



***Using intervention logic  
for designing RTD policies and programmes  
- what could be done in the EU context?***

**EUFORDIA - European Forum On Research and Development Impact Assessment**

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## ***What did the Court say in the context of the FPs?***

- **Defining intervention logic: a key element of programme design from the outset**
  - Article 163 of the Treaty as the starting point for such an intervention logic for the FPs
  - to be made more specific with regard to the different scientific areas covered by the FPs and the different instruments used
- **Lack of explicit logic models** explaining how the FPs and their constituent programmes contribute towards scientific and technological progress and innovation
- Using intervention logic in programme design should result in **more focused and better structured programmes** and would make evaluation and monitoring more effective
- **Intervention logic** should be rendered **explicit in future legislation**
  - Underlying assumptions
  - Linkage between scientific and socio-economic objectives
  - Definition of performance indicators

# ***What is intervention logic?***

- **Intervention logic as the overall framework** in which evaluation and monitoring takes place
  - setting of objectives at policy and programme level
  - definition of performance indicators

## **Definition of intervention logic:**

- a set of hypothetical cause and effect linkages ...
- describing how an intervention is expected to attain its global objectives
  - best illustrated through “logic models”

- **Use in the EU context:**
  - The Commission’s evaluation guidelines state that intervention logic provides *‘the conceptual link from an intervention’s inputs to the production of its outputs and, subsequently, to its impacts on society in terms of results and outcomes’*
  - European Commission, DG Budget, ‘Evaluating EU activities: a practical guide for the Commission services’, July 2004, pp. 87 and 106

# ***Impact assessment as prospective evaluation***

## **“Prospective”**

**Impact  
assessment**  
(prospective; ex-ante)

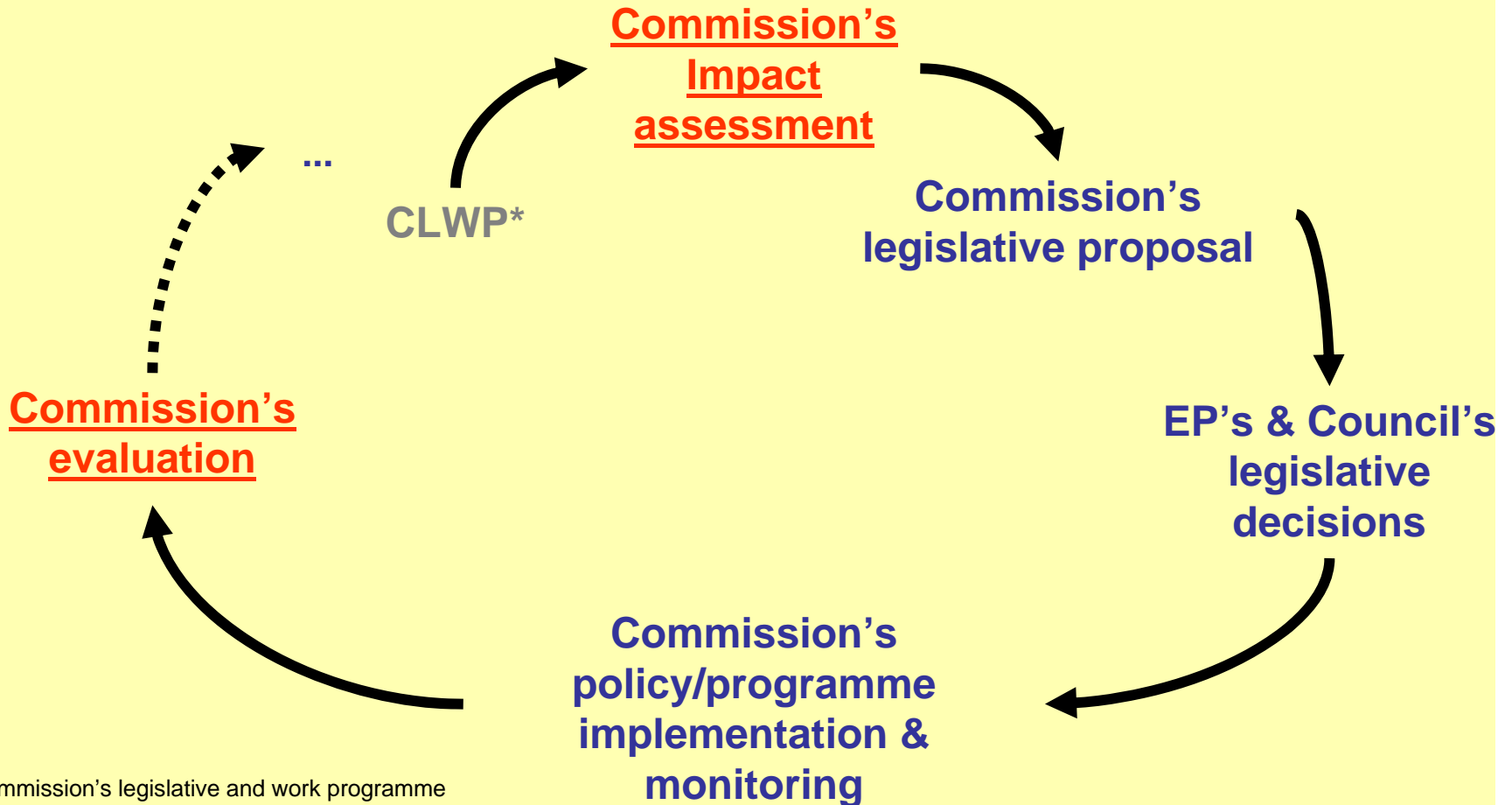
- Financial Regulation, Art. 27(4)
- since 2002; Commission guidelines (revised in 2009)
- co-ordinated by Secretariat General

## **“Retrospective”**

**Evaluation**  
(interim; ex-post)

- Financial Regulation, Art. 27(4);  
FP7 Decision No. 1982/2006/EC, Art. 7
- Commission guidelines (revised in 2007)
- co-ordinated by DG Budget

# ***Impact assessment and evaluation – the policy cycle***

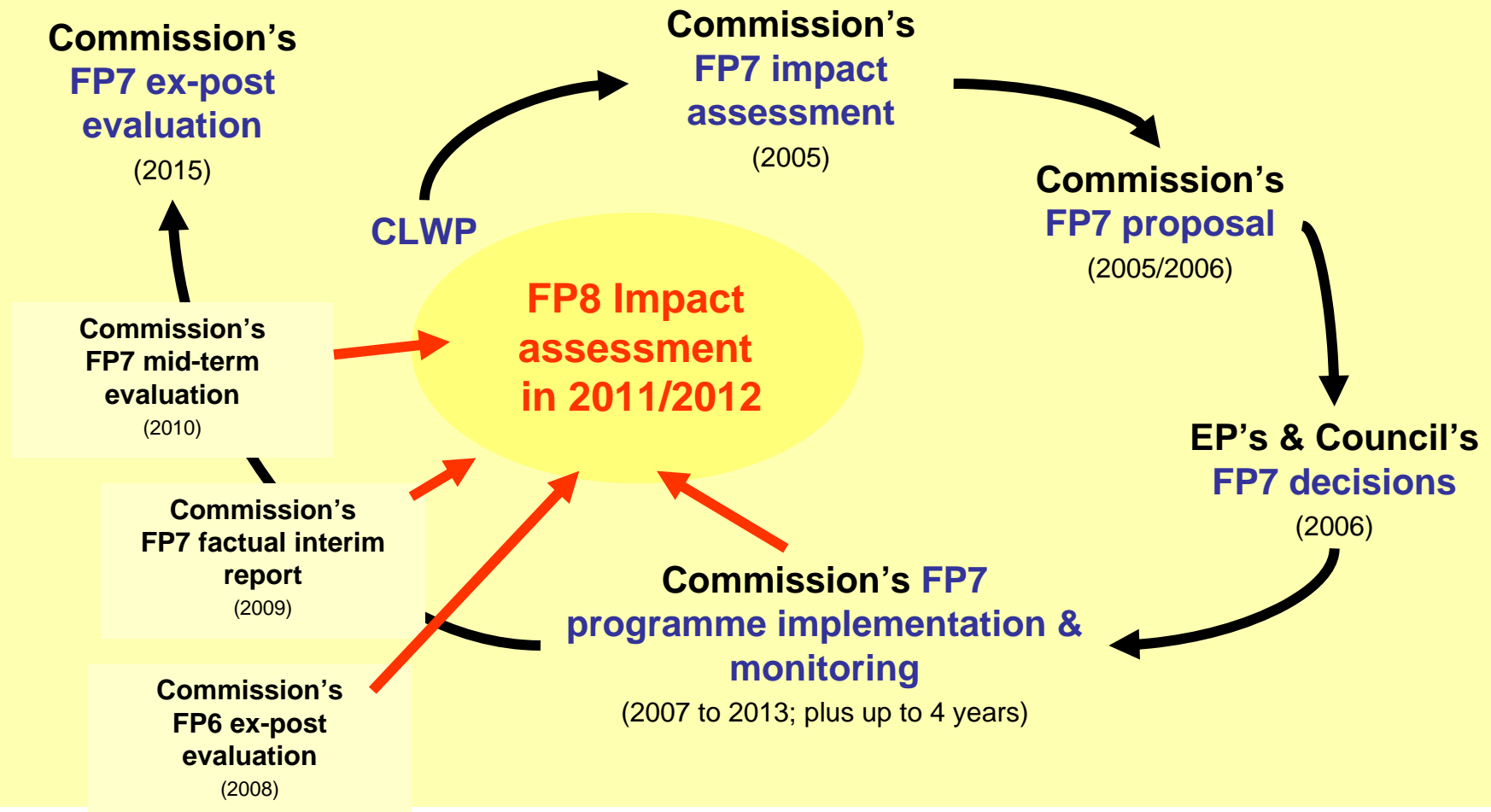


\* Commission's legislative and work programme

# ***What are “Impact assessments” in the EU context?***

- simplifying and improving the **regulatory environment** is a policy objective at EU level
- **Impact assessments aim to**
  - **identify and assess the policy problem** at stake and the objectives pursued;
  - develop the **main options** for achieving the policy objective;
  - analyse their likely **economic, environmental and social impacts**; and
  - **analyse the costs** that may be incurred by economic actors as a consequence of the legislative proposal, including in particular a **quantification of the information costs** (“administrative burden”).
- Commission-wide use of **“ex-ante” impact assessments** since 2002
  - Impact assessment can be defined as *“... the process of systematic analysis of the likely impacts of intervention by public authorities”* .
  - A formal impact assessment is required for all items on the **Commission’s Legislative and Work Programme (CLWP)**
  - based on **OECD “good practice”**
  - **Inter-institutional agreement** between European Parliament, Council and Commission on the use of impact assessment

# ***Impact assessment – a suitable instrument to set out the intervention logic for the period after 2013?***



***Thank you  
for your attention !***





# **Annex:**

***Background information about the audit  
related to Special Report No. 9/2007***

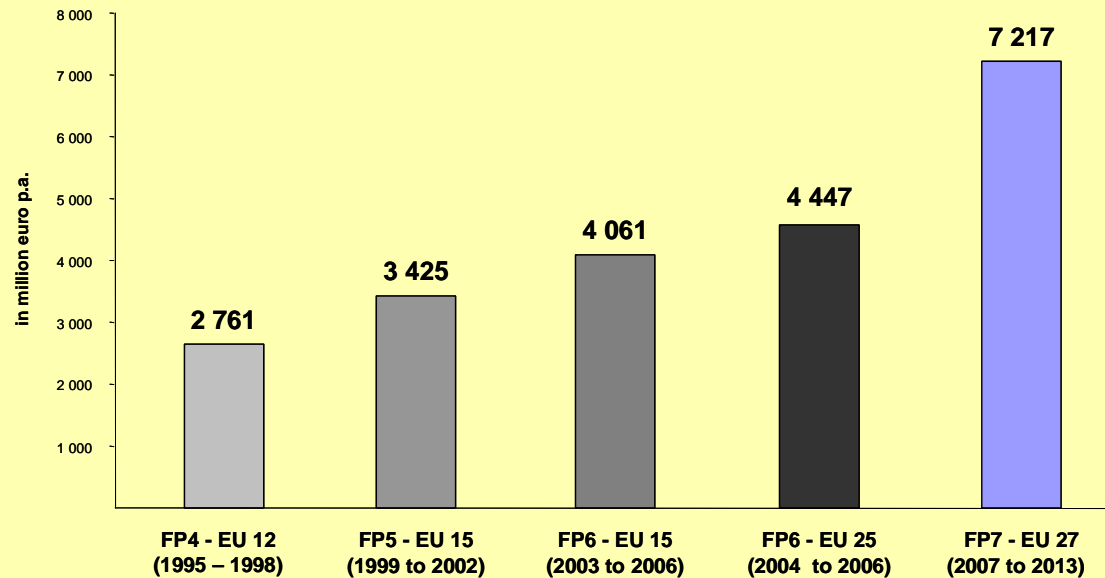
- About the audit
  - Scope and approach
  - Work done
- Overall conclusion
- Main audit observations and recommendations
  - Intervention logic, objective setting and performance indicators
  - Evaluation strategy
  - Organising evaluation for the FPs
  - Evaluation methodologies and techniques
  - Disseminating and using evaluation findings

# ***About the audit***



# Audit scope and approach (1)

- The **Community RTD framework programmes (FPs)** are the **largest public source of research funding** in the European Union, with **FP7** increasing to around **7,200 million euro p.a.**
- The **Commission is responsible** for managing the FPs and assessing their results
- The FPs are implemented jointly by **six Directorates-General (DGs)**, the so-called "**research DGs**"
- The audit covered the **monitoring and evaluation arrangements** in place **since 1995** for the last three programming periods (FP4, FP5, FP6) and also gives an **outlook for FP7 (2007 - 2013)**



Source: Legislative decisions for FP4 to FP7, see [Annex 2](#)

Average annual Community financial participation - FP4 to FP7 (EC)

## ***Audit scope and approach (2)***

- In recent years **significant changes have been made to the FPs**, due to :
  - new **political challenges** (the Lisbon strategy and Barcelona objectives, the establishment of a "European Research Area" (ERA) and the increasing use of the open method of co-ordination in research and innovation policy);
  - the **changing orientation of FPs**, from simply solving technical problems under FP4 and addressing specific social problems under FP5, to encouraging the co-operation of research organisations within the ERA and contributing to the establishment of a knowledge-based economy and society under FP6 and FP7;
  - **longer programming periods** (previously 4 years, now 7 years for FP7 in line with the 2007 - 2013 Financial Perspectives);
  - **more Member States and participating countries**;
  - **increased funding**, in particular under the current Financial Perspectives;
  - the setting up of the **European Research Council (ERC)** and the delegation of programme management activities to **executive agencies** starting under FP7; and
  - the increasing **use of large-scale funding instruments** (e.g. Networks of Excellence, Integrated Projects, Article 169 projects, Joint Technology Initiatives)
- The audit was carried out with the **EFTA Board of Auditors** and the **assistance of external experts**
- Findings and recommendations were discussed and **validated by “Focus groups”** comprising experts from several Member States, associated countries, the USA and Canada



## ***Audit scope and approach (3)***

- Overall **audit question**:

***Did the Commission have an adequate approach to assessing the results of the FPs through its evaluation and monitoring activities (in terms of legal requirements and stakeholder expectations) ?***

- In particular, the audit asked whether:
  - there was an underlying intervention logic to the FPs and their constituent programmes that could provide a sound basis for evaluation and monitoring
  - the Commission had defined an evaluation strategy for the FPs
  - the organisational structure of the Commission's evaluation system for the FPs ensured that evaluation was properly coordinated, adequately resourced and perceived by stakeholders as being sufficiently independent
  - methodologies used for evaluation were satisfactory and
  - evaluation and monitoring activities provided information and analysis which could be used to improve on-going programmes and prepare future FPs
- follow-up to **Special Report 1/2004** on the Commission's management of FP5

# ***Audit work done (1)***

- **Audit field work**

- review of the legal and statutory requirements (FP legal basis, Financial regulation, Commission standards and guidelines, international good practice)
- analysis of the organisation of evaluation and monitoring activities within the Commission
- review of objectives and performance criteria specified for the FPs (legislative and work programme level; Activity-based management)
- analysis of comprehensive sample of more than 80 monitoring and evaluation reports (in particular report typology, approach and methodologies employed, main findings)
- review of academic literature on current trends in research evaluation (with assistance of external experts)

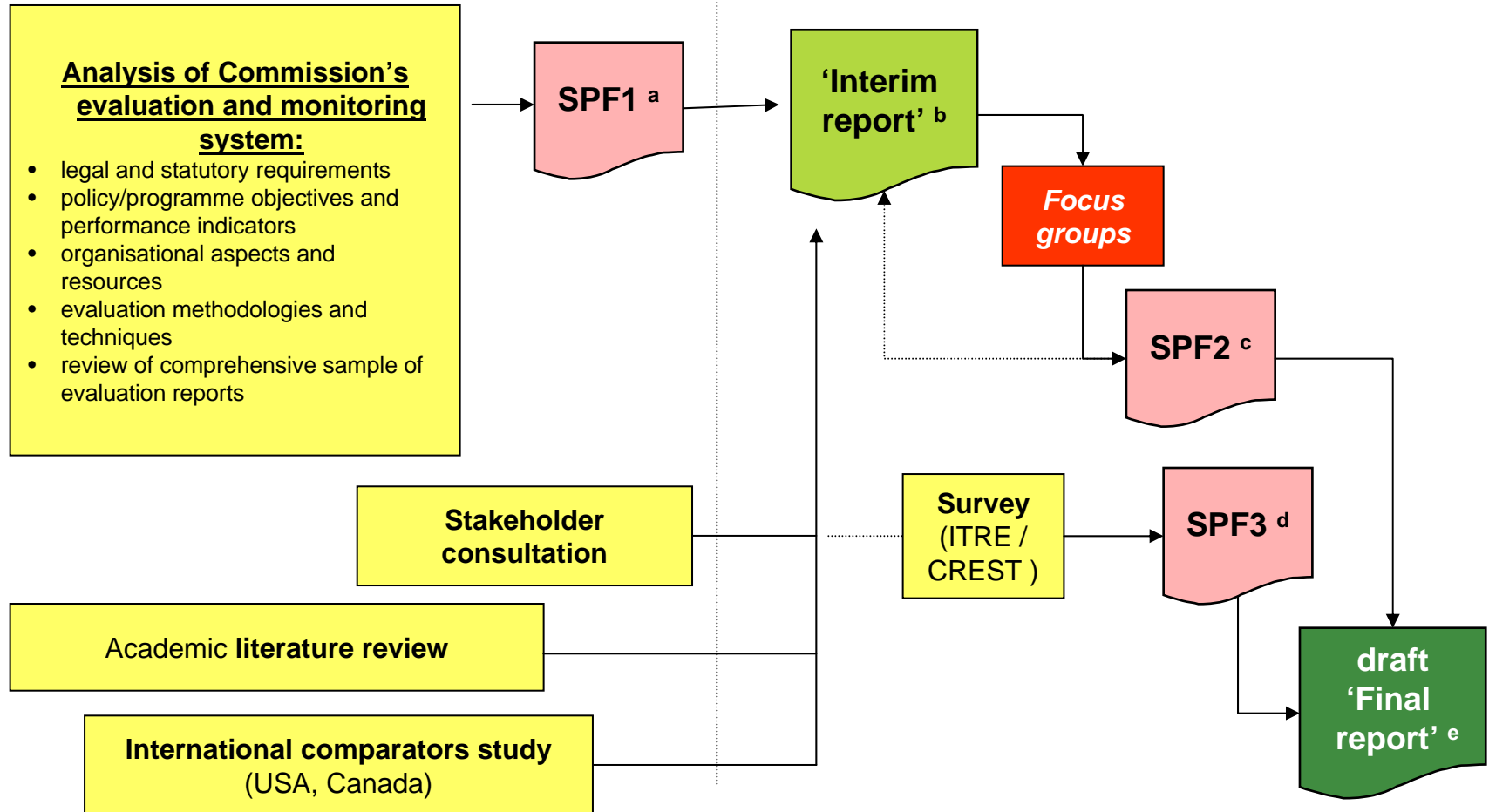
- together with an **assessment of stakeholder expectations**

- interviews with more than 60 Commission officials 90 experts identified as stakeholders in Member States and associated countries (Czech Republic, Germany, Estonia, Spain, France, Italy, Luxembourg, Netherlands, Austria, Finland, Sweden, United Kingdom and Norway)
- surveys with institutional stakeholders at the European Parliament's ITRE and the Council's CREST committees
- a consultation with more than 65 experts in the field of research evaluation in the USA and Canada as an international comparison group
- a series of “focus group” meetings in February 2007 (facilitated by external experts)

# Audit work done (2) - task work flow

2006

2007



*Note: SPF – Statement of Preliminary Findings*

a) *SPF1*: Covering mostly systems description, dispatched on 27 July 2006; Commission reply dated 26 October 2006; follow-up 30 November 2006, reply follow-up 5 February 2007

b) *Interim report*: Used as basis for focus group discussions, dispatched on 9 February 2007 to 'Focus group' participants

c) *SPF2*: Complete analysis covering all main aspects of the audit, dispatched on 15 March 2007; Commission reply dated 15 May 2007

d) *SPF3*: Results of surveys of CREST and ITRE committees, dispatched on 11 May 2007 (no response requested, only transmission of factual survey results)

e) *draft 'Final report'*: first reading on 1 June 2007, adopted by Court on 5 July 2007; contradictory with Commission on 9, 22 and 29 October 2007; final adoption (together with Commission replies) by Court on 22 November 2007



# ***Overall conclusion***



## ***Overall conclusion (1)***

- **evaluating RTD programmes**, and in particular assessing their long-term results, **is inherently difficult** and 'best practice' is hard to define. Nevertheless, evaluation is **essential** for programme management, future planning and policy-making
- Evaluation also provides a **basis for accountability**: information about
  - what **intended (or unintended) results** have been achieved,
  - the extent to which **programme objectives have been reached**,
  - the **relevance and utility of programmes** and
  - the **efficiency and effectiveness of programme implementation**
- For the period covered by this report, as required in the FP legislation, the "research DGs" had an **evaluation system in place** and the Commission can point to a sizeable body of evaluation studies
- The Commission established an **overall evaluation framework in 2000 and 2002** and subsequently revised it in 2007:
  - formally the "research DGs" have complied with the Commission-wide requirements, but
  - no major improvements were observed during the period audited by the Court in the way evaluations of the FPs and their constituent programmes were planned, designed and implemented

## ***Overall conclusion (2)***

- the fact remains that **little or nothing is known about the achievement of programme objectives and the results of the FPs**. This is because evaluations have generally focussed on short-term issues of programme implementation. As a result, the **Commission's evaluations** were of **limited usefulness** to policy-makers, stakeholders and even to the Commission itself
- Given the importance of evaluation for programme management and policy-making, **the Commission's approach to evaluating the FPs and their constituent programmes needs to be re-examined** in view of new political challenges, increased funding, a broadening of the orientation of Community research policy and the recent Commission reform. This was also recommended by EURAB in its 2007 report
- The Court's **recommendations** in this report are **based on** either **existing practices within the Commission** or **international good practice**
- With regard to resources, it is clear that the **introduction of the suggested approach to programme evaluation would entail higher costs**. However, in the Court's view, it is most likely that this will produce a **positive pay-off of at least the same order**

# ***Main audit observations and recommendations***

# ***Intervention logic, objective setting and performance indicators***

- **Audit base:** The Court analysed whether policy/programme objectives and relevant performance indicators were defined within the framework of an “intervention logic” as suggested by good practice in other EU budgetary areas, in certain Member States and the USA or Canada
- **Findings:**
  - an **explicit intervention logic was lacking** for FP4, FP5 and FP6
  - **objectives** – as specified in the programme decisions, but also at the operational work programme level or in the ABM framework – were, in general, **poorly defined** and **unsuited to measure the performance** of the FPs
  - these **design weaknesses** undermined effective monitoring and evaluation from the outset
- **Recommendations:**
  - in **future legislative proposals** to the Council and the European Parliament, the Commission should set out an **explicit intervention logic for the FP** as a whole and its constituent parts
  - for the current **FP7**, the Commission should
    - clearly describe the objectives of the FP and its constituent specific programmes (and sub-programmes) and how they should be achieved;
    - clarify the link between the scientific and socio-economic objectives for each specific programme (and sub-programme); and
    - define relevant operational objectives
  - for its **FP7 monitoring system**, the Commission should put in place a **limited, but balanced, set of performance indicators** to measure the efficiency and effectiveness of programme implementation for each specific programme (and sub-programme)
  - the “research DGs” should harmonise their **ABM/ABB nomenclature** to make performance indicators comparable both over time and, where possible, between specific programmes (and sub-programmes)

# ***Evaluation strategy***

- **Audit base:** The Court verified whether an evaluation strategy provided the conceptual framework within which the Commission's evaluation activities for the FPs were designed, planned, executed and used. Having such a strategy in place, and making sure that it is implemented, is a pre-requisite for embedding evaluation in the Commission's organisational culture and decision-making process
- **Findings:**
  - a **comprehensive evaluation strategy**, agreed among the "research DGs" implementing the FPs, was **absent**
  - this resulted in **inconsistent approaches between the various Commission departments**
  - this lack of a strategic approach is illustrated by the **under-evaluation of significant parts of the FPs** (at least 30% of FP4 and 50% of FP5 activities in terms of budgetary appropriations were never subject to any kind of evaluation)
- **Recommendations:**
  - the Commission should urgently develop a **comprehensive, but not overly prescriptive, evaluation strategy** for the FPs
  - this strategy must be **agreed between the “research DGs” jointly implementing the FPs** to ensure a **consistent approach** with regard to the evaluation and monitoring of the FPs

# ***Organising evaluation for the FPs (1)***

- **Audit base:** The Court checked the extent to which the organisational structure ensured that the Commission's evaluation system for the FPs was appropriately coordinated, adequately resourced and also perceived by stakeholders as being sufficiently independent
- **Findings:**
  - evaluation of the FPs was decentralised, the **existing coordination mechanisms** among the “research DGs” implementing the FPs **were not effective** and the **Commission's central services** (DG Budget, Secretariat-General) **had no enforcement role**
  - The **use of panels** composed of high-level external experts appointed by the Commission for major evaluation exercises was well suited to the Community context and are perceived by stakeholders **as** guaranteeing the “independence” of the evaluation. However,
    - these temporary panels were **not involved early enough** in the process to influence evidence collection and had only **limited possibilities to follow up relevant issues over time**
    - by using only an overall FP panel (in addition to a panel for one specific programme), **insufficient attention** was given to specific issues related **to the different scientific areas** within the FPs
  - FP evaluation was **under-resourced**: around 1% of Commission staff and approximately **only 0,15% of budgetary appropriations** were spent on evaluation; this is significantly less than recommended by DG Budget and at the lower end of international practice observed by the Court

## ***Organising evaluation for the FPs (2)***

- **Recommendations:**
  - the "research DGs" should consider setting up a **joint evaluation office** in addition to the existing evaluation units within each DG. In line with current practice in other policy areas, this office could co-ordinate the Commission's evaluation activities for the FP as a whole. Such **common support functions** have been recommended in the past for the DGs implementing the FPs and **may become even more important in the future** with the **creation of the ERC** and the **delegation of programme implementation to executive agencies**
  - **evaluation panels** should **continue to be used** by the Commission to assist it in its evaluation activities. However, the Commission should consider how to **align the panel structure with the overall FP programme structure**. This could be done by having panels for specific programmes and, where appropriate, sub-programmes. In addition, these **panels** should be **set up sufficiently early** in order to provide effective support to the Commission, and continue to do so throughout the programming period
  - the Commission should **reconsider the resources to be used for the evaluation** of the FPs and their constituent programmes. An evaluation system based on the proposals made in this report would, on average, represent **less than 0,4% of FP7 budgetary appropriations**



# ***Evaluation methodologies and techniques (1)***

- **Audit base:** The Court checked the extent to which specific guidelines existed, whether information needs were properly analysed on a timely basis and whether relevant data were made available to evaluators. Considering the evaluation studies carried out by (or on behalf of) the Commission, the Court reviewed the techniques used for the individual studies. The potential contribution that might be made to the evaluation of the FPs by national-level evaluations was also considered
- **Findings:**
  - inadequate methodological guidance was provided by the Commission; unlike in other areas there is **no “evaluation manual” for the FPs**
  - **problems in data gathering** resulting in a **weak evidence base**
    - **data requirements** were specified late and data reported by participants – as contractually required - was often inadequate for evaluation purposes. Other data was often requested too frequently from participants and/or from an unnecessarily large share of participants
    - the **Commission’s internal IT systems** were often unreliable and unsuited to provide robust (and comparable) data on participants and results
    - **other data sources** within the Commission (such as CORDIS) and the Member States were not exploited
  - **evaluation studies focussed on short-term issues of programme implementation**; no evaluation study was found that addressed the longer-term outcomes and impacts of the FPs or the achievement of programme objectives
  - **innovative methodologies or techniques** - such as scientometric approaches (citation analysis), quantitative methods (such as cost-benefit) or behavioural models were **generally not used**
  - **national impact studies were too heterogeneous** to be aggregated or to be compared at FP/EU level

## ***Evaluation methodologies and techniques (2)***

- **Recommendations:**

- the Commission should **draw up a manual for the evaluation of activities funded by the FPs**, providing definitions of key concepts and terminology and identifying a range of appropriate methodologies for certain evaluation activities. This manual should be based on existing guides and toolboxes and should be updated on a regular basis
- the Commission should **define its information needs**, taking into account the need to limit the administrative burden on participants
- the Commission should **provide monitoring information on the implementation of the FPs in a timely manner**. As required by the FP7 "Rules for Participation", problems relating to the Commission's IT systems for managing data on programme management and participants should be addressed urgently
- **participants' reporting obligations** towards the Commission should be reduced significantly and surveys carried out on a sample basis only. The contractual requirement to submit indicator-based impact data for each project should be replaced by a **short self-assessment upon project completion**
- the Commission should **make more extensive use** for its evaluations **of existing complementary sources of relevant data** (both within the Commission and in Member States)
- the Commission should **employ the full range of evaluation techniques available**. In addition, it should support the development of innovative approaches and use these approaches in its own evaluations.
- the Commission should consult with Member States on how to **maximise the benefits of national-level evaluations of the FPs**

# ***Disseminating and using evaluation findings***

- **Audit base:** The Court checked the extent to which evaluations were properly timed, findings were communicated and disseminated to stakeholders outside the Commission and recommendations were taken into account by the Commission to revise on-going programmes ("learning programmes")
- **Findings:**
  - because the **timing of evaluations was often premature** for addressing the most relevant issues, the Commission's evaluation system for the FPs was of limited usefulness to policy-makers, stakeholders or even the Commission itself
  - ultimately, **little is known about the achievement of programme objectives and the results of the FPs**
- **Recommendations:**
  - the Commission should **establish the type and scope of evaluation** that can reasonably be expected for the dates specified in the legislation (2008, 2010 and 2015), explain how evaluations can be used to adapt programmes ("learning programmes") and specify what contribution evaluations can make to policy decisions. In particular, the Commission should clarify its intended approach with regard to the **evaluation of the longer-term results of past and present FPs**, given that such results may take 7 to 10 years to come to fruition
  - the Commission should **review its practice on communicating and disseminating its evaluation findings** to ensure that stakeholders receive the necessary information

# European Court of Auditors

Special Report 9 / 2007

concerning

***“Evaluating the EU Research and Technological Development (RTD) framework programmes – could the Commission’s approach be improved”***

*together with the Commission’s replies:*

Official Journal 2008/C 26/01, Volume 51, 30 January 2008

