entered into the accounting system of Certifying Authority and which has been included in the payment applications submitted to the Commission	Total amount of the corresponding public expenditure incurred in implementing operations	(E=A-C)	(F=B-D)	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
ITP Priority 1	€ 24 695.76	€ 24 713.19	€ 22 235.76	€ 22 622.69	€ 2 460.00	€ 2 090.50	
ITP Priority 2	€ 289.07	€ 145.33	€ 289.07	€ 145.33	€ 0.00	€ 0.00	
ITP TA Priority	€ 128.79	€ 107.91	€ 128.79	€ 107.91	€ 0.00	€ 0.00	
Grand total	€ 25 113.62	€ 24 966.43	€ 22 653.62	€ 22 875.93	€ 2 460.00	€ 2 090.50	

Out of which amounts corrected in the current accounts as a result of audits of operations according to Article 127(1) of Regulation (E U) No 1303/2013

Figure 286 Accounts for the accounting year

- Irregularity does not go to reporting on recoveries, withdrawals, etc.

Figure 287 Workflow Scenario 2

Scenario 3

Should be used for:

- Irregularity detected in year N linked to expenditure included in the Interim payment application to EC <u>in previous accounting years (year N-n)</u>.

- Irregularity is a <u>withdrawal</u>.

Financial Correction Programme Level

Ca Confirmation Number	Payment Application	Account	Accounting Year
27 - 30.11.2016 ▾	Number: 1	Number: 8	01.01.2014 - 30.06.2015

Olaf Report	Irregularity	Amount Below250 Eur	To Be Reported To E C
☐	☐	☐	✔

Scenario	Description
3 ▾	**Scenario 3**

Should be used for:

- Irregularity detected in year N linked to expenditure included in the "interim payment application" in previous accounting years (year N-n).
- Irregularity is a withdrawal.

How will the workflow work?

- Irregularity will be available on the list of findings to be included in the CA confirmation.
- CA confirmation including this irregularity will go to "payments to projects".
- CA confirmation with this irregularity should be included in the "interim payment application" <u>or</u> directly in the "final interim payment application" for the accounting year N (it needs to be included manually by the user).
- The "final interim payment application" will be transferred to the "accounts for accounting period" for accounting year N.
- The irregularity will be reported as withdrawal for the accounting year N.

Action	Cleared	Future
Withdrawal	☐	☐

Figure 288 Scenario 3 finding

How will the workflow work?

- Irregularity will be available on the list of findings to be included in the CA Confirmation. In order to include it, it must be confirmed by CA first. The finding needs to be manually selected for the CA Confirmation.

  Please note that the scenario findings cannot be included in one CA Confirmation together with other items. This means that you can include in one CA

Confirmation multiple findings of Scenario 3 but you cannot include Scenario 3 findings together with a report or other finding.

Scenario findings are always marked with the Scenario number.

- CA Confirmation including this irregularity will go to Payments to projects. Repayments should be manually introduced in the eMS after funds are recovered from project.

- CA Confirmation with this irregularity should be included in the Interim payment application to EC or directly in the Final interim payment application to EC for the accounting year N (it needs to be included manually by the user). The CA Confirmation with Scenario 3 finding(s) will be available to be included in the Interim payment application to EC or Final interim payment application to EC from a separate table 'Scenario CA Confirmations'. If it is included in Interim payment application to EC it gets transferred automatically to the Final Interim payment to EC and is no longer available on the list of Scenario CA Confirmations in Generate final interim payment application to EC view.

- The Final interim payment application to EC will be transferred to the Accounts for accounting period for accounting year N.

- The irregularity will be reported as withdrawal for the accounting year N.

Withdrawals And Recoveries

ERDF | IPAII | ENI

Priority	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
ITP Priority 1	€ 34.42	€ 5.17	€ 29.25	€ 0.00	€ 0.00	€ 0.00
Total	€ 34.42	€ 5.17	€ 29.25	€ 0.00	€ 0.00	€ 0.00

Split Of Amounts Withdrawn And Recovered During The Accounting Year By Accounting Year Of Declaration Of The Corresponding Expenditure	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
In Relation To Accounting Year Ending 30.06.2015	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2016	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2017	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2018	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2019	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2020	€ 34.42	€ 5.17	€ 29.25	€ 0.00	€ 0.00	€ 0.00

Figure 289 Reporting on Recoveries and Withdrawals for accounting year N

Figure 290 Workflow Scenario 3

Scenario 4

Should be used for:

- Irregularity detected in year N linked to expenditure included in the Interim payment application to EC in <u>previous accounting years (year N-n).</u>

- Irregularity <u>recovered by the programme in year N</u>.

- Irregularity is a <u>recovery</u> (incl. "recovery according to art. 71")

Financial Correction Programme Level

Ca Confirmation Number	Payment Application	Account	Accounting Year
27 - 30.11.2016	Number: 1	Number: 8	01.01.2014 - 30.06.2015

Olaf Report   Irregularity   Amount Below250 Eur   To Be Reported To E C ✔

Scenario   Description

4

Scenario 4

Should be used for:

- Irregularity detected in year N linked to expenditure included in the "interim payment application" in previous accounting years (year N-n).
- Irregularity recovered by the programme in year N.
- Irregularity is a recovery (incl. "recovery according to art. 71")

How will the workflow work?

- The system will add interest on late repayment (if any) to the irregular amount.
- Irregularity will be available on the list of findings to be included in the CA confirmation.
- CA confirmation including this irregularity will go to "payments to projects".
- CA confirmation with this irregularity should be included in the "interim payment application" <u>or</u> directly in the "final interim payment application" for the accounting year N (it needs to be included manually by the user).
- The "final interim payment" will be transferred to the "accounts for accounting period" for accounting year N.
- The irregularity will be reported as recovery <u>or</u> "recovery according to art. 71" for the accounting year N.

Action   Date Of Repayment   Recovery Accoring To Article71

Recovery   14.12.2016   ✔

Figure 291 Scenario 4 finding

How will the workflow work?

- The system will add interest on late repayment (if any) to the irregular amount. The interest will be added only if the amount in field 'Total interest on late repayment' is different than zero. The interest will be added to the total amount corrected and reported together to the Commission. It will be added when confirming the finding or control and the user will be informed about it by

information popup. If it is updated after confirming the finding, the amount will no longer be updated.

- Irregularity will be available on the list of findings to be included in the CA Confirmation. In order to include it, it must be confirmed by CA first. The finding needs to be manually selected for the CA Confirmation.

  Please note that the scenario findings cannot be included in one CA Confirmation together with other items. This means that you can include in one CA Confirmation multiple findings of Scenario 4 but you cannot include Scenario 4 findings together with a report or other finding.

  Scenario findings are always marked with the Scenario number.

- CA confirmation including this irregularity will go to Payments to projects. The repayment from project must be introduced retrospectively because the recovery data must be included in the finding form before it is transferred into a CA Confirmation and Payments to projects interface.

- CA confirmation with this irregularity should be included in the Interim payment application to EC or directly in the Final interim payment application to EC for the accounting year N (it needs to be included manually by the user). The CA Confirmation with Scenario 4 finding(s) will be available to be included in the Interim payment application to EC or Final interim payment application to EC from a separate table 'Scenario CA Confirmations'. If it is included in Interim payment application to EC it gets transferred automatically to the Final Interim

payment to EC and is no longer available on the list of Scenario CA Confirmations in Generate final interim payment application to EC view.

- The Final interim payment application to EC will be transferred to the Accounts for accounting period for accounting year N.

- The irregularity will be reported as recovery or "recovery according to art. 71" for the accounting year N.

Withdrawals And Recoveries

ERDF | IPAII | ENI

Priority	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
ITP Priority 1	€ 6 150.00	€ 923.73	€ 5 226.27	€ 246.00	€ 0.00	€ 246.00
Total	€ 6 150.00	€ 923.73	€ 5 226.27	€ 246.00	€ 0.00	€ 246.00

Split Of Amounts Withdrawn And Recovered During The Accounting Year By Accounting Year Of Declaration Of The Corresponding Expenditure						
	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
In Relation To Accounting Year Ending 30.06.2015	€ 6 150.00	€ 923.73	€ 5 226.27	€ 246.00	€ 0.00	€ 246.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2016	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2017	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2018	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00

Figure 292 Reporting on Recoveries and Withdrawals for accounting year N

Figure 293 Workflow Scenario 4

Scenario 5

Should be used for:

- Irregularity detected in year N linked to expenditure included in the Interim payment application to EC <u>in previous accounting years (year N-n)</u>.

- Irregularity is <u>amount to be recovered</u>.

Figure 294 Scenario 5 finding

> **Attention!**
>
> Please note, that because the finding does not go to the Accounts for accounting period, it is necessary to select the accounting year in which the finding should be reported as 'amount to be recovered'. There is a built in validation, which will not allow you to save the Scenario 5 finding without selecting the accounting year.

How will the workflow work?

- Irregularity will be available on the list of findings to be included in the CA Confirmation. It must be manually included by the user.

  Please note that in case of scenario 5 findings, the CA Confirmation can include just one finding (because each finding can have a different follow up in the future). In case you select multiple Scenario 5 findings and press 'Generate CA Confirmation' button, the system will generate as many CA Confirmations as findings selected. You'll be informed about this in a popup.

Figure 295 Generating CA Confirmations for Scenario 5 findings

Figure 296 Workflow Scenario 5

- CA confirmation including this irregularity will go to Payments to projects. In case of repayment, the payment data needs to be manually introduced in the eMS.

- Irregularity will <u>neither</u> go to Interim payment application to EC <u>nor</u> to the Final interim payment application to EC <u>nor</u> to the Accounts for the accounting period for year N.

- The irregularity will be reported as "<u>amount to be recovered</u>" for the accounting year N (the accounting year selected in the finding form – see Figure 29).

THE SCENARIO REQUIRES A FOLLOW UP IN THE NEXT ACCOUNTING YEARS!

Financial Correction Programme Level

Ca Confirmation Number	Payment Application	Account	Accounting Year
2 - 15.12.2016	Number:	Number: 12	01.07.2019 - 30.06.2020

Olaf Report	Irregularity	Amount Below250 Eur	To Be Reported To E C
			✔

Scenario

5

Description

Scenario 5

Should be used for:

- Irregularity detected in year N linked to expenditure included in the "interim payment application" in previous accounting years (year N-n).
- Irregularity is amount to be recovered

How will the workflow work?

- Irregularity will be available on the list of findings to be included in the CA confirmation.
- CA confirmation including this irregularity will go to "payments to projects".
- Irregularity <u>will neither</u> go to "interim payment application" NOR to the "final interim payment application" NOR to the "accounts for the accounting period" for year N.
- The irregularity will be reported as "amount to be recovered" for the accounting year N.

THE SCENARIO REQUIRES A FOLLOW UP IN THE NEXT ACCOUNTING YEARS!

Accounting year

-

Action

Amount To Be Recovered

Follow ups

Date	Scenario	Accounting year	Remove
No records found.			

⊕ Add follow up

Figure 297 Scenario 5 follow up

All the follow ups are stored in the finding form and can be traced later on.

Scenario 5a

Should be used for follow up of Scenario 5 in case:

- The amount reported as "amount to be recovered" in year N <u>was not yet recovered</u> in year N+n

Figure 298 Scenario 5a as a follow up of Scenario 5

How will the workflow work?

- The irregularity will be again reported as "amount to be recovered" for the accounting year N+n. The year in which it should be included in the reporting as "amount to be recovered" again needs to be manually indicated in the follow up dialogue.

THE SCENARIO REQUIRES A FOLLOW UP IN THE NEXT ACCOUNTING YEARS! It is necessary to follow up the scenario 5a each year until the amount is recovered or becomes irrecoverable (see Scenarios 5b and 5c). It is possible to add as many follow ups as necessary.

Scenario 5b

Should be used for follow up of Scenario 5 or Scenario 5a in case:

- The amount reported as "amount to be recovered" in year N was recovered in year N+n.

- The irregularity becomes recovery or "recovery according to art. 71".

Figure 299 Scenario 5b as a follow up of Scenario 5 or Scenario 5a

How will the workflow work?

- CA confirmation including this irregularity should be included in the Interim payment application to EC or directly in the Final interim payment application to EC for the accounting year N+n (it needs to be included manually by the user).

It will be available in the separate table 'Scenario CA Confirmations' as Scenario 5b finding.

- The Final interim payment application to EC will be transferred to the Accounts for accounting period for accounting year N+n.

- The irregularity will be reported as "recovery" or "recovery according to art. 71" for the accounting year N+n.

Withdrawals And Recoveries

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Priority	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
ITP Priority 1	€ 0.00	€ 0.00	€ 0.00	€ 152.24	€ 22.85	€ 129.39
Total	€ 0.00	€ 0.00	€ 0.00	€ 152.24	€ 22.85	€ 129.39

Split Of Amounts Withdrawn And Recovered During The Accounting Year By Accounting Year Of Declaration Of The Corresponding Expenditure	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
In Relation To Accounting Year Ending 30.06.2015	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2016	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2017	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2018	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2019	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2020	€ 0.00	€ 0.00	€ 0.00	€ 152.24	€ 22.85	€ 129.39

Figure 300 Reporting on Withdrawals and Recoveries for the Accounting year N+n

Figure 301 Workflow Scenario 5b

Scenario 5c

Should be used for follow up of Scenario 5 or Scenario 5a in case:

- The amount reported as "amount to be recovered" in year N <u>cannot be recovered</u> in year N+n (i.e. is irrecoverable).

- The irregularity becomes irrecoverable amount.

Figure 302 Scenario 5c as a follow up of Scenario 5 or Scenario 5a

How will the workflow work?

- Irregularity will <u>neither go</u> to Interim payment application to EC <u>nor</u> to the Final interim payment application to EC <u>nor</u> to the Accounts for the accounting period for year N+n (the year manually selected in the follow up form).

- The irregularity will be reported as "irrecoverable amount" for the accounting year N+n.

THE SCENARIO REQUIRES A FOLLOW UP IN THE NEXT ACCOUNTING YEARS!

Figure 303 Workflow Scenario 5c

Scenario 5c(a)

Should be used for follow up of Scenario 5c in case:

- In the accounting year N+n+1 the Commission decides that the Programme <u>does not have to repay</u> the irrecoverable amount to the common budget of the European Union.

Figure 304 Scenario 5c(a) as a follow up of Scenario 5c

How will the workflow work?

- Nothing happens, the amount will no longer be reported as irrecoverable and the workflow is closed.

Figure 305 Workflow Scenario 5c(a)

Scenario 5c(b)

Should be used for follow up of Scenario 5c in case:

- In the accounting year N+n+1 the Commission decides that the Programme <u>has to repay</u> the irrecoverable amount to the common budget of the European Union.

- Irregularity becomes a <u>withdrawal</u>.

Figure 306 Scenario 5c(b) as a follow up of Scenario 5c

How will the workflow work?

- CA confirmation with this irregularity should be included in the Interim payment application to EC <u>or</u> directly in the Final interim payment application to EC for the accounting year N+n+1 (it needs to be included manually by the user). It will

be available on the list in a separate table 'Scenario CA Confirmations' as Scenario 5c(b).

- The Final interim payment application to EC will be transferred to the Accounts for accounting period for accounting year N+n+1.

- The irregularity will be reported as withdrawal for the year N+n+1. The workflow is closed.

Withdrawals And Recoveries

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Priority	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
ITP Priority 1	€ 1 740.60	€ 261.45	€ 1 479.15	€ 0.00	€ 0.00	€ 0.00
Total	€ 1 740.60	€ 261.45	€ 1 479.15	€ 0.00	€ 0.00	€ 0.00

Split Of Amounts Withdrawn And Recovered During The Accounting Year By Accounting Year Of Declaration Of The Corresponding Expenditure	Withdrawals - Total Eligible Amount Of Expenditure	Withdrawals - Corresponding Private Contribution	Withdrawals - Corresponding Public Expenditure	Recoveries - Total Eligible Amount Of Expenditure	Recoveries - Corresponding Private Contribution	Recoveries - Corresponding Public Expenditure
In Relation To Accounting Year Ending 30.06.2015	€ 1 588.36	€ 238.60	€ 1 349.76	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2016	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2017	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
Out Of Which Amounts Corrected As A Result Of Audits Of Operations According To Article127(1) Of Regulation(E U) No1303/2013	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
In Relation To Accounting Year Ending 30.06.2018	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00

Figure 307 Reporting on Withdrawals and Recoveries for the Accounting year N+n+1

Lump sums for preparation costs and disabling flat rates for preparation costs

Two new call options were introduced in version 3_2 of the eMS. They can be used together or separately. Both privileges can be selected only if the workpackage preparation is activated.

Disable flatrate for preparation cost

If this call option is selected, no flat rates will be generated for the items in workpackage preparation. This means that even if the flatrates are activated, they will be generated for any other WP but preparation. This applies to the Application Form as well as for reporting.

Budget Flatrate
☑

Flatrate Staff
☑ 20.00% ▲▼

Flatrate Office
☑ 15.00% ▲▼

↻ Recalculate Budget

Budgetline	Wp P - Preparation	Wp M - Management	Sum
Staff costs	€ 0.00	€ 10 768.04	€ 10 768.04
Office and administration	€ 0.00	€ 1 615.19	€ 1 615.19
Travel and accomodation	€ 0.00	€ 0.00	€ 0.00
External expertise and services	€ 50 000.00	€ 53 840.24	€ 103 840.24
Equipment	€ 0.00	€ 0.00	€ 0.00
Infrastructure and works	€ 0.00	€ 0.00	€ 0.00
Net Revenue	€ 0.00	€ 0.00	€ 0.00
Sum	€ 50 000.00	€ 66 223.47	€ 116 223.47

Figure 308 Partner budget, no flat rates for WP preparation are generated

Please note that this call option cannot be used retrospectively, it can only be used for new application forms.

Enable lump sum for preparation cost – does not go through FLC

If this call option is enabled, the system will use a different reporting workflow for preparation costs. All the partner budget from the WP Preparation will be marked as Lump Sum and reported automatically by LP or JS as lump sum.

There are no visible changes in application form, partners introduce their budgets as previously.

When the project is approved partners can normally report their cost for all other periods than period 0 and Workpackages other than WP preparation. The preparation cost report is triggered by LP or JS – each programme can decide who should be allowed to claim it (the user needs privilege ACCESS_CLAIM_LUMP_SUM_PREPARATION_COST_BUTTON).

Figure 309 Claim preparation cost button as LP role

Figure 310 Claim preparation costs button

If you click on the button the system will ask for confirmation of the action. If confirmed the following will happen automatically:

1. The system will generate partner reports for all the partners who in the Application cost have planned costs in the WP Preparation. The reports will contain no text, just the List of Expenditure. All values will be taken from the Application Form and all items will be marked as lump sums.

Figure 311 automatically generated preparation cost partner report

2. The partner report will be automatically marked as 'Report FLC Certified' but no FLC certificate will be available. The report will skip the FLC.
3. The system will automatically generate project progress report and mark it as 'Report submitted to JS" and attach all certificates of all automatically generated partner reports.
4. The project report will automatically be submitted to the JS.

260

5. The 'Claim preparation cost' button will be deactivated and cannot be pressed again.

Figure 312 automatically generated preparation cost project report

From this point, the normal workflow should be followed. The JS can access the report from the list of reports waiting for approval, can cut expenditure and approve it. It is possible to revert the report to the Lead Partner. LP can then modify it (e.g. add text) and resubmit. The LP cannot delete the report.

Similarly, MA and CA workflows remain unchanged.

AT CA level, all the expenditure from these reports will be marked as Lump Sums and reported as such. The system will also use ratio of public/private contribution from the Application Form and apply it on partner contribution from the automatically generated reports. The Total Public expenditure will be calculated accordingly.

Caution!

It is not possible to repeat this reporting process!
The system does not allow for submission of any additional preparation costs reports.

Attention!

It is possible to use this option only after the Lead Partner assign users for each of the project partners (in Supplementary Information/Users section). If not all partners have users assigned, the system will show a warning and not perform the lump sum reporting action.

> **Attention!**
>
> This option can be turned on and used for projects that are already approved. The condition is that the projects DID NOT yet submit any preparation cost report!

Lump sum calculator

The lump sum calculator was introduced to ease the calculation process of total eligible amount for partners of programmes who allow lump sum based on fund amount. So if a programme allows e.g. 50.000 EUR ERDF for all partners, the partners need to share the lump sum between themselves and calculate the total eligible amount for each of them based on their co-financing rate. The lump sum calculator helps calculating such amounts.

The lump sum calculator is available for users with allocated user privilege ENABLE_LUMP_SUM_CALCULATOR and is accessible from the left side menu in the application form, partner budget view.

Figure 313 Access to the Lump Sum calculator

The calculator includes the list of the partners, their funding source and co-financing rate. Partners include the lump sum in fund amount – 'Lump sum (fund) and the system calculates the total eligible per partner which should be introduced in the budget – 'Lump sum (total)'. It is possible to export the calculated data to Excel.

The amounts calculated by the Lump Sum calculator are not transferred automatically to partner budgets, partners must introduce them manually in the budget tables.

Lump Sum Calculator ✖

Partner abbreviation	Fund	Co-financing rate	Lump sum (fund)	Lump sum (total)
MY LP	ERDF	56.00 %	€ 20 000.00	€ 35 714.29
My PP2	ERDF	74.36 %	€ 15 000.00	€ 20 172.14
My PP3	ERDF	84.67 %	€ 15 000.00	€ 17 715.84

🗋 Export

Figure 314 Lump Sum calculator

Attention!

As the fund amount rounding principle always is round down to two digits after the comma, in order to get exactly the required amount of fund amount, the total eligible calculated by the lump sum calculator is rounded up to two digits after the comma.

Advance payments

In order to use advance payments functionality, the call option 'Enable advance payments to projects' need to be activated.

Figure 315 Call option 'Enable advance payment for projects'

Allocating advance payments to projects

If this call option is selected, the user with privilege

'ACCESS_MAKE_ADVANCE_PAYMENT_MENU' sees a button 'Advance payments' in the left-side menu of the project reporting overview.

Figure 316 Advance payments menu item

This button leads to advance payments overview table. In this table the JS can see all the advance payments introduced for this project and add a new one.

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Figure 317 Adding advance payment to project

After clicking on 'Add new advance payment' you are transferred to a form where you can add information about advance payments to the project. First you need to mark partners that should receive advance payment and click on 'Add entries for selected partners'.

Figure 318 Adding advance payments for selected partners

Introduce amounts of advance payments for each of the partners and click on 'Submit' button.

The advance payment is recorded and submitted to CA for payment. The JS can see it on the list of advance payments for the project.

If the property automessage.submitAdvancePayment in message.properties is set to true, the CA will receive automatic message when the advance payment is submitted by JS and ready for payment.

The CA can see the list of all advance payments in a separate list under 'Payments to projects' menu item under CA confirmation menu.

Payments to Projects - Advance Payments

Project Id	Subprogramme	Priority Axis	Name	Acronym	Start	End	Lead Partner	LP Nationality	Call	Timeslot	Specific Objective	Submission Date Phase 1	Submission Date	Project State	Applicant Or Leadpartner	Officer In Charge	Advance payment total	Advance payment status	View advance payment
ITP13		ITP Priority 1	another test project	ATP	28.10.2016	27.11.2019	Institute for cooperation	POLSKA	Test the full CA call		ITP Specific objective 1.1		31.10.2016	Contracted	blukomska2		€ 60 000.00	Not Paid	🔍
ITP80		ITP Priority 1			29.12.2016	31.12.2017	My LP	LATVIJA	Advance payment test call		ITP Specific objective 1.1		29.12.2016	Contracted	blukomska2		€ 60 000.00	Not Paid	🔍

Figure 319 Advance payments under 'Payments to projects' menu

In order to introduce information on actual payments, you need to click on magnifying glass in the 'View advance payment' column.

Payments of advances work similarly as payments to projects. The payment can be done in full or in installments.

Figure 320 Paying of advance payments

Similarly, to any other payment to project, it is possible to notify Lead partner about payment.

Figure 321 LP notification about transfer of advance payment

There is an empty validation plugin, which is triggered when pressing 'Confirm payment process' button. Programmes can implement their own validation rules for advance payments.

Settlement of advance payments

Settlement of advance payments was introduced in the eMS version 3_3.1.

Settlement is possible for any advance payment paid to project partner in full. Settlement is done together with payment of the project report.

If there is any advance payment ready to be settled (paid in full to partner and not yet fully settled) the CA will see a button 'Settle advance payment'.

Figure 322 Settle advance payment button

Please note that for technical reasons it is possible to settle advance payments only when paying the partner report in full. Therefore, you can select advance to be settled only after checking 'Paid in full'.

Figure 323 Advances can be settled only with reports paid in full

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After you check the 'Paid in full' the 'Settle advance payment' button will show you a popup with a list of advance payments paid to the partner.

Figure 324 List of advance payments available for settlement

The CA can decide which of the available advances should be settled and which amount should be deducted from the payment claim.

The amount to be settled cannot be:

- higher than the remaining unsettled advance payment
- the amount to be paid to the partner

The system will not allow you to introduce amount that is not fulfilling the above mentioned criteria.

Figure 325 Settlement of advance payment. Update of amount to be paid.

The amount to be paid is decreased by the amount to be settled. The system records lower payment but the amount that is included in the payment application to EC remains unchanged (the advance payment is never claimed from the European Commission).

Status of the advance payment is updated with every settlement.

Figure 326 Advance payment overview.

The JS can follow the settlement in the 'Advance payment' section in project view. It is updated with every payment and settlement of the advance payment.

Modification Request

Needed user rights / privileges

Monitoring Committee/JTS - MG_CHANGEREQUESTS is the privilege which enables users to request modifications, approve modifications requests from LPs and to finalize modifications. It also enables the user to see the Overview list of all modification requests (see below).

Lead Partner – No special privilege needs to be assigned to ask for modification from the side of a LP.

The eMS handles three different ways to reopen already submitted applications:

1) Via **modification requests**. This is the only way to generate a NEW VERSION of the application form and can be done at any stage of the programme implementation before the project status is set to 'Finalised'. After the finalization of a modification, the old version of the AF is archived and a new one is created and becomes the valid application form. This process is described in detail below.

2) Via '**revert to saved**' or '**revert to saved2**' (in the case of a 2-step call). This simply reopens the application form for further editing. NO NEW VERSION of the application form is generated after the LP submits again the modified AF (for more details check out the chapter on reverting).

Caution!

Re-submission of reopened application form creates a new submission with a new date! No trace of previous submission is kept in the eMS except for the audit log.

Figure 327 Revert to SAVED2 reopens an application form for further editing WITHOUT generating a new version of the Application Form.

3) Via reopening the attachment upload section. This opens the attachment upload section for further uploads by the LP. The rest of the application form remains closed. No new version of the Application form is generated but it is easily traceable which attachment was uploaded.

Figure 328 'Attachment upload closed' can be changed to 'attachment upload open' to allow the applicant to upload further documents

Who can initiate a modification?

Modifications can either be initiated by a programme authority (e.g. JS, MC) or by the Lead Partner. Furthermore, modifications are initiated automatically if a project is 'approved under conditions' (after MC decision).

- **Approved under conditions:** Applications approved under conditions in the 'Funding Decision (MC)' interface are automatically re-opened for modifications by the LP. The following workflows are initiated:

  o Approval under conditions opens request for modification -> LP modifies AF -> JS approves modification -> new version of the AF is generated. OR

  o Approval under conditions opens request for modification -> LP modifies AF -> JS requests further modifications -> LP modifies AF -> JS approves modification -> new version of the AF is generated. OR

  o Approval under conditions opens request for modification -> LP modifies AF -> JS rejects modification -> project status is changed to Rejected and project is archived.

- **Programme Authorities:** A user with the privilege to manage change requests (MG_CHANGEREQUESTS) such as e.g. JS can initiate a modification by pressing the 'request modification' button in the project view. The JS user is then asked to enter information about the requested modification into a user interface. Saving directly opens the Application Form for the LP to be edited and informs the LP about the requested modification. The following workflow are initiated:

  o JS requests modification -> LP modifies AF -> JS approves modification -> new version of the AF is generated. OR

  o JS requests modification -> LP modifies AF-> JS requests further modifications -> LP modifies AF -> JS approves modification -> new version of the AF is generated. OR

  o JS requests modification -> LP modifies AF -> JS rejects modification -> AF remains not changed and no new version of the AF is generated.

- **Lead Partner:** Project Lead Partner can request a modification by pressing the 'request modification' button. The LP is then asked to enter information about the intended modification into a user interface. Saving informs the JS about the request.

JS can then approve the modification request and open the Application Form for editing by the LP or reject the request. The following workflows are initiated:

- LP requests permission to modify -> JS approves request for modification -> LP modifies AF -> JS approves modification -> new version of the AF is generated.

- LP requests permission to modify -> JS approves request for modification -> LP modifies AF -> JS requests further modifications -> LP modifies AF-> JS approves modification -> new version of the AF is generated. OR

- LP requests permission to modify -> JS approves request for modification -> LP modifies AF -> JS rejects modification -> AF remains not changed and no new version of the AF is generated.

Request Date	Message	Decision Message	Date Decision	Approval Message	Date Approval	Decision State	
04.08.2015 17:18:21			04.08.2015 17:18:45				▶
22.07.2015 13:47:57		ok	22.07.2015 13:50:58	ok	22.07.2015 13:50:58	Accepted	▶
22.07.2015 11:53:45			22.07.2015 13:47:34	ok	22.07.2015 13:47:34	Accepted	▶
			22.07.2015 11:52:15	ok	22.07.2015 11:52:15	Accepted	▶

Categories:
- Change of Project Result/Indicators

Decision Message

Figure 329 The menu item 'Modification request' leads to the overview list of all modifications for a project and related messages

When can a modification be requested?

- A modification request is automatically opened after an application is **'approved under conditions'**

- **Programme authorities** with the user right (MG_CHANGEREQUESTS) can open modification requests at any time after submission of an Application form even BEFORE the application has been approved or contracted. This was requested by programmes that want to allow modifications prior to project approval e.g. during the assessment of applications. Other programmes are more likely to modify applications forms only after a project has been approved or approved under conditions.

- **Lead Partners** can request modifications after the project has been handed over to a lead partner and the LP has been approved by the JS. Before that stage it is not possible for LPs to request modifications.

Attention!

No authority can request modifications for projects which are finalized or archived.

Attention!

It is always the last valid application form which is a subject to modification request, not the initial one!

Attention!

It is not possible to initiate a modification request (neither by programme authorities nor by Lead Partner) if a previous modification is not finalized (i.e. approved or rejected by JS).

Approved under conditions

For information on modifications initiated when applications are approved under conditions, please refer to the Chapter 'Decision'.

Modifications initiated by the JS

The JS can initiate a modification any time after the application has been submitted until the project is finalized. In the project view, the JS can initiate modification using the left-side menu item 'Application and Contract'→ 'Request Modification'.

Figure 330 (JS view) To request a LP to modify the AF, the JS enters the project view and requests a modification

A modification initiated by the JS, automatically opens the AF for modification by the LP.

Modifications requested by the LP

After the LP has been approved (see 'handover' chapter), he/she can ask for permission to modify the AF using the left-side menu item 'Application and Contract' → 'Request Modification'.

Figure 331 (LP view) Requesting the JS to open the AF for modifications

The LP then needs to wait for the approval by the JS to continue with the modification. Once the JS approves the modification request, the AF will be unlocked for editing.

The JS has the following options:

- 'New': The JS does not decide yet whether to refuse ort accept the request to modify the AF. Please note that the wording will be changed to '-' as 'new' is confusing.

- 'Mr Refuse': Modification request refused. The JS refuses the request to modify the AF. This closes the request and the AF remains locked. The LP can decide to open a new modification request.

- 'Mr Accepted': Modification request accepted. The JS accepts the request for modification and the AF is unlocked for editing by the LP.

Figure 332 (JS view): The JS can accept or decline a request by the LP to modify the AF

JS choses the decision in the drop-down, enters a message text, presses 'Save Mr evaluation' and 'submit Mr evaluation'.

If 'Mr accepted' is chosen, the AF is now open for modifications and the LP can edit the AF.

Modification Request Details: Project Test4FLCChecklist1

Request Date	Message	Decision Message	Date Decision	Approval Message	Date Approval	Decision State
21.12.2015 11:40:18	I need to add a partner	Please go ahead.	21.12.2015 11:51:50			Accepted

Message

I need to add a partner

Decision Message

Please go ahead.

Approval Message

Figure 333 (LP view) After the programme allowed the LP to modify the application form, the Modification Request section appears as default view when opening the project

The LP can now modify the AF and submit the modified AF to the JS for approval.

The JS can use the 'Compare modifications' function of the eMS to compare the old AF with the modifications proposed by the LP ('track changes') (see below).

| Project Summary | Partner | Project Description | Work Plan | Project Budget | Project Budget Overview | Attachments | Attachments JS | Documents |

Modification Request Details: Project TestAgain

Request Date	Message	Decision Message	Date Decision	Approval Message	Date Approval	Decision State
18.12.2015 00:00:00		Please extend the duration of your project to 12 months and modify the project budget accordingly. Please also make sure to secure to publish all project outputs on the project's website.	18.12.2015 14:13:09	We accept your modifications	18.12.2015 14:13:09	Accepted

Figure 334 After the modification has been approved, the 'decision date' is added to the 'modification request' interface.

Compare Modifications – Track changes

There are two modes for the authorities to compare proposed modifications with the presently valid version of the AF.

1) The first mode makes the changes visible in form of a tree. Modifications can be seen as separate elements in a table view.

Figure 335 Compare Modifications – Tree view

2) The second mode uses the pdf extraction of an application form for comparison. This comparison is similar to the track changes function used by some office software. To access this mode, users need to press 'Compare html'.

Figure 336 Compare Modifications - HTML view

Keeping track of modifications, decisions and contract amendments

The eMS stores all versions of the Application Form in consecutive order under the menu item 'project history'.

Figure 337 To access the project history enter the project and press 'project history'

The Project History gives an overview of the different versions of application forms. Authorities can insert additional information about the different versions of the AF, when and who decided etc. Additionally, contract amendments or other relevant documents can be uploaded here. The date of signing the subsidy contract (or amendments to the contract) is also entered here.

Different versions of application forms can always be compared via the comparison function.

| Project Summary | Partner | Project Description | Work Plan | Project Budget | Project Budget Overview | Attachments | Attachments JS | Documents |

Mod Number	Status	Date Of Approval Rejection	Valid Af	Type Of Modification	Who Decided	Date Of Signature Of Subsidy Contract	Number Of Contract Amendment	Comment	Attachment	Attachment Description	Attachment Upload Date	Attachment Uploaded By	Compare
0	CR_ACCEPTED		🔍		MC ▾	13.08.2015	1		⊕				↩
1	ACCEPTED			Change of Budget, Change of Activities	JTS1			Budget & Activities ändern					
2	CR_DONE		🔍		– ▾				⊕				↩

Figure 338 The project history shows important events in the lifetime of a project

The eMS also shows all currently <u>open</u> modifications for all projects under the 'modification request' menu item at the programme level.

Figure 339 To access the overview of open modifications, press 'Modification requests'.

Project statuses during modifications

Modifications lead to changes in the status of a project as can be seen in the various overview lists of projects and in the project history.

	Status in 'My Applications'	Status in 'Application Browser'	Status in 'Modification requests' overview	Versions shown in Project History
LP requested permission to modify	Cr	Cr	Cr	CR
JS granted permission to modify	Cr_in_process	Cr_accepted (=old version) Cr_in_process (=version to be modified)	Cr_in_process	CR_ACCEPTED CR_IN PROCESS
JS refused permission to modify	Contracted (=old version)	Contracted (=old version)	Contracted (=old version)	CONTRACTED
LP submitted modified AF	Cr_done	Cr_accepted (=old version) Cr_done (=modified version)	Cr_done	CR_ACCEPTED CR_DONE
JS approved modified AF	Contracted	Archived (=old version) Contracted (=modified version)	*not shown*	ARCHIVED CONTRACTED
JS rejected modified AF	Contracted (=old version)	Contracted (=old version) Archived_copy_cr (=archived version of the rejected modified AF)	not shown	CONTRACTED ARCHIVED_COPY_CR

As can be seen, once the JS permits the LP to modify the AF, the application browser shows the project twice. Cr_accepted is the old AF, Cr_in_process is the one, which is undergoing the modification. Once the LP submitted the modified AF to the JS, there will also be two versions: Cr_accepted is still the old AF, Cr_done is waiting for approval

by the JS. After the JS approved the modified AF, the old one will be archived and the new one will be shown as 'contracted'

Note: It is possible to translate or rename these statuses in your version of the eMS.

Figure 340 (JS view) After the LP submitted the modified AF, the application browser shows the project twice.

After the JS approves the the Cr_done version, a new AF is generated and the old one is archived.

Figure 341 After the JS accepts the modification, the application browser archives the old AF and shows the new version in the status 'contracted'.

In the 'my applications' view only the latest version of the AF is shown.

Figure 342 (JS, LP) In the 'my applications' view only one version of the AF is show.

Reverting

At different stages of the workflow, eMS enables reverting a project or a report to a previous stage based on the privilleges.

Revert a project to SAVED

Needed user rights / privileges

The user (usually JTS) able to revert a project to "Saved" needs to be assigned a privilege CAN_REVERT_PROJECTSTATE.

How to revert a project to SAVED

Logged in as JTS, you can revert the submitted projects (in the state SUBM or PART_SUBM) to the SAVED state, thus enabling the applicants to reedit the project. The corresponding button can be found in the left side menu under the General items.

Figure 343 Reverting a project to SAVED

Revert a project to SUBM/ PART_SUBM

Needed user rights / privileges

The user (usually JTS) able to revert a project to "SUBM" or "PART_SUBM " (in the first step of a two-step proceeding) needs to be assigned a privilege CAN_REVERT_PROJECTSTATE.

How to revert a project to SUBM/ PART_SUBM

Logged in as JTS, you can revert an eligible or first-step eligible (state: Eligible_phase1) project to the SUBM/PART_SUBM state, thus providing a possibility of repeated eligibility evaluation or further reverting the project back to an applicant. The corresponding button can be found in the left side menu under the General items.

Figure 344 Reverting a project to SUBM/ PART_SUBM

Revert a project to ELIGIBLE

Needed user rights / privileges

The user (usually JTS) able to revert a project to "Eligible" or "Eligible_phase1 "(in the first step of a two-step proceeding) needs to be assigned a privilege CAN_REVERT_PROJECTSTATE.

How to revert a project to the Eligible / Eligible_phase1

Logged in as JTS, you can revert an evaluated or first-step evaluated (state: Evaluated_phase1) project to the Eligible / Eligible_phase1 state, thus providing a possibility of repeated quality assessment or possibility of further reverting the project back to eligibility evaluation. The corresponding button can be found in the left side menu under the General items

Figure 345 Reverting a project to ELIGIBLE

Revert a project to EVALUATED

Needed user rights / privileges

The user (usually JTS) able to revert a project to "Evaluated" or "Evaluated_phase1 " (in the first step of a two-step proceeding) needs to be assigned a privilege CAN_REVERT_PROJECTSTATE.

How to revert a project to Evaluated / Evaluated_phase1?

Logged in as JTS, you can revert a project after recommendation or first-step recommendation (states: Recommended, Recommended_under_conditions, Not_recommended, Recommended_p1, Recommended_under_conditions_p1, Not_recommended_p1) to the Evaluated / Evaluated_phase1 state, thus providing a possibility of repeated recommendation or possibility of further reverting the project back to quality assessment.

Similarly, the projects already approved, approved under condition, not approved or projects in the handover state can be reverted to the Evaluated state.

The corresponding button can be found in the left side menu under the General items.

Figure 346 Reverting a project to EVALUATED

Revert a project to Handover

Needed user rights / privileges

The user (usually JTS) able to revert a project to "Handover" needs to be assigned a privilege CAN_REVERT_PROJECTSTATE.

How to revert a project to Startup

Logged in as JTS, you can revert a project to be contracted (state: Contracting) to the Handover state, thus providing a possibility of another trial for lead partner user choice. The corresponding button can be found in the left side menu under the General items.

Figure 347 Reverting a project to Handover

Revert a project to Startup

Needed user rights / privileges

The user (usually JTS) able to revert a project to "Startup" needs to be assigned a privilege CAN_REVERT_PROJECTSTATE.

How to revert a project to Startup

Logged in as JTS, you can revert a contracted project to the state before contracting (Startup) thus providing a possibility of editing the supplementary information. The corresponding button can be found in the left side menu under the General items.

Figure 348 Reverting a project to Startup

Revert a report

Reverting a partner report

Partner report cannot be reverted to the applicant by an FLC user directly. The FLC needs to contact a JTS and ask for opening an additional report for the particular user. Further details can be specified via internal message.

Reverting a project progress report by JTS

If JTS is not satisfied with the provided Project Progress Report or its part, it can revert it to the LP by clicking the corresponding item at the bottom of the left-side menu.

Figure 349 Reverting the Project Progress Report to LP

If JTS is not satisfied with the FLC report and/or certificated expenditures, it can revert it either to the FLC or to a project partner by clicking the corresponding button in the "List Of Partner FLC Certificates" section of the Project Progress Report.

Figure 350 Revert Project Progress Report to FLC or PP

Reverting a project progress report by MA

If MA is not satisfied with the provided Project Progress Report or its part, it can revert it to the JTS by clicking the corresponding item at the bottom of the left-side menu.

Figure 351 Reverting the Project Progress Report to JTS

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Reverting a project progress report by CA

If CA is not satisfied with the provided Project Progress Report or its part, it can revert it to Ma or JTS by clicking the corresponding item at the bottom of the left-side menu.

,

Figure 352 Reverting the Project Progress Report to JTS or to MA

Rounding

We faced some rounding issues in the eMS and had to look for a new solution. Our initial specification of storing 10 digits after the comma (high precision) in the technical database and showing two digits in the user interface has led to a situation where sums in the tables of the user interface do not always match and fund values as well as flat rates sometimes exceed the % limits. Rounding issues in the eMS are caused by all calculations that increase the number of digits after the comma. Specifically, in the eMS these are:

·   Calculating fund amounts (i.e. applying the co-financing rate)

·   Currency conversion (applying the currency conversion rate)

·   Flat rates (e.g. 15% of a budget line value)

After any of these calculations, the eMS needs to know what to do with the digits after the comma. Specifically, it needs to know:

1)   How many digits after the comma to keep in the technical database (24,8958754345 OR 24,89)

2)   How to round (e.g. arithmetically, truncating, etc.) (24,90 OR 24,89)

3)   How many digits after the comma show in the user interface and how to round the amount to be shown.

In version 3_1.0 of the eMS a new solution was developed and **now every eMS programme will have to choose between one of two options for currency exchange and flat rates.**

This is what is implemented in the eMS:

Flat rate calculations

The result of the flat rate calculations can be configured in the programme properties. There are two properties, which should be configured. First, the property **flatrateCalculationPrecision** sets how many digits after the comma will be stored in the technical database after the calculation of the flat rate. The system will always display only 2 digits, but if you set this property to more than 2, the high precision amounts will be stored and used for calculations.

The property **flatrateCalculationRoundingMode** sets the rounding mode for the result of the flat rate calculation. If you decide to round it down the system will round down with selected number of digits. So, if you set the **flatrateCalculationPrecision** at more than 2 digits (e.g. 5), the rounding will be applied only at 5th digit after the comma.

For example, with the following configuration **flatrateCalculationPrecision=5** and **flatrateCalculationRoundingMode=RoundingMode.DOWN** the amount 2,345676898 will be stored as 2,34567. If you change a rounding mode to UP or HALF_UP the same amount will be stored as 2,34568.

Please note, all amounts which are stored with more than 2 digits after the comma will be displayed in the user interface as 2 digits after the comma, rounded down. In the already mentioned example, if the result of flat rate calculations is stored with 5 digits after the comma and rounded down the amount in the database is 2,34567 (it is used for all future calculations) but the amount the user can see will be 2,34. User can see the actual amounts in the tables exported to Excel.

Currency conversion

Similarly, the result of applying the currency exchange rate needs to be rounded and the programmes can decide on the number of digits after the comma to be stored and the rounding mode. The following properties can be configured in the programme properties file: **currencyExchangeCalculationPrecision** and

currencyExchangeCalculationRoundingMode=RoundingMode.DOWN.

Single items are shown in the user interface with two digits after the comma. In case you choose the two digit rounding option, what you see in the user interface and what is in the database will be exactly the same. In case you choose 3-10 digits after the comma, the user interface will show two digits (rounded down) while the database stores more digits.

The exporting of all the tables to Excel format will show the REAL values from the database (i.e. if in the DB there are 10 digits then the export shows 10 digits).

Please see the two examples below and their consequences:

1) If you decide to go for higher precision and **store item values with more than 2 digits after the comma (max 10 digits)** the mathematical precision will be high. BUT if you add up the sub-totals or items displayed in the summary tables in the user interface, the total might differ by few eurocents.

eMS configured at 5 digits after the comma, rounding mode HALF_UP		
Actual amount	Amount stored in the database and used for calculations	Amount displayed in the eMS
22.56458575	22.56459	22.56
1.256987411	1.25699	1.25
1.11111111	1.11111	1.11
75.12548963	75.12549	75.12
100.05817390	100.05818000	100.04000000
Total that will be displayed in the eMS	**100.05**	

2) If you decide to work with two digits after the comma only (setting properties for results of currency exchange AND flat rates at 2 digits, no matter which rounding mode) all the overview tables will always be correct (i.e. the sum of sub-totals and also sum of all displayed items will add up to the totals) BUT there could be some differences when re-calculating the flat rates or exchange rates at the total level. If every single expenditure item is converted, every item needs to be rounded as well. If you do this to many items the rounding error adds up – a potential disadvantage for the beneficiary. If you store only 2 digits after the comma the calculations are less precise compared to using e.g. 10 digits after the comma. If you use 2 digits after the comma only, what you see and what you get always match (all the totals and sub-totals) but the calculation precision is lower.

eMS configured at 2 digits after the comma, rounding mode DOWN		
Actual amount	Amount stored in the database and used for calculations	Amount displayed in the eMS
22.56458575	22.56	22.56
1.256987411	1.25	1.25
1.11111111	1.11	1.11
75.12548963	75.12	75.12
100.05817390	100.04	100.04
Total that will be displayed in the eMS	**100.04**	

Please also remember about the cuts done by different authorities. They cut with precision of 2 digits after the comma and might not be aware that the real amounts behind contain more digits.

We consulted with developers of banking software to find out how they solve rounding issues in currency conversions and it turns out they always work with only two digits after the comma as working with money implies the smallest amount possible is 0,01. They usually round arithmetically HALF_UP. This means if the banking software converts many items into e.g. EURO, the total of these values after conversion will possibly be slightly higher compared to what you get when you apply the conversion rate to the unconverted total of all items. Of course, in the case of the eMS, conversion rates can also be rounded down (truncated) and then the total of the converted items will be slightly lower compared to converting the total.

For whichever option you as a programme decide to go, you should understand the consequences and you might want to communicate them to your beneficiaries to avoid misunderstandings.

As regards ERDF/IPA/ENI and other fund values, we implemented a solution that should make sure that ERDF values never exceed maximum co-financing, regardless of which rounding method you choose for flat rates and currency conversions. It is not possible to select neither precision nor rounding mode for the fund amounts 2 digits and rounding mode DOWN is hardcoded and cannot be changed.

The fund amounts are calculated in the following way:

Total (budget and expenditure) is calculated out of single items (no change to the previous versions)

Fund amounts (ERDF/ENI/IPA, etc.) are NOT calculated out of single items (previously it was calculated for each item, leading to rounding errors), they are calculated out of the total budget

Total is rounded down with two digits after the comma (applies when items are with more than two digits)

ERDF is calculated as Total (i.e. the rounded total!) * co-financing rate and the result is rounded down to two digits after the comma

Partner contribution is calculated as Total (i.e. the rounded total) minus ERDF (i.e. the rounded ERDF) (previously partner contribution was also calculated for each item leading to rounding issues)

In the summary tables, the total should be the same in all tables. This means that the sum of subtotals might be different from the total (only in case of 3-10 digits after the comma used for calculations, see above).

The following programme property is removed from the source code and can be removed from your properties file: **inputNumber.decimalPlaces** is not used anymore. It is not possible to configure financial inputs with more than 2 digits after the comma.

For more information on available rounding modes and their implications, please see the documentation on rounding modes.

Recommended rounding mode

We recommend Option 2 (to work with **two digits after the comma only**- setting properties for results of currency exchange AND flat rates at 2 digits. Please note that Interact will also test the eMS with 2 digits only.

For flat rates, we recommend using a rounding method DOWN that rounds down (truncates) to avoid exceeding the maximum flat rate of e.g. 15%.

For currency exchange, rounding DOWN will lead to disadvantages for the project, rounding UP will lead to advantages. There is no recommendation on our side what to do.

The funds amounts (e.g ERDF) are always rounded DOWN (see description above).

INTERact

Project History

Monitoring Project History

Actions like Submitting, changes after Modification Request, Generating Contract or Adding Supplementary Information trigger saving the backup versions of the AF.

The previous versions of the project can be seen in the "Project History" section.

Needed privileges

For seeing the project history, no special rights are needed. For editing, the privilege EDIT_PROJECT_HISTORY is necessary.

How to enter the Project History

Project History might be entered by clicking the "Project History" item in the "General" section of the left side menu.

Figure 353 Entering the Project History

In the Project History section, the selected AF version might be seen, Modification responsible for triggering its saving is described, as well as User responsible for the decision is listed. Furthermore, the Project History enables selecting any two versions and their comparing.

Comparing the Versions

Any pair of Versions listed in the Project History might be compared to each other and the differences might be displayed in both Vertical and Horizontal tree, as well as HTML Compare Projects Dialog.

Figure 354 Compare Projects

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Editing the History

Privileged users might edit the Project History View by filling in additional information on the modifications:

- Date Of Approval / Rejection
- User responsible for the Decision
- Date Of Signature Of Subsidy Contract
- Number Of Contract Amendment
- Comment
- Attachment
- Attachment Description (Attachment Upload Date & User Uploading the Attachment are filled in automatically)

Categories of intervention

eMS contains a management for categories of intervention. The system by default includes the codes mentioned in the annex of regulation nr. 184/2014.

The system contains the selection of codes per project and the reporting of these categories to the European Commission like mentioned in regulation nr. 1011/2014.

Selection of codes for the programme

The system allows selection of categories of intervention which apply to the programme. This selection is a global selection, which has do be done by an administrator or by a user having the userprivilege "MG_PROGRAMME".

The codes can be selected per priority axes in the "Programme Data" section.

Figure 355 Selection of codes per priority axes

Selection of codes for the project

After the handover, JS user, an admin or any user having the "MG_STARTUP" userprivilege, can access the supplementary information section. This section contains a tab "Codes" to access this section.

In the supplementary information section, it is possible to grant read or read/write privileges to each of the different sections. To be able to access the "Codes" section, the user needs to have the "SU_CO_W" userprivilege, for read access the "SU_CO_R" is needed.

Figure 356 Supplementary information - codes section

The section "Codes" allows selection of all codes available under this priority axes.

Figure 357 Selection of codes for one project

Reporting to EC

The reporting of the codes of intervention according to regulation 1011/2014 can be accessed via the "Programme Report" section.

Breakdown Of The Cumulative Financial Data By Category Of Intervention

Priority Axis	Fund	E (Dimension 0)	F (Dimension 1)	I (Dimension 2)	M (Dimension 3)	T (Dimension 4)	Thematic Objective(dimension5)	Economic Activity(dimension6)	Location(dimension7)	Total Eligible Cost Of Operations Selected For Support(E U R)	Private Contributions Of Operations Selected For Support(E U R)	Public Eligible Cost Of Operations Selected For Support(E U R)	Total Eligible Expenditure Declared By Beneficiaries To The Managing Authority	Number Of Operations Selected
2	ERDF			004					AT130	€ 431 291.63	€ 850.40	€ 430 441.23	€ 910.00	4
2	ERDF			004			promoting sustainable transport and removing		AT130	€ 431 291.63	€ 850.40	€ 430 441.23	€ 910.00	4
2	ERDF			003					HR042	€ 276.75	€ 0.00	€ 276.75	€ 0.00	1
2	ERDF			003			promoting sustainable transport and removing		HR042	€ 276.75	€ 0.00	€ 276.75	€ 0.00	1
2	ERDF			005					HR036	€ 0.00	€ 472.50	€ -472.50	€ 0.00	1
2	ERDF			005			promoting sustainable transport and removing		HR036	€ 0.00	€ 472.50	€ -472.50	€ 0.00	1
1	ERDF	E10					preserving and protecting the environment and promoting resource efficiency		AT130	€ 138 000.00	€ 0.00	€ 138 000.00	€ 0.00	1
1	ERDF	E04					preserving and protecting the environment and promoting resource efficiency		CZ010	€ 138 000.00	€ 0.00	€ 138 000.00	€ 0.00	1
2	ERDF			005					CZ010	€ 428 410.88	€ 32.00	€ 428 378.88	€ 0.00	2
2	ERDF			005			promoting sustainable transport and removing		CZ010	€ 428 410.88	€ 32.00	€ 428 378.88	€ 0.00	2
1	ERDF	E10					preserving and protecting the environment and promoting resource efficiency		CZ010	€ 138 000.00	€ 0.00	€ 138 000.00	€ 0.00	1
1	ERDF	E06					preserving and protecting the environment and promoting resource efficiency		AT130	€ 138 000.00	€ 0.00	€ 138 000.00	€ 0.00	1
1	ERDF	E11					preserving and protecting the environment and promoting resource efficiency		AT130	€ 138 000.00	€ 0.00	€ 138 000.00	€ 0.00	1

Figure 358 Reporting to EC

Technical assistance (deprecated)

Caution!

Please note: the TA module is discontinued.
TA has to be handled as a priority. Please open a call for TA projects.
The tables below are still available, but do not link to the Programme budget.
Therefore, their use is not recommended.

Technical assistance institutions

It is possible to add technical assistance institutions in eMS. These institutions have their own data like fund, co-financing rate etc. eMS allows to set a planned budget for each institution per year and Budgetline.

Year	Staff costs	Office and administration	Travel and accomodation	External expertise and services	Equipment	Infrastructure & works	Net Revenue	Sum	Sum cofin
2014	1 000.00	50.00	1 000.00	1 000.00	1 000.00			€ 4 050.00	€ 3 442.50
2015	1 000.00	50.00	1 000.00	1 000.00	1 000.00			€ 4 050.00	€ 3 442.50
2016	1 000.00	50.00	1 000.00	1 000.00				€ 3 050.00	€ 2 592.50
2017	1 000.00	50.00	1 000.00	1 000.00				€ 3 050.00	€ 2 592.50
2018	1 000.00	50.00	1 000.00	1 000.00				€ 3 050.00	€ 2 592.50
2019	1 000.00	50.00	1 000.00	1 000.00				€ 3 050.00	€ 2 592.50
2020	1 000.00	50.00	1 000.00	1 000.00				€ 3 050.00	€ 2 592.50
2021	1 000.00	50.00	1 000.00	1 000.00				€ 3 050.00	€ 2 592.50
2022	1 000.00	50.00	1 000.00	1 000.00				€ 3 050.00	€ 2 592.50
Sum	€ 9 000.00	€ 450.00	€ 9 000.00	€ 9 000.00	€ 2 000.00	€ 0.00	€ 0.00	€ 29 450.00	
Sum cofin	€ 7 650.00	€ 382.50	€ 7 650.00	€ 7 650.00	€ 1 700.00	€ 0.00	€ 0.00		€ 25 032.50

Save   Return

Figure 359: Budget forecast

Reporting/Monitoring

Monitoring and reporting of TA expenditures is not carried out inside eMS, but eMS allows putting money per timespan and priority axes. These amounts go into the programme overview tables.

Monitoring   Welcome Admin eMS!

Timespan	Staff costs	Office and administration	Travel and accomodation	External expertise and services	Equipment	Infrastructure & works	Net Revenue	Sum	Sum cofin
2014 January	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 February	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 March	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 April	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 May	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 June	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 July	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 August	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 September	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 October	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 November	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014 December	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00
2014	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00	€ 0.00
2015 January	0,00	0,00	0,00	0,00	0,00	0,00	0,00	€ 0.00	€ 0.00

Figure 360: TA monitoring

Translations

Translations is a tool in eMS used to change and translate each label in the user interface. Programmes are therefore free to change each text visible to the users of the system.

Translation of the user interface

Needed user rights / privileges

The user who wants to manage the checklists must have the almighty "ADMIN" privilege.

How to enter Translations

Logged in as "ADMIN" you can enter the Translations by clicking on the section on the left-side menu "Configure EMS".

Figure 361 Translations menu item

In the picture below, the sections of the application are shown which allow changes or translations.

Figure 362 Sections of the Translations module

Importing and Exporting Translations

By clicking "Export Localization" the localization is saved to a csv-format file. Importing can be performed by choosing "Override on import", then by clicking on "Import Localization". This feature either overwrites an already existing file or creates a new one.

How to identify the element in the user interface

To translate a label in eMS, at first the path in the translation tree has to be known. This can be obtained using a special language, which is only available for admin users.

Figure 363 ADM language only available for admin users

Choosing this language shows all keys of all elements in the system.

Figure 364 Example of keys for system elements, displayed in "()"

Keys in the application form are shortened using the character "*" as abbreviation for "application form". This means for example if you want to change the text of "Programme priority", you can find this element in the tree on the path "application/form/projectSummary/projectIdentification".

You can find the translation of the respective element and the configuration for the attached input field in this section.

Convenience feature for identifying the element in the user interface

As a convenience feature, eMS allows to select specific labels directly in the user interface for translation. A user with admin user privilege can click on the pencil icon to go to the corresponding element in the translation tree.

This feature is only for translations of global texts and is not yet implemented for all user interface elements in eMS. Labels without a pencil icon have to be identified manually in the translation tree.

This convenience feature can only be used for global texts. Texts specific for calls have to be changed in the corresponding translation tree in the call configuration.

Figure 365 Label selection for translation in user interface

How to change and translate labels

By clicking on the desired node and modifying the global label, it is possible to change or translate the label. Afterwards, the save button and "rebuild Localization" have to be clicked.

Figure 366 Changing and translating a label

How to delete nodes

The desired node has to be selected. By clicking the button "delete selected node and all subnodes", the selected node and subnodes, if there are subnodes existing, will be deleted.

Tooltip

Tooltips allow you to display the description of expected answer to a question. They appear when hovering over the text box or a dropdown menu. You can activate a tooltip by choosing the desired node and by entering an input in "Global tooltip".

Help button

The help button will open a pop-up window that shows a description of the question. You can activate a tooltip by choosing the desired node and by entering an input in "Global help".

Manage Multilanguage for Call

This is another option how to change and translate labels, but can be used only for a specific call. Besides to the ADMIN, a user is also able to manage Multilanguage for a call if the privilege "MG_MULTILANGUAGE" has been assigned to the user.

How to enter:

You have to choose a specific call, then scroll to the bottom and click "Manage Multilanguage for Call".

Manage Multilanguage For Call   Save   End Call   Back To Overview   Copy Call   Unlock Call   ?

All modifications made will only be visible for the specific call.

Help system

The help system can be managed in the translation tree as well. The help buttons in the AF are represented by question mark icons, which are only visible if the corresponding help text is not empty.

Form configuration

eMS allows to enable/disable specific fields in the application form. Configuration can be performed for

- assignments of single fields to call phases

- adding of additional text input fields

- validation of fields (mandatory, optional)

- maximum length of input text

The configuration is done in the same section as the translations. For call specific configuration, the corresponding forms can be found in the call setup.

Configuration

Assignment of single fields to call phases

Has to be carried out in the management of the call.

Figure 367 Field assignment to phase

Additional TIF

For adding an additional question you have to click on "additionalTIF". After choosing the desired node you can enter the additional question. Afterwards, the save button and "rebuild Localization" have to be clicked again.

Figure 368 Adding additional questions

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Validation of fields (mandatory, optional) & Maximum length of input text

The maximum length can be specified. In addition, it is possible to mark the selected field as mandatory or optional.

Figure 369 Validation settings

eMS allows to configure the maximum input length for text fields and editors. This can be done in the translation tree, by changing the configuration of the maximum length.

Figure 370 Configuration for maximum length of user input

Text fields and text areas (text fields which automatically expand) can contain up to 2000 characters.

Editor elements can only have the following configuration:

100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000, 10000

All other configuration forces the system to take the nearest neighbor.

Hiding fields in application form and reporting

eMS allows to hide almost all fields from application form and reports. Interact tried to identify all fields, which are mandatory for legal reasons. For all such fields, the hiding fields functionality is not implemented.

Hiding can be done both globally or per call. Elements, which are hidden in the application form should not show up in the reporting.

Figure 371: Configuration for hiding fields

Help System

Help system can be adjusted using the Translations tool in eMS. Each label of the Help can be set in the user interface. Programmes are free to change each Help text visible to the users of the system.

Help System of the user interface

Needed user rights / privileges

The user who wants to adjust the Help System must have the almighty "ADMIN" privilege.

How to enter Help System

Logged in as "ADMIN" you can enter the Help System by redirecting to Translations section. You nedd to click on the left-side menu "Configure EMS" item.

Figure 372 Translations menu item

In the picture below, the sections of the application are shown which allow changes or translations.

Figure 373 Sections of the Translations module

How to change the help labels

By clicking on the desired node of the translations tree and modifying the Global tooltip, it is possible to change or translate the label. Afterwards, the save button and "rebuild Localization" have to be clicked for the change to be taken into account.

Figure 374 Adjusting Tooltip and Help labels

Tooltip

Tooltips allow you to display the description of expected answer to a question. They appear when hovering over the text box or a dropdown menu. You can activate a tooltip by choosing the desired node and by entering an input in "Global tooltip".

Help button

The help buttons in the AF are represented by questionmark icons in the left side menu, which are only visible if the corresponding help text is not empty. The help button will open a pop-up window that shows a description of the question.

Figure 375 Help button

The help system can be managed in the Translations tree as well. You can activate a tooltip by choosing the desired node and by entering an input in "Global help".

More information and tips on how to work with Translation tools might be found in the chapter "Translations".

Validation plugins

eMS contains a variety of plugins, which can validate the provided data on different points in the workflow. The plugins are Programme specific implementations and can therefore contain Programme specific validation rules.

Validation using plugins

All plugins mentioned in this chapter are technically implemented as Java plugins. To create or to change such a plugin basic Java development know-how is needed.

All plugins need to be configured in programme.properties. This file contains configuration where the system can find the plugin on the file system. If the property in programme.property is removed or commented (starts with "#") the plugin is not taken into account by the system.

Interact provides empty validation plugins. Those plugins do not contain any validation rule.

Each plugin has input parameters – usually it is the document, which needs to be verified. Due to the input parameters, the plugin can only work with the information, which are provided by the system.

The plugin needs to deliver messages as output. The plugin can determine with each message, if this is an information, a warning, or a blocking finding.

Dependent on the finding, a plugin can allow or decline submission of a document.

The different finding scan be displayed differently in the user interface.

Figure 376: Example of an information message

Figure 377: Example of a warning message

Figure 378: Example of an error message

Figure 379: Example of a message with severity "fatal"

The severity of a message determines, how messages are displayed in the user interface. The output of the plugin has a state, where the plugin can decide, if the check is passed.

Property	Comment
checks.jarPath.phase1	Validation on submission of application form phase 1
checks.jarPath.lastphase	Validation on submission of application form phase 2 or only submission in a single step application
checks.jarPath.partnerreport	Verification on submission of partner report
checks.jarPath.invoice	Verification on saving of expenditure item dialog in the list of expenditure
checks.jarPath.emptypartnerreport	optional check for empty partner report submission, directly to the lead partner if not present, the regular plugin will be used
checks.jarPath.progressreport	Validation on submission of project progress report
checks.jarPath.flc	Validation on creation of an FLC certificate
checks.jarPath.mr	Validation on submission of a modification request (modified version of an application form)
checks.jarPath.finalReport	Validation on submission of a final report
checks.jarPath.paymentstoprojects	Validation on saving of a payment to a project
checks.jarPath.advancepaymentstoprojects	Validation on saving an advance payment

Plugin to detect double spending

This plugin allows to check all expenditures of one partner ever submitted in eMS. This is one possibility to identify possible double spending.

```java
16  public interface IPartnerCheck {
17
18⊖     /**
19      * Checks the project for correctness and saves the result in the result-variable
20      *
21      * @param partner partner which is to be checked
22      * @param periods list of periods containing the partner-reports
23      * @param result result-variable in which the messages and state should be saved
24      * @param i18n translation service
25      * @param language the preferred language
26      * @param applicationSettings programme-properties
27      * @return updated result-variable
28      */
29⊖     CheckResultDTO check(PartnerDTO partner, List<PeriodDTO> periods, CheckResultDTO result, II18n i18n, String language,
30             IApplicationSettings applicationSettings);
31
32  }
33
```

Figure 380: Source code of validation Interface

Partner Reports

1 - My lead partner1 - My lead partner1

Report	Report Start	Report End	State	Date Of Partner Report Submission	Date Of Partner Report First Submission	Date of flc verification	Included in Project Report	Total Partner Expenditure Declared ERDF	View Report	Certificate	
Period 0 31.05.2017 - 31.05.2017											
Period 1 31.05.2017 - 29.11.2017											
Report 1.1	31.05.2017	29.11.2017	Report FLC Certified	31.05.2017	31.05.2017	31.05.2017	Period 1 Project Report 1	€ 118.00	🔍	🔍	↩ Revert From Js To Flc ↩ Revert From Js To Pp
Period 2 30.11.2017 - 29.05.2018											
Report 2.1	30.11.2017	29.05.2018	Report In Progress	In Progress	31.05.2017		Not Certified	€ 0.00	🔍		
Period 3 30.05.2018 - 29.11.2018											
Period 4 30.11.2018 - 29.05.2019											
Period 5 30.05.2019 - 29.11.2019											
Period 6 30.11.2019 - 29.05.2020											
Period 7 30.05.2020 - 29.11.2020											
Period 8 30.11.2020 - 29.05.2021											

🔄 Partner Living Tables   ⊘ Check partner

Figure 381: Button to call the validation plugin

The plugin can be turned on/off via programme.properties via the "check.jarPath.partners" property.

Automatic messages

eMS contains multiple types of automatic messages. Some of them are triggered by the user, some of them by changes of states of e.g. the application form.

Notifications to the registered email address of the user

eMS can send a notification to the registered email address of the user when receiving an email. Up to version 3_3.1 of the eMS the email could not contain the text of the message; its purpose was purely to notify the user about received messages in eMS.

From the eMS version 3_3.1 the administrator can decide on whether the user should receive just notification or should the content of the message be forwarded per email.

This feature does not work for automatic messages only; it works for any message received in the eMS (so-called in-application message). In the mail.properties there are two properties available: mail.sendMailAfterMessage (activating notification emails, when in-application message is received – does not contain content of the message) and mail.sendContentMailAfterMessage (activating email containing content of the received message, incl. attachments).

The programme can therefore decide one of the following scenarios:

- If one of the options is set to true and the other one to false – the eMS sends either a generic message or a content e-mail and user cannot decide which one

- If both options are set to false – the eMS does not send any email after the message is received in the eMS

- If both options are set to true, the eMS sends either generic message or the actual content of the message and the user can decide which one he/she wants to receive. This can be set in the 'user account' section and is only available if both properties are true.

Figure 382 - User account view with type of automatic email after message selection for user.

Forward message – means the email contains content of the message (including attachments)

Receiving information –means a generic message with no content (Exact text of such message is defined by the eMS administrator, e.g. You have a new message in the eMS, please log in).

Automatic messages sent within the Messaging Portal

eMS automatically sends messages at special points in the workflow. Most of them can be turned on/off via configuration.

The configuration needs to be done in a configuration file "message.properties". The messages are sent via the internal message system. The property file contains a global switch, to turn all messages off "automessage=off". If this is turned to "off" the system will not send any automatic notifications.

Please note: the system needs to be restarted to take changes in the configuration file into account.

The following configurations can be done:

Configuration element	Recipient	Step in workflow
automessage.submittedApplication	Lead applicant	Upon application form submission (2nd phase, or only phase in 1-step call)
automessage.submittedApplicationJTS	Assigned officers or all JTS	Upon application form submission (2nd phase, or only phase in 1-step call)
automessage.submittedApplicationP1	Lead applicant	Upon application form submission for the first step in a two-step application
automessage.approvedApplication	Lead applicant	Upon assignment of MC decision "approved"
automessage.approvedApplicationP1	Lead applicant	Upon assignment of first step decision "approved"
automessage.approvedUnderCondition	Lead applicant	Upon assignment of first step decision "approved under conditions"
automessage.handoverToLP	Lead applicant	Upon state change to "handover". Lead applicant needs to name a lead partner now.
automessage.lpAccepted	Lead applicant, Lead partner	Upon acceptance of lead partner in handover
automessage.lpRejected	Lead applicant	Upon rejection of lead partner in handover
automessage.mrSubmitted	Assigned officers or all JTS	Upon submission of a modification request submit by the lead partner (submit of new version of the application form)
automessage.mrApproved	Lead partner	Upon acceptance of the modification request
automessage.mrRejected	Lead partner	Upon rejection of modification request
automessage.mrChangeApproved	Lead partner	Upon approval of project modification (not request but actual modification)
automessage.mrChangeRejected	Lead partner	Upon rejection of project modification (not request but actual modification)
automessage.mrReset	Lead partner	Upon modification request refusing

automessage.mrRequested	Assigned officers or all JTS	Upon request of a modification request by the lead partner (prosa request)
automessage.contracted	Lead partner	Upon approval of subsidy contract
automessage.flcAssigned	All assigned FLC users, Assigned officers or all JTS, Lead partner of the project	Upon assignment of FLC users
automessage.flcRemoved	All disassigned FLC users , Lead partner of the project	Upon removal of FLC users from FLC assignment
automessage.partnerReportSubmitted	Project partner, assigned FLC, Lead partner of the project	Upon submission of partner report
automessage.flcCertified	All involved partners and lead partner	Upon FLC certificate submission
automessage.projectReportSubmitted	Assigned officers or all JTS and lead partner	Upon submission of project progress report
automessage.projectReportJSApproved	Lead partner, all MA-users	Upon submission of report by JS
automessage.maApproved	Lead partner, all CA users	Upon submission of report by MA
automessage.caCertified	To all assigned JTS officers and lead partner	Upon creation of CA certificate
automessage.projectClosed	Lead partner	Upon finalization of a project (close of project)
automessage.reopenForMa	All MA users and lead partner	Upon revert from MA to CA
automessage.reopenForJs	All MA users and lead partner	Upon reverting from MA to JS
	All assigned JS officers, or all JS + lead partner	Upon reverting from CA to JS (skipping MA)
automessage.reopenForLp	Lead partner	Upon reverting from JS to FLC
	Lead partner	Upon reverting from JS to LP
	Lead partner	Upon reverting from JS to PP
automessage.reopenForFlc	Lead partner	Upon reverting from LP to FLC
automessage.reopenForPartner	Lead partner	Upon reverting from LP to PP
automessage.submitAdvancePayment	CA	Upon submission of advance payment by JS (to be paid by CA)
automessage.unsubmitAdvancePayment	CA	When already submitted advance payment is unsubmitted

Configuration element	Paths in translation tree	
	Subject	Text
automessage.submittedApplication	automessage.submittedApplication.subject	automessage.submittedApplication.text
automessage.submittedApplicationP1	automessage.submittedApplicationP1.subject	automessage.submittedApplicationP1.text
automessage.approvedApplication	automessage.approvedApplication.subject	automessage.approvedApplication.text
automessage.approvedApplicationP1	automessage.approvedApplicationP1.subject	automessage.approvedApplicationP1.text
automessage.approvedUnderCondition	automessage.approvedUnderCondition.subject	automessage.approvedUnderCondition.text
automessage.handoverToLP	automessage.handoverToLP.subject	automessage.handoverToLP.text
automessage.lpAccepted	automessage.lpAccepted.subject	automessage.lpAccepted.text
automessage.lpRejected	automessage.lpRejected.subject	automessage.lpRejected.text1
automessage.mrSubmitted	automessage.mrSubmitted.subject	automessage.mrSubmitted.text
automessage.mrApproved	automessage.mrApproved.subject	automessage.mrApproved.text
automessage.mrRejected	automessage.mrRejected.subject	automessage.mrRejected.text
automessage.mrReset	automessage.mrReset.subject	automessage.mrReset.text
automessage.mrRequested	automessage.mrRequested.subject	automessage.mrRequested.text
automessage.contracted	automessage.contracted.subject	automessage.contracted.text
automessage.flcAssigned	automessage.flcAssigned.subject	automessage.flcAssigned.text
automessage.flcRemoved		
automessage.partnerReportSubmitted	automessage.partnerReportSubmitted.subject	automessage.partnerReportSubmitted.text
automessage.flcCertified	automessage.flcCertified.subject	automessage.flcCertified.text
automessage.projectReportSubmitted	automessage.projectReportSubmitted.subject	automessage.projectReportSubmitted.text
automessage.projectReportJSApproved	automessage.projectReportJSApproved.subject	automessage.projectReportJSApproved.text
automessage.maApproved	automessage.maApproved.subject	automessage.maApproved.text

automessage.caCertified	automessage.caCertified.subject	automessage.caCertified.text
automessage.projectClosed	automessage.projectClosed.subject	automessage.projectClosed.text
automessage.reopenForMa	automessage.reopenForMa.subject	automessage.reopenForMa.text
automessage.reopenForJs	automessage.reopenForJs.subject	automessage.reopenForJs.text
automessage.reopenForLp	automessage.reopenForLp.subject	automessage.reopenForLp.text
automessage.reopenForFlc	automessage.reopenForFlc.subject	automessage.reopenForFlc.text
automessage.reopenForPartner	automessage.reopenForPartner.subject	automessage.reopenForPartner.text

Notification on MC decision

eMS can generate a notification upon MC decision. This notification is stored in the system and is sent **manually** by a privileged user.

Needed privileges

User who wants to send a notification on MC decision needs to have the APPROVE_NOTIFICATION or the almighty ADMIN privilege.

How to send the Notifications

The Notifications section might be entered in the user interface left side menu -> Applications -> Saved/Sent Notifications.

Figure 383 Notification on MC Decision Menu Item

The default text of such a notification can be changed by the programme. After the generation of the notification, it is visible in the "Saved Notifications" section.

Notification Overview

Phase1

Project Id ⇵	Name ⇵	Acronym ⇵	Start ⇵	End ⇵	Lead Partner ⇵	Call ⇵	Project Status ⇵	Modify	Approve	Download	
No Data Found											

Phase2

Project Id ⇵	Name ⇵	Acronym ⇵	Start ⇵	End ⇵	Lead Partner ⇵	Call ⇵	Project Status ⇵	Modify	Approve	Download	
TP4A1	Test1	Test1	01.01.2016	01.01.2020	Test1LP1	Test call	CONTRACTED	🔍	✖	⬇	
TP4A2	Test2	Test2	01.01.2016	01.01.2020	Test2LP1	Test call	CONTRACTED	🔍	✖	⬇	

Send

Figure 384: Saved Notification section

Here a privileged user can change the text of each message manually.

Figure 385: Editing view of the notification section

After approval (clicking on the corresponding button) and selection in the checkbox, the system can send all selected notifications as in-application messages to the applicants.

Each notification can as well be extracted to PDF with the "download" feature.

After sending, the notifications are still visible in the "Sent Notification" section.

Figure 386: Sending the approved message to the selected approved project

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PDF templates

The application form is generated asynchronously, the user triggers the generation of the pdf, the pdf gets generated and appears in the "Generated Files" section. This allows the eMS to handle more users during peak times.

All other pdfs in the system are generated synchronously – they are available immediately after clicking the button.

All pdfs are generated using templates. Default templates are provided in the installation. These templates can be changed/adapted by ETC Programmes.

Adaptation of pdf template

In eMS, the extraction of data to pdf is implemented using Apache Velocity templates. These templates can be adapted and translated by Programmes.

The templates in eMS are implemented using HTML-standards, enriched with Velocity placeholders. When generating the pdf, the placeholders are replaced by text/values stored in eMS.

Selecting a Template: Configuration

When using a two-step procedure, eMS allows us to insert different templates for the two different steps. The templates to be used in the given step can be configured in programme properties.

Different templates for different languages

eMS can handle various languages, both, in the user interface (as translations of the user interface) and as content languages (for users to enter text in several languages).

The application can generate pdfs in each language configured as translation languages for the user interface. To enable this feature, a template has to be provided, where the name of the template follows the pattern:

"*Two-letter-country-code*"+"name of the template".vm

Example:

Name of the template: *templateS1.vm*

Translation to german: *DEtemplateS1.vm*

Translation to Czech: *CZtemplateS1.vm*

eMS generates pdfs in the language selected in the user interface. If you see the German translation at the time of pressing the "Save as pdf file" button, the pdf will be generated in German.

If no special translation document is provided, eMS will use the general template.

How to translate a template

The template files can be edited in any text editor (e.g. Notepad,…), however, for more comfortable and clearer adjusting of the template, source code editors are recommended.

The export to pdf does not take texts from the database or the translation tree in account. The translations have to be done in the template files.

Please be aware: to be able to handle special characters the file encoding has to be UTF-8.

Hints for better orientation in a template

Items marked with

represent comments and descriptions

@ stand for the text

 # stand for apache velocity code, therefore cannot be simply rewritten as text strings

$ stand for variables drawn directly from the eMS, might misbehave if retyped wrongly

If you do not plan to change the template and only want to translate the text, you can simply retype the text strings starting with the @. You do not need to specify the language inside the template. The information will be obtained from the system.

Multilanguage template

If required by a programme, a multilanguage (recommended 2-language) template might be used. In this case, the desired languages of the output pdf need to be specified in the template, as the system enables using more than two languages. For creating a pdf however, more than two languages would be difficult to read and it would be difficult to stay oriented.

The languages selected to be used for the template need to be specified in the file "VM_global_library.vm" by modifying the code of the country in line 16:

```
#set($languages = ['AT','HU'])
```

The modification is needed in order to use the correct values (language versions) of eMS variables.

Afterwards, you can simply retype the text strings, starting with the @ in order to translate the template.

Add/remove/change order of elements in template

Creating pdfs is implemented using Apache Velocity templates. The template behaves as any other HTML document. You can change the order of elements in the template, remove or add elements if needed. In order to edit the generally available templates,

at least basic understanding of HTML scripting is recommended. HTML has a very strict syntax and semantics. Please change/add/remove carefully, not to destroy the syntax of the document.

Styling of the pdf

As any other regular HTML application, the pdf template is styled using CSS styles. Please check out the CSS documentation or ask your service provider if you want to change the styles.

Global and local column selector

Some overview tables in eMS allow two ways to select the visible columns. The following tables offer this feature:

- My Applications
- List of expenditure
- Application browser

This chapter will explain both.

User specific column selection

Very wide tables – like the list of expenditure – allow hiding columns based on the users decision.

A user can click on the columns dropdown and select/deselect the columns she wants to see.

By clicking on the "Save columns" button, the selection will be stored. Next time the user opens this section only the selected columns will appear.

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Global column selection

Next to the user specific column selection, a programme can decide, which columns should be visible in the list of expenditure. This configuration is done in the "programme.properties" configuration file. Columns, which are deselected in this configuration are not visible for the user and do not show up in the user specific column selection.

Columns can be removed, by removing them from the configuration.

 # configuration for My Applications
myApplicationsColumns=project_id;subprogramme;name;acronym;start;end;leadPartner;lPNationality;call;specificObjective;submissionDate;project_state;funds;applicantOrLeadpartner;officerInCharge;viewProject;bookmarkProject

 # configuration for list of expenditure
loExpColumns=budget
Line;wp;intRefNo;invNo;invDate;paymDate;description1;partnerComment;currency;totalValItem;vat;declaredAmountOrgCurrency;conversionRate;conversionRateDate;declaredAmountEuro;expOutside;in
Kind;declared;uploads;verifiedByCA;differenceCA;amountCertifiedCA;commentCA;verifiedByFLC;differenceFLC;amountCertifiedFLC;commentFLC;verifiedJS;differenceJS;amountCertifiedJS;commentJS;verifiedByLP;differenceLP;amountCertifiedLP;commentLP;verifiedByMA;differenceMA;amountCertifiedMA;commentMA;DIFFERENCE MA;Date of request for payment to EC;reimbursed

 # configuration for application browser
applicationBrowserColumns=project_id;subprogramme;priorityAxis;name;acronym;start;end;leadPartner;lPNationality;call;specificObjective;submissionDate;project_state;funds;applicantOrLeadpartner;officerInCharge;viewProject

---

Table 6 Column configuration in programme.properties

Cube

The cube is a general purpose tool, which can be used to aggregate data in eMS and to do further statistics, which are not implemented in the core system of eMS.

Please be aware: generation of statistics could need a lot of resources. Using this tool during the end of a call is therefore not recommended.

Technical description / adaptation

The cube is defined in a configuration file, which is stored in the eMS configuration (in default installation, this can be found in "EMS_HOME/conf/common/eMS.xml").

The cube is implemented using a Mondrian OLAP server and is integrated into eMS by using OLAP4j. It is possible to add/change /remove dimensions from the cube by adapting the eMS.xml.

Adaptation

The cube dimensions can be adapted by modifying the ems.xml file by rewriting selected parts of the document. The document might be edited using a standard text editor such as Notepad.

The XML definition of the eMS Budget Cube consists of the following components:

- Measures
- Dimensions
- Hierarchies
- Members
- Levels

Measures

Measures define the quantity that you are interested in measuring. In our case, it is "Total" standing for total amount of money corresponding to the selected axis.

Each measure (see `<Measure>`) has a name, a column in the fact table, and an aggregator.

Dimensions

Dimensions are attributes according to which the measures are divided into the categories and sub-categories. They correspond to the row and column names.

Dimension is connected to a cube by two columns: one in the fact table and one in the dimension table. Each `<Dimension>` element has a foreignKey attribute (matching the name of the fact table column).

Members

Dimensions consist of members. They are defined by a set of attributes. They can be organized into levels.

Levels

Cubes are organized into dimensions and levels of data. The levels are then arranged into hierarchies. A level is a collection of members (data) which have the same distance from the root of the hierarchy.

Hierarchies

Hierarchy represents a systematic way of organizing the members into a logical structure. Organizing members into hierarchies makes the analysis much more convenient.

Hierarchies with the same fact table attribute are further grouped into dimensions.

Please check out the Mondrian documentation for more details.

Use of Cube

Needed Privilleges

For accessing the Cube section of eMS, the privilege REPORTING is necessary.

How to use Cube

Cube reporting can be accessed by clicking the corresponding item in the left side menu, section Programme tables.

Figure 387: Cube menu item

At least one attribute from each, the Cube Budget Rows and Cube Budget Columns, need to be selected for creating a report. After the attributes have been chosen, the request might be submitted by clicking on the "Submit" button.

Figure 388 Cube - Main Page

After a while, a table is generated containing the requested data.

Figure 389 Cube report - Partner/Period

When the report is ready, its axis can be swapped, the table can be exported to Excel or PDF or the Cube can be recalculated.

eMS also enables generating a graph (Pie, Bar or Line Chart) based on the cube report.

Figure 390 Example of a graph generated based on the cube calculations

Audit log

eMS traces every creation, modification and deletion of documents and data, which happen in the system. The logs are written to a table in the technical database called "auditlog".

Especially all changes of states of the application form, certificates and reports are logged there.

The audit log needs to be turned on in programme.properties with the property "*auditlog.active=yes*"

Figure 391 Auditlog

Upload of documents

eMS allows the upload of documents at certain sections. None of the documents in eMS is visible for public, only registered, logged in users with certain privileges or roles can see those documents.

eMS does not transform/edit/modify any uploaded document. They are stored binary identically to the uploaded file in the system. eMS does not allow to edit/modify those documents in the application. Documents uploaded to the system can be downloaded again, and shown in external third party applications (e.g. PDF Reader).

eMS does not modify any documents. Especially the modification of documents bearing an electronic signature is not possible in the system.

Import of data

eMS currently only allows manual import of translations. Currently no other importing functionalities are foreseen.

Import of translations

eMS allows the import of translations and texts from the user interface. This feature is importing previously exported translations from CSV format to the system.

Figure 392 Import of translations

Automatic import of currency exchange rates

The eMS automatically imports the monthly currency exchange rates from the European commission (http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/inforeuro_en.cfm).

This import can be configured in programme.properties

*quartz.cronTrigger.interval=0 * * * * ? ***

*quartz.cronTriggerCSV.interval=0 0 4 1 * ?*

quartz.cronTriggerCSV.receiveAllowed=true

quartz.cronTriggerCSV.url=http://ec.europa.eu/budget/inforeuro/index.cfm?fuseaction=dsp_html_monthly_rates&FileType=CSV&Language=en&Delim=c&Period=#year#-#month#&Download=Yes

Export of data

eMS allows to export data on different levels and at different places in the application.

Export of translations

eMS allows to export translations and texts from the user interface. This feature exports to CSV format, which can be processed in any text editor. The exported translations can be imported again in the same form of the user interface.

Figure 393 Export and import of translations

Export of budget in the application form

eMS allows the export of all data, which is used in the partner budget of the application form. This feature exports data into Excel format, which can be processed by proprietary tools like Microsoft Excel or free tools like Libre Office or Open Office.

Figure 394 Exporting of application form budget

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Export of overview tables

eMS contains a variety of overview tables at different sections of the software. This feature exports all the visible content of the selected data table to Excel format.

Figure 395 Export of overview tables

Export of application form and project lists

All lists of an application form or project elements can be exported to Excel. Only the attributes visible in the corresponding table will be exported.

Figure 396 Exporting of application form and project lists

Export of application form, reports and several other forms

eMS allows to export several forms or objects to pdf. This exporting is based on templates, which can be exported to pdf format.

Figure 397 Exporting of application form

Exporting of checklists

The system allows to export checklists and to generate reports based on this information. For example, it is possible to create a report based on information from the application form and the quality assessment, which can be provided to the monitoring committee for decision.

The templates can be customized by ETC Programmes. The extracted document can still be modified in an editor before transformation to PDF. Modifications in the extracted document are not stored in eMS.

Figure 398 Report based on application form and checklist

Cube

eMS contains an integrated OLAP cube based system. This system allows the export of data to Excel or PDF.

Figure 399 OLAP Cube exporting

Export from Documents section

Users with the appropriate user privileges can access two different sections (application form and report) in the eMS. In those sections, programmes can define their own templates for the extraction of PDFs.

Figure 400 Export in Documents section

Exporting from technical database

The software uses standard SQL based RDMS. Therefore, any appropriate tool can be used to export data from the technical database. For example, Mysql Studio can be used to export data to different formats.

Interact recommends to install a third party reporting server, to extract data from the technical database. Those tools usually support the extraction of any data available in the database and allow generating a variety of different documents and formats.

Export of files from the file system of the server

All uploaded documents in eMS are stored on the file system of the server. An administrator of this server can export documents in any format like ZIP.

KEEP

KEEP (www.keep.eu) is the only source of aggregated information regarding projects and beneficiaries of European Union programmes dedicated to cross-border, transnational and interregional cooperation within the European Union and between European Union Member States and neighbouring countries.

The Interact Programme, with the support of the European Commission and the remaining Interreg and ENPI/ENI CBC programmes, built this database and maintains it, as part of its mission.

Automatic export of data to KEEP

eMS allows automatic transmission of data to KEEP.

The link to KEEP can be configured in the configuration file "programme.properties" by changing the following configurations

```
quartz.cronTriggerProgXML.enabled=true

# <ss> <mm> <hh> <dd> <month> <day of week>
quartz.cronTriggerProgXML.interval=0 01 05 * * ?

quartz.cronTriggerProgXML.ftpServer=keep2.web.iway.sk
quartz.cronTriggerProgXML.ftpPort=21
quartz.cronTriggerProgXML.ftpUsername=***
quartz.cronTriggerProgXML.ftpPassword=***

quartz.cronTriggerProgXML.ftpWorkingDirectory=
```

Please make sure, that your server can access the KEEP server on the specified url and port.

The export is done periodically in the specified interval (property "*quartz.cronTriggerProgXML.interval*"). The link can be turned on/off by changing the property "*quartz.cronTriggerProgXML.enabled*".

eMS sends the information via *FTP with explicit TLS* to the KEEP server. To establish the link, eMS creates an XML-file. Please find the specification of the submitted data in the annex of this manual.

Manual export of data to KEEP

Besides the automatic transition of data to KEEP, eMS contains a functionality to manually extract and push information.

This functionality is available to users whose user role contains the "MG_KEEP_EXPORT" privilege.

Keep export

Keep export paremeters

Use credentials from programme-properties

Keep username

ems

Keep password

••••••••••

Keep url

keepaut.arakne.it

Keep port

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Keep directory

Save

Manage keep exports

Number	Date last sent	Edit	Upload	Download	Export to keep server	Delete
8	01.03.2017 11:37:49	🔍	⊕	🖹	↗	⊖

⊕ Create new

Figure 401 Manual export of data to KEEP

The user interface shows the credentials and the access information which is configured for the automatic export. A user can change this data for the manual export in the user interface. The automatic export is not affected, if the information in the user interface has been changed.

To export information to KEEP, a user needs to create an export by clicking on the "Create new" button. This button retrieves the data from the system and stores the data to be exported in the format, which needs to be provided to KEEP (XML format). The exported data can be edited before sending it to KEEP.

Before sending the information to KEEP, the data can be edited ("Edit" button). The system provides a possibility to edit the export file, before sending the information to KEEP.

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> **Note**
>
> The KEEP website contains an editing feature, where data can be altered before it is published. This might in some cases be the more comfortable feature to use.
>
> Please note as well – the data will not be immediately available in the KEEP web application. Please find more information on how to make data available for users on the KEEP platform in the KEEP manual.

eMS allows to export the data ("Download") in an XML format and it allows to import ("Upload") a XML file into the system again.

To send data to KEEP, a user needs to press the "Export to keep server" button. The export will then be pushed to the KEEP server.

Transparency requirements

To support the extraction of data, which needs to be published on programmes' website, the eMS contains an exportable overview table. This table is based on art. 115(2) of Regulation 1303/2013.

In order to access this report, the user needs a privilege SHOW_TRANSPARENCY_REQUIREMENTS. With this privilege a menu item 'Transparency requirements' is available under 'Programme tables'.

Figure 402 Transparency requirements menu item

The data can be exported to Excel. The Excel file contains date of extraction.

Figure 403: Transparency requirements table

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Backup of eMS

eMS does not automatically backup any of the available data. Backup has to be done by the environment the system is installed in.

There are two main possibilities to backup eMS. Both depend on the configuration and the possibilities of the environment.

- Backup of database (database dump) and backup of file system
- Snapshot of the virtual machine(s)

Each programme has to take care of a backup and save storage of data.

Usually the backup is done periodically (e.g. once a day). Parallel synchronized storage of data was not scope of this project, but could (maybe) be added by the environment.

Restoring of data

Restoring depends on the selected backup possibility. Any of the above mentioned backup scenarios allow restoring of data.

Search functionalities

Lists of application forms allow searching for all visible elements. For this reason, all data tables contain a searching functionality.

Figure 404 Search functionality in lists

Easy retrieval of documents

Documents are always attached to elements like application forms or reports. Therefore, these documents are easy to find. eMS does not process the content of attached documents, therefore it is not possible to search for content of documents in the application.

As the data retrieved by the system are stored using standard technologies (RDBMS, file system) it is possible to search for specific documents. This has to be done in the technical database or on the file system. Please contact your technical administrator for support.

Adaptations and plugins

Logo

The logo of the Programme is located in the provided .war file and can be changed by the Programmes by replacing the provided "Interreg_Logo.png" with the programme logo.

During the development procedure, Interact proposed to include the programme logos into the application itself. Programmes who provided their logo do not have to replace the image in every installation, but can show their logo upon configuration.

Styling

Styling in eMS is implemented using CSS, a standard technology used in web applications. The CSS files are located inside of the provided ems.war file. To change the styling, please get in touch with your service provider.

Plugins

eMS contains a variety of plugins. Depending on the technology they are implemented with, Programmes either need a text editor to change them or an integrated development environment (like Eclipse).

Figure 405 Plugin overview

File upload for login page

eMS enables to provide users or possible users with certain information even before registration. This feature is secured via posting the documents on the start / login page.

Form

Username*
Password*
✓ Login   + Register   ? Forgot Password

Disclaimer
Testdokument.pdf

Figure 406 Documents posted on the start / login page

Needed privileges

For uploading files For Login, the UPLOAD_FILES_FOR_LOGIN_PAGE or the almighty ADMIN privilege is necessary.

How to post the documents to the login page

In order to post the documents to the login page, the documents need to be uploaded.

▼ eMS Management
  Calls
  New Call
  Programme Data
  Manage Users
  Manage Roles
  Configure eMS
  Manage Checklists
  Technical Assistance
  Upload Files For Login

Figure 407 Upload Files For Login menu item

You can enter the corresponding section by navigating to the left side menu ->eMS Management -> "Upload Files For Login" item.

Here, you can select and upload files to be posted to the login page.

Uploaded Files

Filename	Delete
Testdokument.pdf	⊖

+ Select   ⬆ Upload   ⊘ Cancel

Figure 408 Selecting Files To Be Posted To Login Page

Performance fine-tuning

As eMS is a brand new system and it potentially has to deal with a lot of concurrent users and big data. eMS provides a number of possibilities how to improve the performance of the system and how to deal with a high number of concurrent users.

As eMS now is in productive use, we already gained some experience on this topic which we want to share in this chapter.

Application server load balancing

eMS allows to install several parallel application server instances.

Figure 409 Architecture of eMS

It is recommended to install at least a second instance of the application server. Please note: not only applicant or partner users count in the system as concurrent users, also authority users like JS or CA are technical users.

Standalone Apache ActiveMQ

To support the asynchronous generation of pdfs, eMS uses by default an embedded Apache ActiveMQ instance.

eMS allows several other possibilities of how to run Apache ActiveMQ:

1. Embedded Apache Active MQ in one Tomcat only
2. Embedded Apache Active MQ in all (or some) parallel Tomcat instances
3. Standalone Apache Active MQ (here you need to install a standalone Apache ActiveMQ on one of your servers
4. Configure all or only some application servers as workers to generate pdfs

5. Configure one or several separate application servers, which are not available to end users to generate pdfs.

The following configuration in "programme.properties" can be changed to call different activemq instances:

```
# ActiveMQ Configuration
# to start embedded server,
# use "vm://localhost?create=false" as address for activeMQ.server

# activeMQ.server=tcp://servername:port
activeMQ.server=tcp://localhost:61616

#activeMQ.server=failover://tcp://localhost:61616

# Name of the print queue in ActiveMQ
activeMQ.queueName=PDFprintQueue

activeMQ.receiveAllowed=true

#defines the path of the activeMQ-kahadb-data-folder
#activeMQ.datadirectory=/path/to/data/directory
activeMQ.datadirectory=/var/lib/ems/kahadb
```
Figure 410 Configuration for Apache ActiveMQ

Pdf Generation interval

The process to generate PDFs is triggered in certain intervals. The "programme.properties" configuration file contains elements to configure the time periods, in which pdfs are generated.

The documentation for this configuration can be found here.

```
# QUARTZ Configuration for PDF printing
# <ss> <mm> <hh> <dd> <month> <day of week>
quartz.cronTrigger.interval=0 * * * * ? *
```
Figure 411 Configuration for PDF generation interval

Avoiding Spring Webflow Serialization

The budget in eMS is built on several dimensions:

- Partner
- Budgetline
- Workpackage
- Period
- Subbudgetline

Due to this number of dimensions, the number of existing budget figures could increase a lot. Due to this and the use of Spring Webflows, performance issues could occur.

Caution!

In case of such large objects, Spring Webflows consumes all the CPU – the performance of eMS tremendously decreases.

eMS contains a configuration in programme.properties, to not persist the budget data in the Spring context, but reload the data from the database with each request. This puts more load on the database.

First tests with big application forms show a tremendous increase in the performance of eMS. CPU consumption decreased tremendously, while the load on the database was acceptable.

```
# true uses Spring Webflow Serialization, false disables
# use false in case of CPU performance issues in the budget section
keepFlowScopeBudget=false
```
Figure 412 Flow scoped budget configuration

Supported Characters

eMS allows to use any character from the UTF-8 character set.

Recommended database configuration

We recommend to create the database schema with the "utf8_general_ci" collation.

The eMS furthermore contains configuration for the database connection in db.properties:

```
db.url=jdbc\:mysql\://localhost\:3306/ems1?characterEncoding\=UTF-8
hibernate.connection.CharSet=utf8
hibernate.connection.characterEncoding=utf8
hibernate.connection.useUnicode=true
```
Table 7 Section of db.properties to configure UTF-8 support

Recommended server/java configuration

The Tomcat Application server should be started with the following java parameter. On some environments this missing java runtime parameter could cause problems with the character encoding.

```
-Dfile.encoding=UTF-8
```
Table 8: Java runtime parameter

Character encoding of PDF templates

The PDF-template files should be saved with with UTF-8 encoding

```
<?xml version="1.0" encoding="UTF-8"?>
```
Table 9 Heading of PDF template file

Therefore, the files can contain all special characters from the UTF-8 charset.

Version 3_0.10 introduces a new element in programme.properties

```
vmCharacterEncoding=UTF-8
```
If this property is set to UTF-8 the generation of PDFs should support any character needed in the EU.

Characters that cannot be used in eMS

The eMS user interface supports all kind of characters. This seems to be a web browser fallback behavior to use a fallback character set in case characters are not included in the provided font.

Tests with Chinese characters showed, the font used to generate the PDFs does not include all Chinese characters. Therefore, Chinese texts entered into eMS might not show up in generated PDF files.

Abbreviations

Abbreviaton	Meaning
CA	Certifying Authority
HIT	Harmonised Implementation Tool – Interacts Project on the harmonisation of forms
JS / JTS	Joint Technical Secretariat
LA	Lead Applicant
LP	Lead Partner
MA	Managing Authority
NCP	National Contact Point
PP	Project Partner
AA	Audit Authority
WP	Workpackage
BL	Budgetline
LoE	List of expenditures

Annex 1: User privileges

privilegekey	label	description
ADMIN	ADMIN	Admin Role - Access to all data
MG_TA	MG_TA	Manage Technical Assistance
MG_PROGRAM	MG_PROGRAM	Manage Programme, Access to OP data
MG_CALLS	MG_CALLS	Manage Calls (New Call, Modify)
SHOW_CALLS	SHOW_CALLS	Access to the list of Calls
SHOW_PROGRAM	SHOW_PROGRAM	Read only access to OP data
SHOW_TA	SHOW_TA	Read only access to TA Data
SHOW_APPLICATIONS	SHOW_APPLICATIONS	Show list of applications
CREATE_APPLICATIONS	CREATE_APPLICATIONS	Create new application
SHOW_ALL_APPLICATIONS	SHOW_ALL_APPLICATIONS	Show all applications (Access to Applicationbrowser)
MG_USER	MG_USER	Manage user accounts
MG_ROLES	MG_ROLES	Manage user roles
MG_MULTILANGUAGE	MG_MULTILANGUAGE	Manage translations of user interface
MAILBOX	MAILBOX	Access to messaging features
DASHBOARD	DASHBOARD	Access to the dashboard
CHECK_PROJECT	CHECK_PROJECT	Check project application (prerequisite to SUBMIT_PROJECT)
SUBMIT_PROJECT	SUBMIT_PROJECT	Submit project application
APPROVE_PROJECT_PHASE1	APPROVE_PROJECT_PHASE1	Approve project application phase 1 (in 2 phase call) as well as access to all the lists under "Assessment-First Step"
APPROVE_PROJECT	APPROVE_PROJECT	Approve project application after submission
DISABLE_PROJECTCHECK	DISABLE_PROJECTCHECK	Disable check-requirement in application form
BROWSE_APPLICATIONS	BROWSE_APPLICATIONS	BROWSE_APPLICATIONS
EVALUATE_PROJECT	EVALUATE_PROJECT	Access to "Quality Assessment" list and to the evaluation-section of applications

SUBMIT_EVALUATION	SUBMIT_EVALUATION	Access the consolidation-view of a checklist and right to finish the assessment
MG_CHECKLIST	MG_CHECKLIST	Access to 'Manage checklists' section
MG_CONTRACT	MG_CONTRACT	Access to "Contracting"-List and subsidy-contract-page for the contract creation and approval
MG_CHANGEREQUESTS	MG_CHANGEREQUESTS	Allows Modification-Requests already after submission of an Application. Access to "Modification Request"-List. Allows to approve of modification requests and the finished modifications
MG_RANKING	MG_RANKING	MG_RANKING
MG_PROMOTED_PROJECT	MG_PROMOTED_PROJECT	Access to the following lists: "Approved under Conditions", "Handover and Contracting", "Contracted"
MG_PARKED_PROJECT	MG_PARKED_PROJECT	Access to the "Reserve List"-List
MG_STARTUP	MG_STARTUP	Access to the "Start up data/Supplementary Information" sections
MG_HANDOVER	MG_HANDOVER	Access to the "Contracting"-List
FLC	FLC	
MA	MA	Allows user the MA-rights for the reporting
CA	CA	Allows user the CA-rights for the reporting
ELIGIBILITY_CHECK	ELIGIBILITY_CHECK	Access to the "Admin and Eligibility Check"-List and to the eligibility assessment
ELIGIBILITY_CHECK_SUBMIT	ELIGIBILITY_CHECK_SUBMIT	ELIGIBILITY_CHECK_SUBMIT
ENABLE_ATTACHMENTS_JTS	ENABLE_ATTACHMENTS_JTS	Acivation of the attachment-upload-functionality for submited applications
EVALUATION_CONSOLIDATE	EVALUATION_CONSOLIDATE	EVALUATION_CONSOLIDATE
RECOMMENDATIONS	RECOMMENDATIONS	Access to the "Recommendation"-List
PROJECT_DECISION	PROJECT_DECISION	Access to the "Funding Decision(MC)"-List
REPORTING	REPORTING	Access to the "Cube"-Seciton of the Programme-Tables
EVALUATE_PROJECT_PHASE1	EVALUATE_PROJECT_PHASE1	Access to the evaluation-check-section of the first phase of a two-phase call applications
JTS_ATTACHMENT	JTS_ATTACHMENT	Role to attach JTS internal documents to projects
CUSTOM_DOCUMENT	CUSTOM_DOCUMENT	Access to custom project document generation
JTS	JTS	Allows all the JTS-Functionality in the reporting-phase of a project

PROJECTFINANCE_MA	PROJECTFINANCE_MA	Access to the "MA Approval"-page
PROJECTFINANCE_CA	PROJECTFINANCE_CA	Access to the "Generate CA Certificate"- and "CA Certificates"-pages
ELIGIBILITY_DECISION	ELIGIBILITY_DECISION	ELIGIBILITY_DECISION
MG_FLC_AT	MG_FLC_AT	MG_FLC_** (Country code) - Manage FLC Assignment for Country **
MG_FLC	MG_FLC	Access to the "FLC Institution"-, "FLC Assignment"- and "My project partners"-page
SHOW_PROJECT_IDEAS	SHOW_PROJECT_IDEAS	Access to the List project ideas
CREATE_PROJECT_IDEAS	CREATE_PROJECT_IDEAS	Access to the Create project idea section
ELIGIBLE_PROJECT_PHASE1	ELIGIBLE_PROJECT_PHASE1	Access to the eligibility-check-section of the first phase of a two-phase-application
SU_PM_R	SU_PM_R	Additional Startup data project management section read access
SU_PM_W	SU_PM_W	Additional Startup data project management section write access
SU_BI_R	SU_BI_R	Additional Startup data bank information section read access
SU_BI_W	SU_BI_W	Additional Startup data bank information section write access
SU_FLC_R	SU_FLC_R	Additional Startup data FLC section read access
SU_FLC_W	SU_FLC_W	Additional Startup data FLC section write access
SU_SA_R	SU_SA_R	Additional Startup data state aid section read access
SU_SA_W	SU_SA_W	Additional Startup data state aid section write access
SU_UA_R	SU_UA_R	Additional Startup data user assignment section read access
SU_UA_W	SU_UA_W	Additional Startup data user assignment section write access
SU_OU_R	SU_OU_R	Additional Startup data output trail section read access
SU_OU_W	SU_OU_W	Additional Startup data output trail section write access
SU_CO_R	SU_CO_R	Additional Startup 'datacode' section read access
SU_CO_W	SU_CO_W	Additional Startup 'datacode' section write access
MG_FLC_OUTSIDE	MG_FLC_OUTSIDE	Manage FLC assignments for partners outside programme area
OFFICER_IN_CHARGE	OFFICER_IN_CHARGE	Assign officer in charge
CA_REVERT_REPORT	CA_REVERT_REPORT	Revert CA certificates
MA_REVERT_REPORT	MA_REVERT_REPORT	Revert MA reports

JS_REVERT_REPORT	JS_REVERT_REPORT	Revert JS reports
LP_REVERT_REPORT	LP_REVERT_REPORT	Revert project progress report
FLC_REVERT_REPORT	FLC_REVERT_REPORT	Revert FLC certificate

Annex 2: Call options

Option	Description
Application Form and Procedure Settings	
Two-step Application Procedure	Enables the 2 step application procedure for this call. All applicants have to fill in and submit all fields assigned to phase 1 and can go on with phase 2 after approval.
Partner Settings	
Contact Details Fields	Enables telephone and email input for partners section
Associated Partner Section	Enables feature to add associated partners
Partnership Description Section	Enables text Input fields for global partnership description
Subpartners	Enables subpartner section in partner detail view
Partner Benefit	Enables partner benefit input field in partner detail view
Partner Confirmation	Enables drop down in partner section for partner confirmation (confirmed/ongoing discussion)
Use English Partnername	Enables partner name in English in partner detail section
Use Partner Abbreviation	Enables partner abbreviation in partner detail view
Project Description Settings	
Cooperation Criteria Section	Enables cooperation criteria input section (cmp. C.1.4 in HIT Applicationform)
Durability And Transferability Section	Enables durability and transferability of project outputs and results (cmp. C.2.3/C.2.4 HIT AF)
Macroregional Strategy Section	Enables the input for macroregional strategies and the projects contribution (cmp. C.3.1 AF HIT)
Risk Section	Enables risk section (submenu) in project descrition
Cooperation Reason	Enables input field for cooperation reason
Enhanced Cooperation Criteria	Enables enhanced cooperation criteria
Knowledge	Enables input field for knowledge
Resultindicator	Enables result indicator section in project focus (C2)
Use Project Specific Objectives	Enables specific objectives section in project focus (C2)
Workpackage Settings	
Work Package Preparation	Enables the workpackage type preparation for use in projects
Work Package Investment	Enables the workpackage type investment for use in projects
Work Package Implementation	Enables the workpackage type implementation for use in projects
Work Package Communication	Enables the workpackage type communication for use in projects
Work Package Management- Activitiy Budget	Enables the input field for budget value for activity in WP Mgmt.
Work Package Management- Activitiy Description	Enables the input field for description for activity in WP Mgmt.

Work Package Management- Deliverable Description	Enables the input field for description for deliverable in WP Mgmt.
Work Package Management- Deliverable Month	Enables the input field for deliverable month in WP Mgmt.
Work Package Communication- Activitiy Budget	Enables the input field for budget value for activity in WP Communication.
Work Package Communication- Activitiy Description	Enables the input field for description for activity in WP Communication.
Work Package Communication- Deliverable Description	Enables the input field for description for deliverable in WP Communication.
Work Package Communication- Deliverable Delivery Month	Enables the input field for deliverable month in WP Communication.
Work Package Investment- Activitiy Budget	Enables the input field for budget amount for activity in WP Investment.
Work Package Investment- Durability And Transferability Of Main Outputs	Enables durability and transferability Input fields for WP Investment.
Work Package Investment- Activitiy Description	Enables the input field for description for activity in WP Investment.
Work Package Investment- Deliverable Description	Enables the input field for description for deliverable in WP Investment.
Work Package Investment- Deliverable Delivery Month	Enables the input field for deliverable month in WP Investment.
Work Package Implementation- Durability And Transferability Of Main Outputs	Enables durability and transferability Input fields for WP Implementation.
Work Package Implementation- Activitiy Description	Enables the input field for description for activity in WP Implementation.
Work Package Implementation- Activitiy Budget	Enables the input field for budget amount for activity in WP Implementation.
Work Package Implementation- Deliverable Description	Enables the input field for description for deliverable in WP Implementation.
Work Package Implementation- Deliverable Delivery Month	Enables the input field for deliverable month in WP Implementation.
Use Deliverables	Enables Deliverables section in workpackage detail view
Disable Workpackages	Disables the add-Workpackage feature. Mandatory Workpackages have to be created via Plugin
Display Targetgroups in Workpackages	Shows selection for Targetgroups in Workpackage detail view.
Budget Settings	
Cofinancing Source Fields	Enables the selection of cofinancing sources
Budget- Enable Flatrates	Enables budget flatrates for office/administration and staff
Budget- Enable Office Flatrates Only	Enables office/administration flatrate only
Budget- Enable Inkind Contribution	Enables in-kind contribution input
Budget- Enable Co-financing Source	Shows/Hides cofinancing source in tables
Budget- Enable Fund Summary	Shows/Hides Fund Summary in Tables

Enable Individual Periods	In enabled the project has to define periods individually. If not enabled periods will be created using the Period-Interface
Budget- Allow Individual Staff Subbudgetlines	If enabled the user is allowed to create individual subbudgetlines for budgetline "Staff".
Budget- Allow Individual Office Subbudgetlines	If enabled the user is allowed to create individual subbudgetlines for budgetline "Office & Administration"
Budget- Allow Individual Travel Subbudgetlines	If enabled the user is allowed (and forced) to create individual subbudgetlines for budgetline "Travel and Accomodation"
Budget- Allow Individual Expertise Subbudgetlines	If enabled the user is allowed (and forced) to create individual subbudgetlines for budgetline "External Expertise and Services"
Budget- Allow Individual Equipment Subbudgetlines	If enabled the user is allowed (and forced) to create individual subbudgetlines for budgetline "Equipment"
Budget- Allow Individual Investment Subbudgetlines	If enabled the user is allowed (and forced) to create individual subbudgetlines for budgetline "Investment"
Budget- Allow Individual Netrevenue Subbudgetlines	If enabled the user is allowed (and forced) to create individual subbudgetlines for budgetline "Net Revenue"

Annex 3: Properties

Remark: properties need to be changed in configuration files by the technical administrator. Most changes require a restart of eMS to be taken into account.

Property	Default Value	
mail.properties		
mail.server		Mailserver for SMTP Service
mail.senderadress		Sender Adress to show in System mails
registration.defaultrole	APPLICANT	Users will have this Role after registration
registration.authenticationName	emsDB	Default Authentication Mehtod for Users after registration
registration.passwordRegexp	((?\=.*[a-z]).{6,20})	Password Regexp Pattern for Security
login.attempts	3	After X failed login attempts the user has to wait "login.timeout" seconts
login.timeout	60	See obove
mail.uploadPath		Path to uploaded mail attachments. eMS will create subfolders for each meassges
mail.adminUserId	1	User id of the admin user
mail.notifyLP	true	Lead partner will be notified via email about submission
registration.captchaEnabled	false	Enables Captcha in user Registration – see configuration notes
registration.usernameEnabled	true	If false, username cannot be choosen – email will be used
programme.properties		
programme.id	1	Id of the productive programme
project.loadLists	yes	Loads Lists in Application form immediately
publiclegalstatus.id	1	Id of the legal status for public (used as a default value)
initpartnertype.id	1	Id of the partner type as a default value
initcofinsource.id	ERDF	Default cofinancing source
initrecovervat.id	yes	Init value for recover vat
auditlog.active	no	Enables/disables auditlog
upload.(jts)path		Paths to store uploaded files. Subfolders will be created automatic.
pdf.path		Path to store created documents. Subfolders for Projects or Users will be created automatic.
intermediate.path		Path to store intermediate files.
font.path		Path to fonts

cssfont.name		Font name of TTF to use in generated Pdfs. Has to support all expected characters.
cssfont.path		Path in css readable format to the font (to be used in templates).
projectReport.prefix		Prefix for PDF Output of Application Form.
template.path		Path to *.vm Template documents.
template.cache	false	Enables caching for templates (velocity setting)
template.modificationCheckInterval	15	If cache is enabled, the interval In minutes to check for template modifications (velocity setting)
template.file		Template to use for Project Report
contractTemplate.file		Template for the contract pd
contractIntermediate.path		Intermediate path
contractPdf.path		Path to generated contracs (subfolders are created automatically)
fundingTemplate.file		Template File for decision print
fundingIntermediate.path		Intermediate path
fundingPdf.path		Path to generated decision prints (subfolders are created automatically)
Funding.filename		Funding Decision Print filename

flcReport.xxx
flcCertificate.xxx
partnerProgressReport.xxx
projectProgressReport.xxx
checklists_Phase1_Eligibility.xxx
checklists_Phase1_Assessment.xxx
checklists_Eligibility
checklists_Assessment
checklists_FLC.xxx
checklists_JTS.xxx
phase1Ineligible.xxx
phase1Approved.xxx
phase1Rejected.xxx
phase2Ineligible.xxx
phase2Approved.xxx
phase2Rejected.xxx
phase2ReferredBack.xxx
finalReport.xxx

xxx.templateFile		Template for Document
xxx.path		Path to store generated document
xxx.pathIntermediate		Path for Intermediate Result
xxx.filename		Filename for pdf
inputNumber.thousandSeparator	.	Settings for Number formatting/input
inputNumber.decimalSeparator	,	
inputNumber.decimalPlaces	2	
inputNumber.minValue	-99999999999999.99	
inputNumber.maxValue	99999999999999.99	
paginatorRows.general		Paginator settings for different lists
paginatorRows.project		
paginatorRows.workpackage		
paginatorRows.partner		
activeMQ.server	vm://localhost?create=false	Queue settings for automatic tasks (active mq settings)
activeMQ.queueName	vm://localhost?create=false	
activeMQ.receiveAllowed	true	
quartz.cronTrigger.interval	0 * * * * ? *	
quartz.conTriggerCSV.interval		Interval for currency fetching
quartz.cronTriggerCSV.receiveAllowed		Enables job for currency fetching
quartz.cronTriggerCSV.url		URL to currency service
currency.defaultId	EUR	Default currency
showStacktraceInGui	false	Shows stack trace in user interface when true
logPerformance	False	Enables Performance Logging
logInformation	False	Enables Information Logging
writerErrorsToStandardOutput		Writes Errors to StandardOut
upload.sizelimit		Filesize Limit for Upload

upload.filetypes		Filetypes allowed for upload
financeReport.xxx **progressReport.xxx** **flcInstitution.xxx**		
xxx.uploadPath		Path for uploaded binaries in the corresponding report
customvm.path		Path to template for custom documents
customvm.cache	false	Velocity cache mode
customvm.modificationCheck Interval	10	Cache interval
customvm.cssfont.nam		Font name to use for costom documents
customvm.cssfont.path		Font path to use for custom documents
dateformat	dd.MM.yyyy	Date Format for GUI
privatelegalstatus.id	1	Default private status – do not modify
copy.enabled		Enables application form copy function
timeformat	dd.MM.yyyy hh:mm:ss	Userinterface Time Format
checks.jarPath.phase1	Plugin for…	.. check of phase 1
checks.jarPath.lastphase		… check of AF submission
checks.jarPath.partnerreport		…check of partnerreport
appCreation.jarPath.initCreat ion		… initialization of AF when creation
nuts1Enabled	False	Shows Nuts Level 1 in Nuts selector
useMcdates	False	Shows drop down in AF to select MC Date
phase1Print	False	Shows print button for Phase 1 Print
template.file1		Template for Phase 1 Print
autoPhase1Print	False	Prints when submitting Phase 1
autoSubmitPrint	False	Prints when submitting AF
activeMQ.datadirectory		Directory to store Active MQ Data (per Instance) can be set as –D Environment for cluster
currencyCsvEncoding		Encoding of currency csv
euroId	EUR	
mrReport		Enables modification requests when reports already exist
mandant	demo	Specific settings

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roundingPlaces		Internal rounding behaviour
roundingMode		
loExpColumns		List of columns used in List of Expenditure
period.jarPath.autocreation		Implementation of Interfaces
checks.jarPath.invoice		
google.maps.apiUrl	http://maps.google.com /maps/api/geocode/jso n	API Url for geocoding
google.maps.defaultLat	48.858222	Default Latitude
google.maps.defaultLng	2.2945	Default Longitude
google.maps.defaultZoom	15	Default zoom factor in map
usePartnerMap	False	User Map in Partner section
velogDir		Logdir for Velocity (PDF Creation)
reports.path		Location for autogenerated reports
google.maps.jsApiUrl		JS API Url for Google Map
htmlInPdf	false	If true, generated intermediate html documents will also be provided to the user
checklists_Phase1_Eligibility.xxx **checklists_Phase1_Assessment.xxx** **checklists_Eligibility.xxx** **checklists_Assessment.xxx** **checklists_FLC.xxx** **checklists_JTS.xxx**		
xxx.pathIntermediate		Intermediate path for checklist print of defined type
xxx.path		Path for pdf result of checklist print of defined type
xxx.filename		Filename for result
phase1Ineligible.xxx **phase1Approved.xxx** **phase1Rejected.xxx** **phase2Ineligible.xxx** **phase2Approved.xxx** **phase2Rejected.xxx** **phase2ReferredBack.xxx**		
xxx.file		Template of notification document
xxx.path		Path for resulting notification pdf

xxx.filename		Filename for notification pdf
eligibilityCheckDecisionEnabled	true	
checks.jarPath.mr		Check implementation for modification request
checks.jarPath.flc		... flc submission
checks.jarPathfinalReport		... final report submission
xml.path		Path for keep export
postponeEnabled		Enables postponing of projects
applicationBrowserColumns		Columns shown in application browser
myApplicationsColumns		Columns shown in my applications
showCategorizedQualityAssessmentComments	false	Quality assessment comments per category, if disables only 1 comment box will be shown
useStickyMenu	False	Menu to the left will stick on top and not scroll with the content section of the application
monthdateformat	MMM.yyyy	Format for date information on month level
automaticHandoverToLeadPartner	False	Lead partner will automatically be assigned to the lead applicants user
reporting.properties		
mondrian.connection		Mondrian Connection string with path to the eMS.xml cube definition and connection settings to the relational database

ANNEX