

# **FCH JU EX-POST AUDIT STRATEGY**



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### 1. BACKGROUND

#### 1.1. Context

The Joint Undertakings (JUs) in general and FCH JU in particular implement part of the 7<sup>th</sup> **Framework Programme (FP7)** which is characterised by a substantial increase in the budget allocated to EU-funded research activities as opposed to previous framework programmes. In order to enhance the ability to respond to this new challenge, Joint Undertakings<sup>1</sup>, have been established. The overall objective of these public private partnerships is to coordinate research efforts in the private and public sectors and align industry needs with policy relevance.

The JUs are legal entities, responsible for the correct implementation of their budgets including appropriate ex-ante and ex-post control mechanisms. They therefore need their own Ex-post audit strategies. However, an appropriate level of harmonisation with the Commission's Ex-Post Audit Strategy is requested by the General Financing Agreement<sup>2</sup> signed between the Commission and the JUs. The alignment with the Commission's strategy while taking into consideration the specificities of the JU is necessary in order to provide: (1) a consistent and (when applicable) common approach towards FP7 beneficiaries and (2) a sound basis of assurance on the use of EU funds.

FCH JU provide funds through grants to beneficiaries eligible to receive funds in order to support research activities selected following open and competitive calls for proposals. The general and specific legal, technical and financial terms for the grant procedures are stipulated through Grant Agreements with beneficiaries, which follow to a large extent the model grant agreements of the European Commission for the execution of the FP7.

According to the regulatory framework of the FCH JU, the Executive Director is accountable for giving reasonable assurance to the Parliament, the Council and the European Court of Auditors, that resources "...have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions".

The **Ex-post Audit Strategy of the FCH JU has to be seen in the context of the JU's internal control system**. In the sequence of controls, the ex-post audits of the beneficiaries come at the end of the payment cycle<sup>3</sup>. This being said, the Ex-post Audit Strategy is a key control of the overall JU's internal control system and represents one of the main elements underpinning the Executive Director's statement of assurance. Its purpose is to provide a systematic approach for the ex-post controls at the beneficiaries, aiming to detect on the spot errors on legality and regularity.

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<sup>1</sup> Joint undertakings represent 8% of FP7 budget (*Source: FP7 Ex-post Audit Strategy 2009-2016, section 1.1*).

<sup>2</sup> Article 7(4): "The Commission shall communicate to the Joint undertaking its own Ex-Post Audit Strategy common to the implementation of the Framework Programme which the Joint Undertaking shall take into account in order to achieve an appropriate level of harmonisation. The Commission may also, at the Joint Undertaking's request, provide assistance and support in the establishment and implementation of the Ex-Post Audit Strategy of the Joint Undertaking".

<sup>3</sup> For more detailed information on the key controls supporting the JU's internal control system, reference is made to the document 'FCH JU Internal Control Framework' (section 6 and Annex 1).

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Following the provisions of the already signed Grant agreements, FCH JU will start receiving beneficiaries' cost claims in 2011. In the beginning only pre-financings will be entered in the JU's annual accounts. Interim and Final payments for project related grant agreements with partners will start from 2011. The **audit population** (i.e. cost claims) in 2011 will remain relatively low. The population will increase progressively as from 2012 when projects related to several calls will be running in parallel.

The audit strategy presented in this document is proportionate to the FCH JU's needs, highly inspired on the **cost-effectiveness** principle (see section 5.1) and established according to internationally accepted auditing standards. Indeed, this strategy aims at making the best use of JU's resources and takes into consideration the assurance provided by other ex-ante controls.

### 1.2. Legal basis and scope of the ex-post audits and the strategy

References to audits/reviews of operations are indicated in the following **legal basis**:

- Article 12 of Council Regulation setting up the FCH JU states that *"The ... Joint Undertaking shall carry out on-the-spot checks and financial audits among the recipients of the... JU's public funding"*.
- Article 39 of the Financial rules of the JU states that *"... the authorising officer responsible shall, depending on his risk assessment, carry out an appropriate ex-post verification.... The purpose of ex-post verification of documents and, where appropriate, on-the-spot verifications shall be to verify that operations... have been correctly implemented<sup>4</sup>... These verifications may be organised on a sample basis using a risk analysis"*.
- Annex II of the JU's Model Grant agreement states:
  - Section II.6 (Payment modalities): *"Any payment may be subject to an audit or review and may be adjusted or recovered based on the results of such audit or review"*.
  - Section II.22 (Financial audits and controls): *"1. The JU may, at any time during the implementation of the project and up to five years after the end of the project, arrange for financial audits to be carried out, by external auditors, or by the JU services themselves or by the Commission including OLAF... Such audits may cover financial, systemic and other aspects (such as accounting and management principles) relating to the proper execution of the grant agreement..."*.
  - Section II.23 (Technical audits and reviews): *"1. The JU may initiate a technical audit or review at any time during the implementation of the project and up to five years after the end of the project. The aim of a technical audit or review shall be to assess the work carried out under the project over a certain period, inter alia by evaluating the project reports and deliverables relevant to the period in question. Such audits and reviews may cover scientific, technological and other aspects relating to the proper execution of the project and the grant agreement..."*

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<sup>4</sup> The expenditure is in order and conforms to the relevant provisions (Legality and regularity) and the principle of sound financial management has been applied.

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5. *The ... JU may be assisted in technical audits and reviews by external scientific or technological experts...*"

- In particular, Article 7 (Ex-post audit of beneficiaries) of the General Financing Agreement signed between the Commission and the JU requests that *"The Joint Undertaking shall, in its competent board, adopt its Ex-Post Audit Strategy with the aim of providing reasonable assurance on the legality and regularity of the underlying transactions and shall forward the adopted Ex-Post Audit Strategy to the Commission"*.

The lifetime of the JU is linked to FP7 from a budgetary point of view (2007 to 2013). However, operations will continue after 2013. Indeed, according to art. 1 of the Council Regulation, FCH JU is set up for a period up to 31 December 2017. Therefore auditing activities will most likely extend to at least four years after the conclusion of the programme. The scope of this document is therefore the period 2011 to 2017. Notwithstanding the expected period of validity, revisions of the current version of the audit strategy may take place following the experiences made in the course of the audits. In particular, concerning the sampling approach, due consideration will be given to the size of the audit population<sup>5</sup>, to the representativeness and to the audit coverage while maintaining the harmonised approach with the FP 7 audit strategy.

In addition, revisions will take place as appropriate, if the environment changes significantly. In particular, when changes in the JU's internal control system (e.g. balance between ex-ante and ex-post controls) so require.

### 1.3. Main differences from FP7 with an impact on the audit strategy

The FCH JU's model grant agreement is highly inspired on FP7 model. However, the following differences deserve mentioning as they have an impact on the JU's ex-post audit checks and strategy:

- Threshold for audit certificates on financial statements: whereas in the FP7 model a certificate on the financial statements shall be submitted for claims of payments equal or superior to Euro 375.000, in the JUs' model (art. II.4.4) the thresholds for a certificate are lower (Euro 50.000 and 325.000, for final and interim payments, respectively<sup>6</sup>). This implies that the bulk of JU's beneficiaries are bound to submit such certificate. This fact has two main implications on the JU's internal control system: (1) on the 'ex-ante' control side, control efforts will focus on the effective functioning of these audit certificates as they are a key piece of assurance and (2) on the 'ex-post' control side, this audit strategy will address those financial statements (i.e. cost claims) not subject to the audit certificate through risk-based ex-post audits (see section 3.1.2.1).
- Certificate on the methodology: In FCH JU and FP7 model grant agreements, the beneficiary may submit a certificate on the methodology for the calculation of personnel and indirect

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<sup>5</sup> important increase in the size of the population, could require the use of a statistical sampling approach

<sup>6</sup> Art II.4.4: *"A certificate on the financial statements shall be submitted for any claims of final payments submitted by each beneficiary whose total FCH JU financial contribution, claimed in the form of reimbursement of costs, exceeds 50.000 EUR, and for claims of interim payments when the amount of the FCH JU financial contribution claimed by a beneficiary under the form of reimbursement of costs is equal or superior to EUR 325.000, when cumulated with all previous payments for which a certificate on the financial statements has not been submitted"*

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costs and the related control systems (i.e. CoM) and a certificate for average personnel costs (i.e. CoMav). However, the incentive for the beneficiaries to submit those certificates and the chances to get them accepted is lower in the JU. Indeed, the certificates have to be accepted by a Committee empowered by the Commission<sup>7</sup> on the basis of restrictive criteria<sup>8</sup> and procedures applied in FP7. If the certificate on the methodology (i.e. CoM) is accepted, the requirement to provide an audit certificate on the financial statements will be waived only for intermediate cost claims. The certificate on final claims cannot be waived and the threshold which requires the submission of the final certificate is relatively low (see point above). Therefore, section 5.3 of this document on the implications for the 'Cost methodology certification' and the importance of system audits (see section 3.3.1) is expected to be marginal in the near future.

- *Direct and indirect costs: identification and upper funding limits:* Identification and reimbursement of direct and indirect costs is subject to different financial provisions in the JU and FP7. Whereas this will have an impact on the specific audit programme to be developed in order to check the legality and regularity of the cost claims, it does not represent any change on the ex-post audit strategy as such.

## 2. OBJECTIVES

The main overall objectives of the ex-post audits are:

- Assess the *legality and regularity of the underlying transactions* through the achievement of a number of quantitative targets (see indicators in section 6 and Annex I).
- Provide an adequate indication on the *effectiveness of ex-ante controls*.
- Provide the basis for *corrective and recovery mechanisms* in place as part of the JU's internal control system, and in this context:
  - Provide feedback on potential corrective actions to the relevant internal procedures of both the JU and the beneficiaries, based on the analysis of audit findings (see Audit Database in section 6 and Annex I) and
  - Improve awareness within the beneficiaries of the regulatory framework within which they operate, with an emphasis on sound project cost accounting.

All objectives above support the annual assurance process and provide input into the assurance declaration of the Authorising Officer which form part of the Annual Activity Report (AAR), in particular the first objective in respect of the legality and regularity of the underlying transactions.

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<sup>7</sup> Joint Assessment Committee of the Commission (JAC)

<sup>8</sup> E.g. According to the 'Guide to Financial Issues relating to FP7 Indirect Actions' the following criteria for the beneficiaries should be met "*Either at least 4 participations in FP7 Grant Agreements signed before the 1<sup>st</sup> January 20109 with an EC contribution equal or above EUR 375 000; - Or, at least 8 participations in FP7 Grant Agreements with an EC contribution equal or above EUR 375 000 at anytime during the implementation of the FP7*".

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It is important to note that ex-post controls alone cannot by themselves deliver the objectives of the wider internal control systems in place. In particular, they cannot reduce error rates or ensure that they achieve certain values. They have to be seen as a complement to ex-ante controls and other measures, such as raising awareness and producing guidelines, which have a 'formative' impact on beneficiaries. In addition, the implementation of audit results including the correction of systematic errors by extrapolation remains under the responsibility of the JU's management and cannot be ensured by the ex-post audit function.

The Ex-post Audit Strategy requires a series of specific actions and associated types of audits and tools which will be used in order to attain the overall objectives set out above. A synthesis is provided in the following table and further detailed in section 3:

Main purpose	Type of audit / Tool
<b>Financial audits</b>	
Provide a <i>representative error rate</i> .	'Representative' audits (section 3.1.1)
<i>Corrective measures</i> → Provide appropriate ex-post audit coverage and initiate the 'cleaning' of a significant part of the budget from systematic material errors.	Corrective audits → Audit of 'individually significant cost claims' (section 3.1.1, step 2) and extrapolation of systematic errors after audit (section 5.4)
<i>Corrective measures</i> → Provide assurance on beneficiaries with specific risk profile and 'clean' this part of the population from errors.	Corrective audits → 'Risk-based audits' after definition of risk profiles (section 3.1.2)
<b>Technical audits</b>	
<i>Corrective measures</i> → Provide assurance on the scientific work carried out and contribute to the detection and correction of doubts/weaknesses with regard to the related scientific/technical deliverables.	'Technical' audits (section 3.2)
<b>Other types of audits</b>	
<i>Corrective measures</i> → Contribute to the prevention and detection of weaknesses in beneficiaries' internal control systems which support the cost claims submitted.	'System' audits (section 3.3.1)
<i>Corrective measures</i> → Contribute to the prevention and detection of the risk of fraud and of financial or technical irregularities.	Audits 'on request' (section 3.3.3)

### 3. TYPES OF AUDITS

The objectives mentioned in section 2 above will be achieved in practice through conducting ex-post audits to the highest professional standards, and collecting, analysing and disseminating their results.

Whereas there is no single classification of audit types, audits below are classified depending on their *nature*. In this context, audits are grouped essentially into three categories: financial, technical and other type of audits (i.e. 'system', 'follow up' and 'on request'). Whereas 'Financial audits' will represent the bulk of the audit effort in order to assess the legality and regularity of the underlying transactions, other type of audits are also envisaged with different purposes. Concerning the *purpose/objective* of the audit, two main categories deserve mentioning: (1) 'representative audits' which contribute towards an error rate representative for the whole population and thus to confirm the effectiveness of the systems and provide input to the assurance declaration of the Authorising Officer and (2) 'corrective audits' which aim at identifying and correcting irregularities by providing a coverage of certain beneficiaries' risk profiles (risk-based audits)<sup>9</sup>. 'Technical' audits and 'other types' of audits (i.e. 'system', 'follow-up' and 'on request') are mainly corrective audits.

Finally and as far as '*audit planning*' is concerned, audits are grouped into two main categories: 'Planned' and 'on request and not initially planned' audits. Whereas the bulk of the audits will form part of the 'Annual audit plan', a part of the audit budget will be devoted to audits 'on request' in order to address new events which could represent a risk not known at the date of the preparation of the annual audit plan.

#### 3.1. Financial audits

Financial audits shall in particular cover compliance with the relevant eligibility criteria for the costs declared and with the applicable rules. They shall be performed at least once a year for populations of cost claims validated by the JU's management for the period subject to audit. This approach implies that cost claims included in a given audit plan, even though not selected in the sample, shall not be taken as an element of the population for the following audit plan.

##### 3.1.1. Representative audits

According to ISA 530, *Audit sampling* is the application of audit procedures to less than 100% of items within a population of audit relevance such that all sampling units have a chance of selection in order to provide the auditor with a reasonable basis on which to draw conclusions about the entire population.

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<sup>9</sup> According to the Court of Auditors opinion N°2/2004 on the 'single audit' model, (§ 48): "Control systems should use sampling for clearly defined purposes: risk-based samples should be used to identify and correct irregularities; representative samples should be used to confirm the effectiveness of the systems".



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Whether or not to use a statistical sampling approach is a matter of professional judgement regarding the most efficient manner to obtain sufficient appropriate evidence. More in particular, according to literature<sup>10</sup> on sampling methods, internationally accepted auditing standards<sup>11</sup> and Commission guidelines<sup>12</sup> on sampling techniques, a large population (minimum 500 to 800 items depending on the literature) is necessary for a cost-efficient use of statistical sampling. In cases where the JU audit population is below 500/800 items, the use of a statistical sampling method is not justified. Indeed, the sample size and thus the audit resources would be disproportionate to the level of assurance required. The sampling methodology described below is considered the most cost-efficient approach for the JU's context. By considering in the sampling approach the 'small' population (significantly below 500 items in the first years of the programme and with a maximum number of items expected in those years where projects related to several calls will be running in parallel, below 800 items) while respecting the principle of a representative sample, it enables the JU to draw valid conclusions on the population (i.e. low sampling risk).

In this context, the JU's representative audits will be conducted on the basis of representative samples in accordance with the following **steps** and sampling methodology:

1. **Identification of the population:** FCH JU's population for each individual 'Audit Plan' will consist of cost claims validated by the JU's management after the preceding audit sampling and up to the date of the current sampling.
2. **Identification of individually significant cost claims:** JU's population will be initially stratified to identify those cost claims, which individually represent a significant amount (e.g. the top 5 or 10 cost claims in value). Such 'significant' cost claims will be all audited and thus excluded from sampling.
3. **Determination of sample size and selection of the sample:** for the remaining population value (i.e. JU initial population (**step 1**) – individually significant cost claims (**step 2**)), which is indeed the population subject to sampling, the sample size and the selection of items for the sample will be determined as follows:
  - a. The main features of the population are identified and the population is stratified according to those features.

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<sup>10</sup> The CPA Journal "Statistical Sampling revisited": Statistical sampling is appropriate when , amongst other factors, we have a large population: *"As a rough rule of thumb, a large population has more than 500 items"* <http://www.nysscpa.org/cpajournal/2004/504/essentials/p30.htm>

<sup>11</sup> International Standard on Auditing ISA 530: Audit Sampling: <http://www.ifac.org/members/Downloads/isa-530-redrafted-audit-sampling.pdf>

<sup>12</sup> Guidance on sampling issued by Commission services:

- DG IAS: "Internal audit methodology Handbook" (page 69): *"For statistical sampling, you always need a large population (minimum 500)"*.
- DG REGIO: "Guidance note on sampling methods for audit authorities" (page 19): *"...where the number of operations in a programme is low (less than +/- 800), the use of a statistical sampling approach to determine the sample size may not always be appropriate"*.

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Audit efficiency is improved by stratifying the population as it implies dividing it into discrete sub-populations which have an identifying characteristic. The objective of **stratification** is to reduce the variability of items within each stratum and therefore allow sample size to be reduced without increasing the sampling risk<sup>13</sup>.

Although not an exhaustive neither a fixed list, the following criteria could guide the stratification of the JU's population:

- Number of Grant agreements per beneficiary
  - Application area
  - Funding Scheme (e.g.: CP: Collaborative Project vs. CSA: Cooperation and Support Action);
  - Type of beneficiaries (legal status)
  - Method for identification and calculation of indirect costs (actual vs. flat rate)
- b.** Items for the sample are **selected** with the aim of ensuring a representative sample (i.e. all main features of the population are present in the sample) and a cost efficient use of audit resources. With both objectives in mind, some items of the sample will be randomly selected.
- c.** The **sample size** is determined to ensure overall audit coverage of 'Representative' audits plus the audits of all 'Individually significant cost claims' (step 2) of at least 40% of the population of cost claims of the audited period. The target audit coverage (40%) may be revised in the future depending on the results of the ex-post audits in the first years.
- 4.** Evaluation of audit results: The results of those cost claims in the sample audited at a given point in time will provide representative error rates. Representative error rates will, in turn, be the starting point for the calculation of the residual error rate (see Annex II for formula and calculation method of representative and residual error rates).
- 5.** Implementation of audit results: after approval of external audit reports and due consideration of extrapolation measures (if applicable), audit results will be implemented through either recovery orders, offsetting with future payments, or waived/not recovered (see Annex I for indicators on the implementation of audit results).

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<sup>13</sup> ISA 530, Appendix 1

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### 3.1.2. *Corrective*<sup>14</sup> audits

All audited cost claims which are not part of the representative audits above will be part of this corrective strand. The scope is deliberately very wide to provide the FCH JU with enough flexibility to target the portions of the operational expenditure where corrections to the errors detected can be most effective (high-risk beneficiaries...).

Corrective audits aim at identifying and correcting irregularities by providing coverage of certain beneficiaries' risk profiles (risk-based audits).

#### 3.1.2.1. Risk-based audits

Risk-based audits aim at ensuring that specific populations not sufficiently covered by representative audits (including the audit of all 'Individually significant cost claims'), which might present specific risks, are properly addressed through ex-post audits.

Without being exhaustive, five main types of beneficiaries/projects will be covered through risk-based audits, namely:

- *Financially weak beneficiaries*: these beneficiaries will be identified either (1) in the negotiation stage during the 'financial viability check' where audits might be launched at the initiative of the JU as a 'protection measure' or (2) during project implementation.
- *Financial Statements not subject to audit certificate*: According to the JU's grant agreements (art. II.4.4) audit certificates on the financial statements will not be submitted for claims of interim or final payments whose financial JU contribution is below a certain amount. As the audit certificate is an important source of assurance in the JU's internal control model, specific audit coverage of cost claims not subject to audit certificate has to be achieved. The goal of these audits is twofold: (1) provide the necessary assurance not available through other 'ex-ante' means and (2) as a deterrent effect (as all cost claims, irrespective of their financial contribution, might be subject to audit).
- *Operationally/Technically weak projects*: Those projects which, during project implementation, provide signals of weaknesses from an operational/scientific point of view will be identified and might be subject to risk-based audits. Feedback will be mainly provided by Project managers as a result of their project monitoring. Whereas underperforming projects will lead mainly to 'Technical audits/reviews' (see section 3.2), financial audits cannot be excluded in cases of operational findings (e.g. activities not adequately carried out) which could derive in ineligible expenditure.
- *Beneficiaries with important non-systematic audit findings as a result of previous audits*: Those beneficiaries will deserve special attention as non-systematic audit findings cannot be corrected through extrapolation.

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<sup>14</sup> It must be noted that errors detected in the representative audits will also lead to corrections.

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- Participants not receiving funding but providing in-kind contributions only within the JU funded projects. These participants do not receive JU funding and thus are not subject to audit certificates<sup>15</sup>. However, as they provide in-kind contributions, audits will be launched on a sample basis to confirm the correct evaluation of their in-kind contributions as requested by article 12.7 of FCH Statutes<sup>16</sup>.

### 3.2. Technical audits/reviews

The aim of a technical audit or review is to assess the work carried out under the project over a certain period, by evaluating the project reports and deliverables relevant to the period in question.

Such audits/reviews will normally cover scientific and technological aspects relating to the proper execution of the project. However, 'joint audits' in which both financial and scientific aspects are looked at may also be launched.

Technical audits are mainly envisaged upon specific request from the Programme Managers if doubts occur with regard to the scientific/technical deliverables. However, a more systematic implementation of 'Technical audits/reviews' as part of project monitoring will be explored depending on the results of the first experiences on technical audits.

These audits will be done in collaboration with the JU's Programme managers and/or external experts.

A specific audit programme will be developed for technical audits, when needed<sup>17</sup>.

### 3.3. Other types of audits

#### 3.3.1. System audits

System audits are carried out to verify the effective functioning of the management and control systems. They contribute to the prevention and detection of weaknesses in beneficiaries' internal control systems which support the cost claims.

System audits are particularly useful in cases of beneficiaries having requested a 'Certificate on the methodology' for the calculation of personnel and indirect costs (CoM) or a certificate on average personnel costs (CoMav) (see section 1.3). However, depending on the results of financial audits, an increase of 'system audits' in detriment to pure 'financial audits' may be

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<sup>15</sup> Participants receiving FCH JU funding and providing in-kind contributions are subject to audit certificates (if above thresholds) and covered in this strategy by 'representative' and, if necessary, 'risk-based' audits.

<sup>16</sup> "The level of the in-kind contributions, calculated on a yearly basis, shall be assessed once a year...." .

<sup>17</sup> FP7 ex-post audit strategy (section 3.3.b): "In DG RTD, a specific methodology has been developed and is currently subject to pilot audits"

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envisaged for the future as a more cost-efficient use of audit resources (e.g. in cases of repetitive cross-cutting internal control issues which lead to ineligible expenditure).

A specific audit programme will be developed for system audits, when needed<sup>18</sup>.

### 3.3.2. *Follow up audits*

Follow-up audits mainly aim at monitoring (1) the implementation by the beneficiary of previous audits recommendations and (2) the extrapolation of audit results, in particular to check whether or not the extrapolation has been correctly applied by beneficiaries (see section 5.4). These beneficiaries represent a specific risk, for instance when the revised cost statements submitted after an audit are not in line with the results of the audited cost statements.

### 3.3.3. *Audits 'on request' and not initially planned*

Whereas the audits to be carried out in a given year will be normally known sufficiently in advance and reflected in the 'Annual audit plan', the JU will reserve 5% of the audit budget to cover potential audit requests during the year, if necessary. This is necessary to ensure that **new events**, which are not known at the date of the preparation of the audit plan but which could represent a risk, are taken into consideration from an ex-post audit point of view.

These audits will contribute mainly to the prevention and detection of the risk of fraud and of financial or technical irregularities.

## 4. RESOURCES

As indicated in the objectives, the FCH JU should achieve a number of quantitative targets while ensuring the cost-effectiveness of auditing through appropriate use of resources and adequate audit sampling.

The current lean structure of the JU as set out in the latest approved Staff Policy Plan does not allow for the setting up of an internal ex-post audit section for beneficiaries independent from the ex-ante verifiers (i.e. financial officers). Therefore, taking into consideration, to the extent possible:

- the requirements of 'segregation of duties' where initiation, ex-ante verification and ex-post verification (i.e. ex-post audits) of an operation shall be separate functions (Art 38.5 of FCH JU's Financial rules) and
- the quantitative and qualitative (i.e. expertise) resources required to carry out the audit work

ex-post audits will be externalized.

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<sup>18</sup> FP7 ex-post audit strategy (section 3.3.a): "A specific audit programme has been developed for these system audits, which is at present being tested"

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Whereas the execution of the audit work is externalized, the JU's staff members (mainly financial and project officers, the Internal Audit Manager and the Executive Director) might be involved in some aspects of the audits with the purpose of ensuring proper understanding by contractors and project participants of the audit scope, methodology and results/implications. In addition, the following 3 processes, which form part of the general ex-post audit process, are under the full responsibility of the JU's staff in order to guarantee that ex-post audits are properly conducted and audit results adequately implemented to provide the assurance required:

- *Planning*: including the risk assessment process leading to the 'Annual audit plan' and decision on any other audits 'on request'.
- *Monitoring*: regular monitoring on audit status through indicators and quality checks of audit reports (see section 6).
- *Evaluation and implementation of audit results*: conclusions on the basis of identified error rates and initiation of recovery orders/offsetting with future payments (see section 6).

Details on the roles and responsibilities of the contractors and the JU will be further specified in the framework contract and in the JU's internal procedures and organisation.

## 5. UNDERLYING PRINCIPLES

This ex-post audit strategy is guided by the following underlying principles:

### 5.1. Cost effectiveness

Ex-post auditing activities will be conducted at all times with due regard to cost-effectiveness. This principle is particularly important in the context of the JU, as described above in chapters 1 and 3, and shall be applied when deciding on the appropriate audit sampling.

The efficiency of an individual audit has to be considered in the context of achieving the overall objectives of the Ex-post Audit Strategy as a whole. For example, an audit in a representative sample might not appear very cost-effective by itself, but it is to be carried out in order not to compromise the sample and collect representative error rates.

### 5.2. Efficient coordination and harmonised approach towards beneficiaries

This audit strategy aims at enhancing the cost effectiveness of the ex-post audit process of the JU by ensuring a close **coordination** of audit activities among the individual research JUs (FCH, Clean Sky and IMI JUs) and with Research Commission DGs. This will avoid (1) unnecessary duplication of audit efforts in cases of multiple audits and (2) different error rates applied to identical beneficiaries but not duly justified.

## FCH JU Ex-post audit strategy

To the extent possible and after due consideration of any legal and financial differences between entities, audit results will be shared between Research DGs and the JUs and common positions will be taken '*vis a vis*' the beneficiaries, wherever appropriate.

### 5.3. Cost methodology certification

Inspired by the FP7 model, the FCH JU model grant agreement allow beneficiaries for the submission of two types of certificates, namely: the Certificate on the Methodology for personnel and indirect costs (CoM)<sup>19</sup> and the Certificate for average personnel costs (CoMav)<sup>20</sup>.

The following section explains the implications on the ex-post audit strategy in cases beneficiaries decided to do so. However, as further explained in section 1.3, the incentive for the JU's beneficiaries to submit those certificates is lower in the JU than in the Commission. Therefore, the applicability of this section is expected to be marginal in the near future.

#### a) The CoM

Aiming at simplifying and reducing the administrative burden for beneficiaries, those who receive approval from the Joint Assessment Committee of the Commission (JAC) on their CoM will not have to submit audit Certificates on the Financial Statements for interim payments. In addition, the final Certificate on the Financial Statements will be prepared by auditors through verifying the compliance with the declared methodology (for the other costs (such as travel, equipment etc), the actual costs rule applies). This simplifies the procedures foreseen in Annex VI - Form D of Grant Agreement and the verifications required from the auditor.

In the case of beneficiaries who have an approved CoM for both personnel and indirect costs, audit procedures should be limited to the assessment of the correct application of the certified methodology. The 'system' part of this audit would involve confirming whether the certified methodology was correctly applied. Any audit adjustments would then be limited to discrepancies in cost categories other than direct labour and overheads. The resulting audit report will be referred to the JAC, so that it can evaluate any findings and decide on further steps to be taken towards the beneficiary. Up to that point, pending the JAC decision, any findings relating to the certified methodology will not have any effect on the error rate.

The CoM, once approved, is intended to be valid throughout the JU's Programme.

#### b) The CoMav

With reference to the Certificate for average personnel costs, i.e. the CoMav, knowing that the basic rule in the JU's grant agreement is the actual costs, the legislator has foreseen the possibility to declare average personnel costs if a series of acceptability criteria, on the basis of the criteria and procedures applied in FP7, are fulfilled.

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<sup>19</sup> FCH JU Model Grant Agreement, Annex II (General Conditions); article II.4.4

<sup>20</sup> FCH JU Model Grant Agreement, Annex II (General Conditions); article II.14.1

## FCH JU Ex-post audit strategy

For completeness, it is worthwhile recalling the acceptability criteria according to FP7:

*"The Commission adopts the following acceptability criteria, for the assessment of the certified average personnel costs methodologies submitted in accordance to... the Grant Agreements:*

- *Methodologies in which, for each personnel category, the difference between the average rate and the extreme values (upper and lower rates) is equal or below 5%: the methodology is acceptable.*
- *Methodologies in which, for any personnel category, the difference between the average rate and the extreme values (upper and lower rates) is above 25%: the methodology is not acceptable.*
- *Methodologies not fulfilling the first criterion and in which, for each personnel category, the difference between the average rate and the extreme values (upper and lower rates) is equal or below 25%: only methodologies applied by beneficiaries having participated in at least four Sixth Framework Programme projects with an EC contribution in each of them equal or above EUR 375.000 or four Seventh Framework Programme projects with an EC contribution <sup>4</sup> in each of them equal or above EUR 375.000 are acceptable. "*

According to the JU's grant agreement provisions, *"Average personnel costs charged to this grant agreement by a beneficiary having provided a certificate on the methodology approved by the JAC are deemed not to significantly differ from actual personnel costs"*. Accordingly, personnel costs charged on the basis of methodologies approved by the JAC will not be subject to financial adjustments and the subsequent application of liquidated damages unless an inappropriate use of the methodology is identified by the JU.

Obviously, from an ex-post audit point of view, the implications of the existence of the certificates on average personnel costs are wide and need to be taken into consideration. In particular, it is necessary to determine the audit approach towards those beneficiaries. This audit approach will be determined in an audit programme consisting of three parts and which requires the auditor to deliver an opinion on each of the following issues:

1. Whether the methodology applied by the beneficiary to charge average personnel costs is the one certified.
2. Whether the certified methodology operates effectively.
3. Whether the certified methodology is applied in an appropriate manner.

On the last point, the system audits referred to under section 3.3.1 will provide the elements to calculate an overall deviation between the average personnel costs charged and the actual personnel costs. The resulting audit report will be referred to the JAC so that it can evaluate any findings and decide on further steps to be taken towards the beneficiary. Up to that point, pending the JAC decision, these findings will not have any effect on the error rate, since *"the average personnel costs ... are deemed not to significantly differ from actual personnel costs"*. Audit adjustments on categories of costs other than direct labour will be implemented in the normal manner, i.e. directly with the beneficiary.

The "system" audit approach will only be applied to those beneficiaries whose average personnel costing methodology has been approved by the JAC. Those beneficiaries of the JU, who are found to have charged average personnel costs without the average personnel cost methodology



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being approved by the JAC, will be subject to a standard audit comparing costs charged with actual costs. Deviations from actual costs will be reported for relevant corrections including the application of extrapolation.

### 5.4. Extrapolation

Extrapolation means in this document the process by which 'systematic' errors found on audited cost claims are 'extrapolated' to all the other non-audited FCH JU claims of the same audited beneficiary.

The implementation of audit results (i.e. their detection and initiation to recovery) implies a reduction of the amount of error present in the budget, as reflected by the 'residual error rate'<sup>21</sup>. It must be clear that moving from the detected error rate to the residual error rate on the audited participations only has a marginal effect. This underlines the importance of extrapolation, which could have a substantial effect on the decrease of the residual error rate in case of a large number of non-audited participations with the same audited beneficiary (see formula of 'residual error rate' in Annex II).

It is important to note that non-systematic errors in non-audited population cannot be corrected. Given their very nature, there can be no systematic approach to removing them. The error rate calculation will however track the incidence of non-systematic errors (see indicators in Annex I). If the incidence of non-systematic errors is found to be important, the 'cleaning' of systematic errors from a larger part of the population will have to be intensified (i.e. increase of sample size) in order to have a better chance of lowering the detected error rate. In addition, risk-based audits will address specifically those beneficiaries with important non-systematic audit findings (section 3.1.2.1).

The adequate implementation of extrapolation relies on beneficiaries preparing and submitting revised cost statements from which the effect of any systematic error(s) detected in audits has been eradicated<sup>22</sup>.

Extrapolation is operational in the Commission Services since the end of 2007 and has been formally integrated across Research services as from February 2008. This Ex-post Audit Strategy foresees no changes on how it will be applied in the FCH JU, namely:

- For all FCH JU projects a beneficiary participates in both open and closed (up to 5 years after the end of the project).

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<sup>21</sup> The 'residual error rate' formula (see Annex II) does not reflect the effectiveness of the corrective and recovery mechanisms since the formula does not distinguish between the amounts already recovered and not yet recovered.

<sup>22</sup> Although there is no explicit legal basis for extrapolation, the justification for extrapolation is provided by the Model Grant Agreement (Annex II-General Conditions) under the articles related to 'suspension of payments' (II.5.3.d), 'protection of the Communities' financial interests against fraud and other irregularities' (II.22.8), 'liquidated damages' (II.24) and 'reimbursement and recovery' (II.21).

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- Only after taking due account of materiality and cost-effectiveness considerations.
- Follow-up audits may be undertaken in order to check if extrapolation has been correctly applied by beneficiaries, leading ultimately to possible suspension of payments.

It must be noted that the responsibility for the implementation of extrapolation results is ultimately held by the Executive Director (Authorising Officer).

### 5.5. Cooperation with the European Court of Auditors (ECA)

The JU will co-ordinate and co-operate as much as possible in their auditing efforts with the ECA. This is necessary in order to minimize the risk of overlapping and to timely identify any potential disagreement with the ECA on methodological aspects.

This collaboration will cover in particular:

- Exchange of audit strategy and methodologies
- Exchange of planning information.
- Joint audits (when appropriate).
- Follow-up of ECA results and sector letters.

## 6. INDICATORS & AUDIT DATABASE

### 6.1. Performance Indicators – Quantitative audit results:

According to the General Financing Agreement signed between the FCH JU and the Commission (art 7), *"The Annual Activity Report shall contain sufficient information on the implementation of the Ex-Post Audit Strategy"* and *"The Executive Director shall report to the Governing Board on its implementation"*.

In addition to the formal legal requirements above, regular information on the implementation of the JU's ex-post audit strategy is necessary for the JU's own purposes. Indeed, an effective Ex-post Audit Strategy needs to be complemented with the specification of a number of performance indicators that will help to assess over time whether specific targets and objectives are being achieved. Furthermore, the quantitative results of ex-post auditing will need to be reported on a regular basis for a variety of audiences, both internal and external.

Performance indicators are grouped in three main types of information, namely:

- *Audit progress*: number of audits planned, closed and on-going
- *Audit results*: detailed information on 'error rates' and 'audit coverage'

## FCH JU Ex-post audit strategy

- *Implementation of audit results*: information on the status of implementation of audit results i.e. implementation done (either through offset from payments or recoveries or waived/not recoverable) or on-going (forecast of revenue issued or to be issued).

### 6.2. Audit Database - Qualitative audit results

In addition to the performance indicators above, an Audit Database with a clear indication of qualitative audit results per audit engagement (type of audit findings including their root-cause, best practices and overall conclusions) is necessary for three main reasons:

- *Input for 'Financial capacity checks'*: The beneficiaries' financial capacity checks carried out during the negotiation phase comprise, amongst other aspects, the verification of substantial financial findings relating to their financial capacity following a (ex-post) financial audit. Therefore, flagging 'financial capacity' issues in the audit Database is an effective way of facilitating the 'financial capacity check' of beneficiaries during the negotiation phase.
- *Feedback loop to help drive ex-ante checks*: as indicated in the introduction, the main elements underpinning the Executive Director's statement of assurance are a combination of ex-ante and ex-post controls and thus ex-post audits have to be seen in the wider context of the JU's internal control system. In the sequence of controls, the Ex-post Audit Strategy comes at the end of the payment cycle. However, information on qualitative audit results (not only on audit findings but also on best practices) could provide (1) specific information for ex-ante checks on audited projects on-going and (2) at aggregate level, interesting feed-back loop to help drive ex-ante checks which could e.g. help negotiators in preparing the grant agreement before its signature<sup>23</sup>.
- *Feedback on potential corrective actions* to the relevant internal control procedures of both the JU (e.g. adapt Terms of reference of audit certificates if it is concluded that quality of those certificates is weak due to unclear ToR) and the beneficiaries (e.g. improve cost accounting).

A working tool for the reporting of indicators to be used throughout the JU's' programme and a possible template for the Audit Database can be found in Annex I. These working documents may be revised during the course of the programme if deemed necessary.

**For the Governing Board on 6 January 2011**

**Gijs van Breda Vriesman, Chair**

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<sup>23</sup> E.g. good alternatives for the use of timesheets for the recording of time by staff working on the project; specific checks on the existence of participants following ex-post audits that revealed the non-existence of certain participants, specific checks on personnel, subcontracting and indirect costs following cross-cutting issues as revealed by ex-post audits, etc).

7. **ANNEX I: INDICATORS & AUDIT DATABASE**

Performance Indicators – Quantitative audit results:



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Audit Database - Qualitative audit results



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8. **ANNEX II: CALCULATION OF THE REPRESENTATIVE AND RESIDUAL ERROR RATE**

1) **REPRESENTATIVE ERROR RATE**

As a starting point for the calculation of the residual error rate (see below), the representative error rate will be based on the average error rate for a stratified population, from which a judgemental sample has been drawn.

It is calculated as the average error rate (AER) according to the following formula:

$$\text{AER}\% = \frac{\sum (\text{err})}{n} = \text{RepER}\%$$

Where:

$\sum (\text{err})$  = sum of all individual error rates of the sample (in %). Only the errors in favour of the JU will be taken into consideration.

$n$  = sample size

2) **RESIDUAL ERROR RATE**

The formula for the residual error rate below shows, how much error is left in the auditable population after the outcome of ex-post controls. Indeed, the outcome of ex-post controls will allow for the correction of (1) all errors in audited amounts, and (2) of systematic errors on the non-audited amounts of audited beneficiaries (i.e. extrapolation).

$$\text{ResER}\% = \frac{(\text{RepER}\% * (P-A) - (\text{RepERsys}\% * E))}{P}$$

Where:

**ResER%** = residual error rate, expressed as a percentage.

**RepER%** = representative error rate, or error rate detected in the representative sample, in the form of the Average Error Rate, expressed as a percentage and calculated as described above (AER%).

## FCH JU Ex-post audit strategy

**RepERsys%** = systematic portion of the RepER% (the RepER% is composed of complementary portions reflecting the proportion of systematic and non-systematic errors detected) expressed as a percentage.

**P** = total amount in € of the auditable population.

**A** = total FCH JU's share of all audited amounts, expressed in €. This will be collected from audit results.

**E** = total non-audited amounts of all audited beneficiaries. This will consist of the total FCH JU's share, expressed in €, of all non-audited received cost statements for all audited beneficiaries (whether extrapolation has been launched or not).

This calculation will be performed on a point-in-time basis, i.e. all the figures will be provided as of a certain date.

Values for P, A and E will not be cumulative as of that date, but will be calculated according to the method of identification of the population as described under Chapter 3.1.1, point 1 (which stipulates, that the population for each individual 'Audit Plan' will consist of cost claims validated by the JU's management after the preceding audit sampling and up to the date of the current sampling).

However, in order to arrive at a meaningful residual error rate for the entire cumulative period covered by ex-post audits during the execution of the JU's programme, the weighted average residual error rate (WAvResER%) shall be calculated for the whole duration of the programme until the end of each audit period according to the standard formula for a weighted average (sum of weighted terms (=term multiplied by weighting factor in relation to the population in value (p)) divided by the total number of terms) as follows:

$$\text{WAvResER}\% = \frac{\sum_{i=1}^n (\text{Res ER}_i * p_i)}{\sum_{i=1}^n p_i}$$

**For the Governing Board on 6 January 2011**

**Gijs van Breda Vriesman, Chair**

