1. **Basic Information**
   1.1 Désirée Number: 2002/000-579.02.01
   1.2 Title: Creation of the system of licensing and supervision of aviation personnel in compliance with EU and JAA requirements.
   1.3 Sector: Administrative capacity - Transport
   1.4 Location: Estonia

2. **Objectives**

2.1 Wider Objective(s):
- Air safety requirements consistent with European Union and European Joint Aviation Authorities (JAA) standards;
- Estonian Civil Aviation Administration (ECAA) compliant with Regulation (EEC) No 3922/91 to meet the conditions of membership of the European Joint Aviation Authorities (JAA).

2.2 Project purpose:
- The creation of a system for licensing and supervision of aviation personnel under EU and JAA requirements.

2.3 Accession Partnership (revised 2001) and NPAA 2002 priority

2.3.1 Accession Partnership

- Complete legislative alignment and reinforce administrative capacity in the inland waterways sector, in the road sector in particular as regards road safety, dangerous goods and taxation, and in the railway transport sector with a view to the implementation of the revised railway *acquis*, particularly by setting up an independent allocation and charging body; **complete legislative alignment in aviation**, and in particular, set up an independent aviation accident investigation authority.

2.3.2 National Programme for Adoption of the Acquis (NPAA)

**The National Programme for Adoption of the Acquis (NPAA) 2002**, part III, chapter 9 “Transport”, section 9.5 “Air Transport”, introductory part says that ‘until 2002, the main emphasis have been put on process of harmonising Estonian legal acts concerning aviation safety with those of European Joint aviation Requirements. ...The decision on full JAA membership will be made on the meeting of JAA Committee in June or October 2002’”

Under the title “Administrative capacity”, the NPAA includes: ‘*The development of the system for licensing aviation personnel and supervision under JAA and EU requirements*”

The requirement to become the full member of the European Joint Aviation Authorities (JAA) is embodied in Regulation 3922/91/EEC on the harmonisation of
technical requirements and administrative procedures in the field of civil aviation. JAA is the associated body of the European Civil Aviation Conference (ECAC), providing the framework within which the aviation authorities of the European countries cooperate with an aim to increase air safety by developing and implementing Joint Aviation Requirements (JAR).

The EU aims to achieve the level of safety defined by JAA in the field of certification of aviation products as well as in the field of training and licensing aviation personnel. Estonia’s objective is to achieve the same level of safety and for this purpose the NPAA identifies training of ECAA officials in the field of aviation safety under the Joint Aviation Requirements.

2.3.3 2000 Regular Report from the Commission on Estonia’s Progress Towards Accession:

‘Estonia is a candidate member of Joint Aviation Administration (JAA) since June 26, 1999 and it has applied for full membership of the Administration.’

2001 Regular Report from the Commission on Estonia’s Progress Towards Accession:

‘As concerns air transport, secondary legislation has been adopted regarding the issuing of licenses and the certification of services.’

3. Description

3.1 Background and justification:

Under the obligation arising from the Regulation (EEC) No 3922/91, Estonian Civil Aviation Administration (ECAA) has undertaken to become the full member of European Joint Aviation Authorities (JAA). This objective is also specified in the Transport Development Plan for the years 1999-2006 Annex 1 (approved by the Government on 9. March, 1999).

The requirements of EU and JAA are designed to achieve a consistent high level of air safety across Europe. Within the framework of common transport policy and under the Regulation (EEC) No 3922/91, Member States must harmonise their technical standards on air safety and operation of aircraft as well as the requirements on the licensing of aviation personnel. The harmonisation of the requirements is a prerequisite for ECAA to become the member of JAA. Estonia became the candidate member of JAA in 1999 and has submitted an application for full membership. It is anticipated that full membership will be achieved before the end of 2002.

A key element in achieving a high level of air safety is the qualification of aviation personnel, especially pilots. To achieve this, JAA has laid down requirements for Flight Crew Licensing - JAR-FCL.

JAR-FCL has determined requirements of aviation authorities in the areas of:

Pilots’ training programs,
Training organisations and standards for the issuing of pilots’ licenses,
Supervision of training and the checking professional skills.
In order for pilots licenses issued in Estonia\(^1\) to be recognised by the JAA (and accepted throughout the EU), The Estonian Civil Aviation Authority (ECAA) will need to ensure that its inspectors supervising the training, the flight examiners as well as the system of licensing of aviation personnel comply with the standards and criteria set by JAA. JAA requirements are more demanding and set higher standards with regard to the training and theoretical knowledge of license holders and applicants.

Estonian Civil Aviation Administration (ECAA) as the authority exercising civil aviation state inspection and issuing licenses and certificates has to carry out the theoretical knowledge examinations for license issue and renewal, to issue the pilots’ licenses and to check regularly the professional skills of license holders.

**Inspector and Flight Examiner Qualifications**

At present there are about 347 licensed pilots in Estonia. Natural turnover rates required to maintain this number of pilots is in the order of 10 per year although this figure may increase once Estonian qualifications are recognised within the EU.

Checks on the professional skills of license applicants and current holders of pilot licenses are carried out by the inspectors of ECAA and flight examiners authorised by ECAA. Most of the 30 flight examiners authorised by ECAA are employed on contractual basis. At present, the examiners have varied professional backgrounds and experience, most hold national Commercial Pilot’s and Air Transport Pilot’s licenses issued under ICAO requirements.

While ICAO requirements foresee that flight examiners “must be qualified and experienced in the subject matter for which they are responsible” and “hold or have held the highest professional licence qualifications in those aspects for which they will be responsible” without further specification, the JAA requirements set very specific and clearly defined requirements to flight examiners’ selection, authorisation, experience and qualifications:

- they must hold a license and rating at least equal to the licence or rating for which they are authorised to conduct skill test or proficiency checks;
- they must hold instructor’s rating to instruct for this licence or rating;
- they must be qualified to act as pilot-in-command of the aircraft;
- they must pass “the Examiner Acceptance Test”;
- they must comply with appropriate examiners’ standardisation arrangements.

Thus, first the examiners and inspectors will have to acquire the necessary licences and ratings under JAR-FCL requirements and then undergo the standardisation arrangements.

Under ICAO requirements the testing is very much dependent on an individual flight examiners’ approach to the work. However, JAA requirements are aimed at very high standardisation level of the examiners, which is the responsibility of the National Authority. After acquiring their JAR-FCL licences and instructors qualifications, the examiners must undergo the initial examiner standardisation course (incl. practical and theoretical training) and acquire a course completion approval, as well as specific instruction connected with the licence or rating for which they will carry out the skill tests and proficiency checks.

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\(^1\) The national aviation licenses issued in Estonia currently comply with the International Civil Aviation Organisation’s requirements.
In order to achieve the required standards it is necessary to undertake an evaluation of flight examiners’ and inspectors’ current qualification(s) and develop a training programme designed to meet JAR-FCL requirements. The process, undertaken on an individual basis, would reveal `gap` between the current qualifications and those of JAR-FCL. The subsequent activities would address the issues of training requirements (including those for instructors’ ratings and flight examiners’ authorisations) and the development of methodology for conversion to JAR-FCL licenses. Once flight examiners and inspectors are JAR-FCL recognised all subsequent supervision and checks on pilots (applicants and existing) would be undertaken according to JAR-FCL requirements.

Inspector and Flight Examiner Training

The training consists of two components: flight training and/or synthetic flight training and theoretical instruction. The synthetic flight training needs to be carried out in a synthetic training device (Flight and Navigation Procedures Trainer, FNPT II) that represents an aircraft with the fuselage, with controls and instruments for flight, navigation, engine(s) and systems (hydraulic, electrical etc.), computer, monitor etc. The trainer can be equipped with optional equipment such as visual display, functional circuit breakers, record/replay module, lesson plan modules. The trainer is widely used for training operations under Instrumental Flight Rules (IFR) and license renewal. To reduce the number of costly flight hours required in conventional training and to increase the efficiency of practical flight training, it is necessary for ECAA to obtain Flight and Navigation Procedures Trainer (FNPT II). This would offer opportunities for recurrent and refresher training, for instrument flight training and Multi Crew Co-operation (MCC) training.

At present the ECAA does not possess any equipment of the kind.

Having in mind the overall purposes of the European and world-wide aviation, the Estonian CAA would like to develop its computer based training and computer based examination facilities.

Under JAA requirements a pilot (including the license renewals) will be required to pass theoretical knowledge examinations in up to 19 subjects. This is more demanding process than that currently required. As examinations are computer based (questions based on the 6000 questions available in the JAA Central Question Bank) it is necessary for the ECAA to acquire additional computers in order to improve pilot access. The average number of annual renewals is approximately 120. To ensure enough computer capacity is available to deal with this workload it is estimated that four additional computers will be required.

As the result of this project the ECAA will be able to issue pilots’ licenses accepted and recognised by JAA and EU member states and carry out the required supervision over the license holders.

It is anticipated that the conversion process to JAR-FCL standards will take a total of three years to complete as the upgrading of existing qualifications will be undertaken as licenses are presented for renewal. As the renewal of licences and ratings is an ongoing process often involving tests on the FNPT as well as theoretical examinations, the FNPT and computers will be continuously used after the completion of this project.

The training and standardisation of flight examiners and inspectors is a continuous and regular activity. ECAA will use the FNPT and the know-how acquired during the project for that purpose using its own resources.
3.2 Linked activities:

The present project is linked to two Phare projects conducted during the period 1998-2000:

- **Phare Multi-Country Transport Programme “Modernisation of the Air Transport Sector in the 10 Central European Countries” (project No B5-98-023).**
  The general objective of the project was to assist the ten Central European Countries in the preparation for accession to the European Union through a program of technical assistance. Particular objectives of the project were concentrated on institutional structures and safety oversight, legislation and regulations, airport infrastructure and development and air traffic management. The training and experts’ assistance offered under the project formed the basis for the harmonisation and training of specialists under EU and JAA requirements. Recommendations for elaborating and completing the developments that had been started within the project were developed for each participating country. Areas of activity requiring further assistance were specified.

- **“Air Operational Safety Improvement in the Phare Countries” (Project No 98-0296),**
  The main aim of the project was to develop training strategies and operational procedures under EU and JAR requirements suitable to improve air operational safety. Basic training courses were carried out, recommendations on training procedures and requirements, institutional and legislative recommendations were developed.

The two PHARE multi-country projects “Modernisation of the Air Transport Sector in the 10 Central European Countries” and “Air Operational Safety Improvement in the Phare Countries” were first of all meant to give a clear picture of the aviation situation in 10 countries in accession and to point out the areas that need further development. Under the projects some general theoretical training has been received in aircraft accident investigation, crew resource management, requirements in flight crew licensing, implementation procedures for JAR-OPS and JAR-145, the transport of dangerous goods, the implementation of JAR-OPS Quality Assurance Programmes, in EU regulations and in their implementation.

As the theoretical training received addressed the legislation and the relevant requirements, there is no overlap with the present project, which is focused on practical training for acquiring definite standards.

Other activities linked with this project are connected with the establishment of a legal basis for the improved licensing system. Regulation No 125 of 21 December 2001 of the Minister of Transport and Communications introducing JAR-FCL requirements was enacted at the beginning of 2002.

Consistent with the requirements of this Regulation the ECAA has commenced the development computer programs enabling the selection, under certain criteria, theoretical examinations questions from the JAA Central Question Bank, to build up different variants of examinations and assess the results of the examinations.
The Aviation Act has been amended (with effect from the 1st January 2002). This amendment relates to aviation personnel licensing and continuous fitness for flight duties. It also introduces the requirement for medical examination and medical fitness for aviation personnel based on JAR-FCL criteria.

3.3. Results

The following results can be identified from the completion of this project as a combination of a both contracts under p.3.4.:

3.3.1 ECAA training of Flight Inspectors and Flight Examiners recognised as complying with JAR-FCL requirements.

3.3.2 Flight Training equipment/computers installed to support the training of Inspectors and Examiners to JAR-FCL standards

3.3.3 30 Inspectors and Examiners holding JAR-FCL licenses with Instructor ratings.

3.3.4 1000 Theoretical Examinations completed using the new computers during the lifetime of the project²

There are both private and commercial pilots among the 347 licensed pilots. The number of holders of commercial pilots’ licenses at present is 125, amongst whom the flight examiners, who carry out the checks in the name of ECAA, are selected. The direct beneficiaries of the project will be ECAA and the 30 authorised flight examiners (ECAA inspectors and airline pilots) who act in the name of ECAA and who will first be trained and checked with the aim of converting their licenses and acquiring the standards required by JAA. The indirect beneficiaries of the project will be the remaining commercial and private pilots who will have afterwards the possibility to be trained to convert their licenses into JAR-FCL licenses, to carry out checks and pass the examinations for renewing their licenses under JAA rules.

3.4 Activities³

In order to achieve the above results the project will involve the following activities:

3.4.1. **Contract 1 (Technical Assistance):**

3.4.1.1 Evaluation of existing Inspector and Flight Examiner qualifications and experience;

3.4.1.2 Development of profiles for inspectors and flight examiners individually and identifying skill and training needs.

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² It is estimated that in the period up to 2006 a total of 3500 examinations will be undertaken on the new computers (The figure includes theoretical examinations in 19 different subjects. Statistics show that about 400 examinations are carried out per year. For converting national licences into JAR-FCL licences and upgrading them, a pilot shall have to pass additionally 14 theoretical examinations, depending on his/her experience)

³ CBA for the project and feasibility study will be completed under PPTFM, by 20 of May 2002
3.4.1.3 Development of training programmes and methodology for converting national licenses to JAR-FCL licenses with instructor ratings. Development of the standardisation procedures.

3.4.1.4 Preparation of training programmes and the delivery of theoretical knowledge training

3.4.1.5 Synthetic flight training on the flight and navigation procedures trainer (FNPT)

3.4.1.6 Training on FNPT in multi-crew co-operation for the operation of multi pilot aircraft

3.4.1.7 Flight training

3.4.1.8 Standardisation training for flight examiners and inspectors.

3.4.1.9 Development of tender for the purchase of FNPT and computers

The above activities will be delivered through a technical assistance and procurement contract. The activities identified above will require the following human resource inputs:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Experience Required</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4.1</td>
<td>Holder of airline pilot’s license (ATPL)</td>
<td>3cm (calendar-month)</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Training manager in a flight training organisation (III category expert) 5 years flight examiner experience</td>
<td></td>
</tr>
<tr>
<td>Tasks:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The evaluation of experience and skills of flight examiners and inspectors on individual basis by interviewing them and carrying out check flights.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• developing individual profiles of the inspectors and flight examiners pointing out their experience, skills and training needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• The development of flight examiners standardisation procedures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4.3</td>
<td>Expert with experience in flight training and training programme (Head of Training of a Flying Training Organisation) with 5 years experience (III category expert)</td>
<td>3cm</td>
</tr>
<tr>
<td>Tasks:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Developing training programs and the methodology for training to convert the national licences of ECAA inspectors flight examiners into JAR-FCL licences with instructors ratings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 3.4.4 | Theoretical knowledge instructor of a Flight Training Organisation meeting the requirements of JAR-FCL with the experience of 5 years (III category expert)  
**Tasks:**  
• Theoretical knowledge instruction under the training programmes developed under 3.4.3 required for passing the tests necessary for converting the national licenses into JAR-FCL licenses. |
| 3.4.5 | Synthetic flight instructor with experience in Multi Crew Cooperation instruction, 5 years experience (III category expert)  
**Tasks:**  
• Instrument flight training on the flight and navigation procedures trainer (FNPT);  
• Training on FNPT in multi-crew co-operation for the operation of multi-pilot aeroplanes; |
| 3.4.7 | Flight instructor with flight examiner experience of 5 years (III category expert)  
**Tasks:**  
• Flying training;  
• Training for the acquisition of flight examiners’ skills and good practice (standardization training)  
• Coordination of the training activities |
| 3.4.9 | Expert in the preparation of tender document with 5 years experience (III category expert)  
**Tasks:**  
• The preparation of tender documentation for the purchase of FNPT |

### 3.4.2. **Contract II (Supply)**

1. **3.4.2.1 Procurement and installation of equipment (Flight and Navigation Procedures Trainer)**

### 3.5 Lessons learned:

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\(^4\) CBA and feasibility study will be completed under PPMTF, by end of May 2002
Estonian Civil Aviation Administration has participated in Phare Multi-country Programmes but they have had no projects under a national programme.

- **Phare Multi-Country Transport Programme “Modernisation of the Air Transport Sector in the 10 Central European Countries” (project No B5-98-023).**
  For Estonia, the project report pointed out the need for further assistance under national Phare projects in implementing the JAA requirements, including the licensing (JAR-FCL) requirements, raising the level of air safety oversight and training aviation personnel.

- **“Air Operational Safety Improvement in the Phare Countries” (Project No 98 0296),**
  The final report of the project pointed out the need to pay special attention to training aviation specialists, inspectors and flight crews under JAA licensing (JAR-FCL) requirements.

The recommendations developed in the framework of the above projects have been taken into account in the harmonisation of national regulations with JAA requirements. The JAR-FCL licensing requirements have been introduced into Estonian legislation by the Regulation No 125 of 21 December 2001 of the Minister of Transport and Communications. The Regulation No 124 of 21st December 2001 introduces into national legislation all the requirements of JARs regulating the certification of aviation products. This creates legal basis for the implementation of all the JAR requirements.

The “ab initio” pilot training has been brought into compliance with the licensing requirements JAR-FCL and the ECAA has started to develop the theoretical knowledge examination programs based on the JAA Central Question Bank.

4. **Institutional Framework**

   The main beneficiary of this project is Estonian Civil Aviation Administration (ECAA). The ECAA is the government body responsible to the Ministry of Transport and Communications (MOTC) carrying out supervision of air safety and flight training and issuing licenses to aviation personnel.

Beneficiary institution: Estonian Civil Aviation Administration

Contact:

- **Name:** Mr. Tiit Soorm
- **Title:** Deputy Director General
- **Institution:** Estonian Civil Aviation Administration
- **Phone:** (372) 694 96 66
- **Fax:** (372) 694 96 67
- **E-mail:** ecaa@ecaa.ee

In order to manage this project a project manager will be employed by the ECAA. They will work in close collaboration with the Flight Safety Division and in particular the Operations Licensing Department’s. No structural changes within the ECAA are envisaged as a result of this project.

ECAA will provide the office premises for the experts and arrange and prepare a room for the Flight and Navigation Procedures Trainer. It will be the duty of ECAA to arrange the
development of computer programs for performing the theoretical examinations for FCL licenses.

5. Budget

<table>
<thead>
<tr>
<th>Contract 1</th>
<th>Technical Assistance</th>
<th>Phare Support (MEUR)</th>
<th>National Cofinancing</th>
<th>IFI</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Investment Support</td>
<td>Institution Building</td>
<td>Total (=I+IB)</td>
<td></td>
</tr>
<tr>
<td>STE 1 (Flight training organisation) 3 months</td>
<td>0.0533</td>
<td>0.0533</td>
<td>0.0533</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STE 2 (Flight training and training programme) 3 months</td>
<td>0.0533</td>
<td>0.0533</td>
<td>0.0533</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STE 3 (Theoretical training) 4 months</td>
<td>0.0717</td>
<td>0.0717</td>
<td>0.0717</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STE 4 (Multi Crew Cooperation) 4 months</td>
<td>0.0717</td>
<td>0.0717</td>
<td>0.0717</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STE 5 (Flight instructor) 10 months</td>
<td>0.18</td>
<td>0.18</td>
<td>0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STE 6 (Expert in the preparation of tender document) 1 month</td>
<td>0.018</td>
<td>0.018</td>
<td>0.018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit Certificate</td>
<td>0.003</td>
<td>0.003</td>
<td>0.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 2</td>
<td>Investment in the Regulatory Infrastructure</td>
<td>0.382</td>
<td>0.382</td>
<td>0.127</td>
<td>0.509</td>
</tr>
<tr>
<td>FNTP</td>
<td>0.367</td>
<td>0.127</td>
<td>0.494</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardware</td>
<td>0.015</td>
<td>0.015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>0.382</td>
<td>0.451</td>
<td>0.833</td>
<td>0.277</td>
<td>1.11</td>
</tr>
</tbody>
</table>

Cost-benefit analyses for the purchase of the equipment will be done additionally under PPMTF by 20 of May 2002.
Estonia will co-finance the project by financing
- the additionally recruited project leader (0,08 MEUR)
- office rental for experts, experts administrative costs (computers, communications tools, copy machines etc) (0,018 EUR)
- the cost of flight hours (ca 232 hours) on aeroplanes (0,052 MEUR)
Those will be parallel co-financing and the procurement of computers and Flight and Navigation Procedures Trainer (0,127 MEUR). It will be divided into two lots within the same tender.
It will be joint co-financing.
The co-financing is planned from the 2003 to 2005 budget of ECAA as follows:
6 Implementation Arrangements

6.1 Implementing Agency:

The implementing agency is the Ministry of Finance, Central Financing and Contracting Unit (CFCU). The CFCU will be responsible for tendering and contracting.

The programme Authorising Officer / PAO is:

Renaldo Mändmets
Deputy Secretary General of the Ministry of Finance
Tel: (+372) 6 113 545
Fax: (+372) 6966 810
e-mail: renaldo.mandmets@fin.ee

The Ministry of Transport and Communication (MOTC) will be responsible for the technical implementation of the project. The relationship between the CFCU and the MOTC will be defined in a memorandum of understanding.

Programming Officer, PO:

Name: Mr. Urmas Kukk
Title: Deputy Secretary General
Institution: Ministry of Transport and Communications
Phone: (372) 6397 641
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E-mail: urmas.kukk@tsm.ee

The project manager is:

Name: Mr. Tiit Soorm
Title: Deputy Director General
Institution: Estonian Civil Aviation Administration
Phone: (372) 694 96 66
Fax: (372) 694 96 67
E-mail: ecaa@ecaa.ee

A Steering Committee will be established, which will be responsible for the monitoring the implementation of the project. The Steering Committee will include the representatives of the:

Ministry of Transport and Communications,
Estonian Civil Aviation Administration,
EC Delegation in Estonia
Ministry of Finance

6.2. Twinning
N/A
6.3 Non-standard aspects

There are no non-standard aspects to this project. DIS Manual and Practical Guide to Phare, ISPA & Sapard contract procedures will be strictly followed.

6.4 Contracts

Contract 1 (PHARE): TA for the development of training programs and carrying out the training – 451 000 Euro

Contract 2: Supply contract for FNPT and 4 computers – 509,000 Euro

7 Implementation Schedule

7.1 Start of tendering/calls from proposals: November 2002
7.1 Start of project activity: March 2003
7.2 Project completion: February 2005

8. Equal opportunities

Opportunity both for men and women to participate in the project will be guaranteed on equal basis and will be measured by recording the experts and consultants employed. However, it should be kept in mind that the aviation sector by its nature involves more men than women. The Estonian laws and regulations concerning the equal opportunities for women, men and minorities will strictly be followed.

9. Environment

N/A

10. Rates of return

The flight examiners authorised will not have to pay for the use of simulator. The other commercial and private pilots who use the simulator for training or renewing their licenses and ratings will have to pay for flight hours on the simulator. The cost of an hour of training will be about 60 euro. The money will be used by ECAA for operating costs and maintenance.

11. Investment criteria

11.1 Catalytic effect

The implementation of the project will ensure the implementation of JAR-FCL requirements in Estonia by providing the necessary training and means for converting the national licenses into JAR-FCL licenses and enabling, after the end of the project, to continue the necessary refresher and other training for renewal the licenses and ratings. It enables to accelerate the process, which is particularly important, taking into consideration the imminent creation of European Aviation Safety Agency (EASA) in the Framework of European Union, with a
legal authority to adopt regulations enforceable throughout EU. By the end of 2004, the EASA is expected also to adopt the directly applicable licensing rules based of the JAR-FCL.

11.2-3. Cofinancing an additionality

ECAA has contacted the private companies with an aim to co-finance the purchase of simulator. As the Phare support and the approval of the whole project is not decided yet, the negotiations has not been completed.

11.4 Project readiness and size

Cost-benefit study on the project has been made and communicated to the Commission

11.5 Sustainability

After training the flight examiners and inspectors, the FNPT II (simulator) will be used at least by 125 flight examiners and pilots a year for refresher training and licenses renewals. This means that the simulator will be used at least 6 hours per working day, considering that commercial pilots need 12 hours of training and checking per year.

Before training the flight examiners and inspectors, written contracts will be concluded with them, under which they will confirm their commitment to act in the name of ECAA during specified period.

Reference from CBA:

During the first four years the simulator would be used quite constantly. Assuming that after the initial training period of all Estonian pilots to get internationally approved licenses only licence renewals would be needed, then the simulator would be used about 500 h/a. (4 hours/pilot/year). The training of existing pilots would not consume the total time of the simulator, but it would be possible to use the simulator for other purposes, too.

In the analysis we assume no growth in the numbers of commercial pilots in Estonia. This assumption is probably false and there will be more than 125 commercial airline pilots in Estonia, so not only replacement training will be needed, but additional training. The acquisition of the simulator would offer opportunities for replacement and additional commercial pilot training in Estonia. These benefits (cost savings) might actually exceed the measured benefits.

The acquisition of the simulator appears sustainable. The operator of the simulator could be made responsible for not only to let the ECAA’s test pilots to use the simulator free of charge, but to maintain and develop the simulator. Renewing and improving a PC-based simulator could be quite flexible and require relatively small investments and become no great burden to the operator.

Co-operation with other Baltic airlines might also be possible. Air Baltic has three Fokker 50s and Lithuanian Airways has two Boeng 737s. As there as such planes also in Estonia it is probable that the simulator has also programmes and auxiliaries for testing the skills with such aeroplanes.

12. Conditionality and sequencing

Conditionality
Preparation of the necessary premises for the FNPT II. Preparation of the ToR for the TA contract

The sequencing of activities of the project is as follows:

1. Existing ECAA inspectors/flight examiners assessment.
2. Training programs and training methodology developed
3. Acquisition of Flight and Navigation Procedures Trainer (FNPT II) and computers
4. Training of ECAA inspectors and flight examiners

The first phase of the project consists of the assessment of the experience and training needs of ECAA inspectors and flight examiners under the technical assistance contract. Under the assessment results, the training programs and relevant methodology will be developed.

Simultaneously with the preparation of training programs, the preparation of the tender documentation for the procurement of Flight and Navigation Procedures Trainer (FNPT) and the computers will start, so that by the start of the training, the ECAA will have the FNPT at its disposal. The Training device and the computers will remain in the ownership of Civil Aviation Administration. The computers will locate in the ECAA premises and will be used for theoretical knowledge examinations for licenses issue or renewal. The FNPT will be located in the premises of Tallinn Airport. The premises of 120 square meters will be prepared by April 2003.

The last stage of the project will be the training of inspectors and flight examiners under the training programs in accordance with the individual needs of the trainees.

The Cost Benefit Analysis for the project and feasibility study will be completed under PPMTF by End of May 2002.

Annexes to project Fiche

1. Logical framework matrix in standard format,  Annex 1;
2. Detailed implementation chart  Annex 2;
6. CBA and Feasibility Study (will be prepared under PPFTM)  Annex 6.

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It is envisaged that the FNPT II will be accommodated at Tartu Aviation College.
**Phare log frame**

<table>
<thead>
<tr>
<th>LOGFRAME PLANNING MATRIX FOR</th>
<th>Project title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programme name and number :</td>
<td>Creation of the system of licensing and supervision of aviation personnel in compliance with EU and JAA requirements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contracting period expires 6:</th>
<th>Disbursement period expires 7:</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 November 2004</td>
<td>30 November 2005</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
</tr>
</thead>
</table>
| Air safety requirements consistent with EU European Joint Aviation Authorities (JAA) standards | Estonia is the full member of JAA in 2005 | • Estonia’s Progress Report submitted by the EC  
• JAA regular reports of ECAA inspections |

<table>
<thead>
<tr>
<th>Project purpose</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| The creation of the system for licensing and supervision of aviation personnel under EU and JAA requirements. | • JAA Member States (incl all EU MS) recognise pilot licenses issued by Estonian Civil Aviation Administration (ECAA):  
• ECAA has the qualified | • Estonia’s Progress Report submitted by the EC (2005)  
• Reports by JAA (MEST- Medical Licensing Standardisation Team) | JAA Licensing Standardisation Team will inspect ECAA and Estonian airlines |

6 Contracting period expires 2 years after the signature of the Financing Memorandum.
7 Disbursement period expires 3 years after the signature of the Financing Memorandum.
personnel for licensing and supervising aviation personnel and the facilities for performing theoretical examination of JAR-FCL license holders and applicants

• Reports of fact-finding visits and inspections of JAA.
• Annual reports of ECAA to the Ministry of Transport and Communications

<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ECAA training of Flight Inspectors and Flight Examiners recognised as complying with JAR-FCL requirements.</td>
<td>30 ECAA inspectors and flight examiners hold JAR-FCL licenses (4 inspectors and 26 check-pilots of ECAA)</td>
<td>ECAA reports to the Ministry of Transport and Communications. JAA inspectors´ reports to JAA.</td>
<td>Conversion procedures accepted by JAA (an internal pre-condition) Regular dialogue with JAA be captured</td>
</tr>
<tr>
<td>2. Flight Training equipment/computers installed to support the training of 30 inspectors and Examiners to JAR-FCL standards</td>
<td>1. Tender documentation submitted by when? 2. Orders placed by when?</td>
<td>Project Reports</td>
<td>Equipment available within the budgeted figure (if over then to be supported by own funds?)</td>
</tr>
<tr>
<td>3. 30 inspectors and Examiners holding JAR-FCL licenses with Instructor ratings.</td>
<td>30 inspectors and examiners to be certified with licenses by end of project (period targets to be determined at project start)</td>
<td>ECAA and JAA records</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Means</td>
<td>Phare</td>
<td>Estonia</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>1. Technical Assistance Contract</td>
<td>1.1-1.2 Short Term Expert for 3 months</td>
<td>0.0533</td>
<td></td>
</tr>
<tr>
<td>1.1 Evaluation of existing Inspector and Flight Examiner qualifications and experience; to be conducted individually.</td>
<td>1.3 Short Term Expert for 3 months</td>
<td>0.0533</td>
<td></td>
</tr>
<tr>
<td>1.2 Development of profiles for inspectors and flight examiners individually and identifying skill and training needs.</td>
<td>1.4 Short Term Expert for 4 months</td>
<td>0.0717</td>
<td></td>
</tr>
<tr>
<td>1.3 Development of training programmes and methodology for converting national licenses to JAR-FCL licenses with instructor ratings</td>
<td>1.5-1.6 Short Term Expert for 4 months</td>
<td>0.0717</td>
<td></td>
</tr>
<tr>
<td>1.4 Preparation of training programmes and the delivery of theoretical knowledge training</td>
<td>1.7-1.8 Short Term Expert for 4 months</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>1.5 Synthetic flight training on the flight and navigation procedures trainer (FNPT)</td>
<td>Execution Records (ca 400/year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6 Training on FNPT in multi-crew cooperation for the operation of multi pilot aircraft</td>
<td>ECAA Reports Progress Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7 Flight training</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1.8 Standardisation training for flight examiners and inspectors

1.9 Development of tender for the purchase of FNPT and computers

6. **Supply contract**

2.1. Procurement and installation of equipment

<table>
<thead>
<tr>
<th>1.8 Standardisation training for flight examiners and inspectors</th>
<th>1.9 Development of tender for the purchase of FNPT and computers</th>
<th>Preconditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 months</td>
<td>0.018</td>
<td>Location for FNPT II confirmed</td>
</tr>
<tr>
<td>1.9 Short Term Expert for 1 month</td>
<td>0.382</td>
<td>ToR for Technical Assistance contract developed</td>
</tr>
<tr>
<td>2.1 Supply</td>
<td>0.382</td>
<td>0.127</td>
</tr>
</tbody>
</table>
# Time implementation chart

**Project No**
**Project Title**: Creation of the system of licensing and supervision of aviation personnel in compliance with EU and JAA requirements.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>2002</th>
<th>2003</th>
<th>2004 – 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract 1: Technical assistance for the development of training programs and carrying out the training</td>
<td>T</td>
<td>T C I</td>
<td>I I I I I I I I I I I I I I I I I I</td>
</tr>
<tr>
<td>Flight instruction and pilot training</td>
<td></td>
<td>I I I I I I</td>
<td></td>
</tr>
<tr>
<td>Training methodology and training programs</td>
<td></td>
<td>I I I I I I</td>
<td></td>
</tr>
<tr>
<td>Theoretical knowledge instruction</td>
<td></td>
<td>I I I I I I</td>
<td></td>
</tr>
<tr>
<td>Synthetic flight instruction</td>
<td></td>
<td>I I I I I I I I I I I I I I</td>
<td></td>
</tr>
<tr>
<td>Flight instruction and check flights</td>
<td></td>
<td>I I I I I I I I I I I I I I</td>
<td></td>
</tr>
<tr>
<td>Preparing FNPT tender documents</td>
<td></td>
<td>I I</td>
<td></td>
</tr>
<tr>
<td>Contract 2: Supply contract for the procurement of FNPT and computers</td>
<td>T</td>
<td>T C</td>
<td>I I</td>
</tr>
</tbody>
</table>
### Annex 3/A

**Cumulative contracting schedule**

**Project No:**
**Project Title:** Creation of the system of licensing and supervision of aviation personnel in compliance with EU and JAA requirements.

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.03</td>
<td>30.06</td>
<td>30.09</td>
<td>31.12</td>
</tr>
<tr>
<td><strong>CONTRACT 1 (MEURO)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Technical Assistance for the development of training programs and carrying out the training</td>
<td></td>
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<tr>
<td><strong>CONTRACT 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurement of FNPT and computers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Annex 3/B

**Cumulative disbursement schedule**

**Project No:**
**Project Title:** Creation of the system of licensing and supervision of aviation personnel in compliance with EU and JAA requirements.

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31.03</td>
<td>30.06</td>
<td>30.09</td>
<td>31.12</td>
</tr>
<tr>
<td><strong>CONTRACT 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Assistance for the development of training programs and carrying out the training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONTRACT 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurement of FNPT and computers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pilot licenses issued in Estonia are not recognised in EU

The system of licensing and supervision is not in compliance with the JAA requirements

The system of medical certification is not in compliance with JAA requirements

The system of pilot training is not in compliance with JAA requirements

The system of checking pilots’ theoretical knowledge is not in compliance with JAA requirements

The qualification of ECAA inspectors and flight examiners is not in compliance with JAA requirements

Lack of computers for carrying out the theoretical knowledge examinations

Lack of computer programs for conducting the examinations

Lack of standardised training

Lack of training programs and methodology

Lack of training devices