

**FESABILITY STUDY**

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**CREATION OF THE EXCELLENCE UNIT FOR MATERNAL AND FETAL  
ASSITANCE WITHIN THE BUCHAREST MOTHER AND CHILD CARE  
INSTITUTE, POLIZU HOSPITAL**

**Table of contents:**

<b>1</b>	<b>GENERAL DATA.....</b>	<b>4</b>
1.1	NAME OF THE INVESTMENT OBJECTIVE.....	4
1.2	LOCATION.....	4
1.3	OWNER OF THE INVESTMENT .....	4
1.4	BENEFICIARY OF THE INVESTMENT .....	5
1.4.1	Beneficiary of the Investment.....	5
1.4.2	Other Beneficiaries of the project – target groups .....	5
1.5	STUDY DRAW UP .....	5
1.6	THE MAIN APPLICANT FOR THE GRANT.....	5
<b>2</b>	<b>INFORMATION REGARDING THE ENTITY RESPONSIBLE FOR PROJECT IMPLEMENTATION.....</b>	<b>7</b>
2.1	FIELD OF ACTIVITY AND RESPONSIBILITIES.....	7
2.2	ORGANIZATIONAL STRUCTURE .....	11
2.3	MANAGEMENT AND QUALITY OF THE MANAGEMENT TEAM .....	12
2.4	PROJECT MANAGEMENT, PERSONNEL AND TRAINING .....	13
<b>3</b>	<b>GENERAL INFORMATION RELATED TO THE PROJECT .....</b>	<b>17</b>
3.1	DESCRIPTION OF INVESTMENT.....	17
3.1.1	Current situation, the need and opportunity of investment promotion.....	18
3.2	TECHNICAL DATA OF THE INVESTMENT .....	25
3.2.1	Area and location.....	25
3.2.2	Legal status of the land that shall be used .....	25
3.2.3	Current situation of utilities.....	25
3.2.4	Technical data of the investment.....	25
3.3	DURATION OF THE INVESTMENT.....	40
3.4	BREAKDOWN CHART OF THE INVESTMENT .....	41
3.5	PROJECT SUSTAINABILITY .....	44
3.5.1	Financial sustainability.....	44
3.5.2	Institutional sustainability .....	48
3.6	ANTICIPATED RESULTS AFTER THE PROJECT .....	48
3.7	PROJECT ADVERTISEMENT AND PUBLICITY .....	49
<b>4</b>	<b>ESTIMATED INVESTMENT COSTS .....</b>	<b>51</b>
4.1	DETAILING THE PROJECT COSTS PER EACH EXPENSE CATEGORY.....	51
4.2	STAGGERING COSTS IN CONJUNCTION WITH THE INVESTMENTS CHART .....	54
<b>5</b>	<b>COST BENEFIT ANALYSIS .....</b>	<b>57</b>
5.1	PROJECT OBJECTIVES .....	58
5.2	THE REFERENCE PERIOD .....	58
5.3	OPTIONS ANALYSIS.....	59
5.3.1	Zero variant .....	59
5.3.2	Proposed variant.....	59
5.4	THE FORECASTED EVOLUTION OF THE COSTS.....	59
5.4.1	Implementation phase.....	59
5.4.2	Operating phase .....	60
5.5	THE FORECASTED EVOLUTION OF THE RESULTS .....	61
5.6	FINANCIAL ANALYSIS OF THE INVESTMENT .....	61
5.6.1	Cumulated cash flow.....	61
5.6.2	Internal rentability rate .....	61
5.6.3	Period of investment recovery.....	61
5.6.4	Cost benefit ratio.....	62
5.7	RISK ANALYSIS .....	62

5.7.1	Identified risks.....	62
5.7.2	Measures for diminishing risks.....	64
5.8	WORKFORCE ESTIMATIONS FOR THE INVESTMENT.....	64
5.8.1	Number of workplaces created in the execution phase.....	64
5.8.2	Number of workplaces created in the operation phase.....	64
5.9	EQUAL OPPORTUNITY.....	64
5.10	THE PRINCIPLE “THE POLLUTER PAYS”.....	65
5.11	SUSTAINABLE DEVELOPMENT.....	66
5.12	INFORMATION TECHNOLOGY AND INNOVATION.....	67
5.13	PUBLIC ACQUISITIONS.....	68
5.14	INTER – REGIONAL APPROACH.....	69
5.15	TRANSNATIONAL APPROACH.....	69
<b>6</b>	<b>THE MAIN TECHNICAL AND ECONOMICAL INDICATORS.....</b>	<b>69</b>
6.1	TOTAL VALUE.....	69
6.2	STAGGERING INVESTMENT.....	69
6.3	DURATION OF ACHIEVEMENT.....	70
6.4	SPECIFIC INDICATORS.....	70
6.4.1	Quantitative indicators.....	70
6.4.2	Quantitative indicators.....	70
<b>7</b>	<b>CONCLUSIONS.....</b>	<b>70</b>
<b>8</b>	<b>ANNEX.....</b>	<b>72</b>
8.1	ANNEX 1: CVs OF THE PROJECT MANAGEMENT TEAM.....	73
8.2	ANNEX 2: COLLABORATION INTERNATIONAL PROJECT.....	102

## 1 GENERAL DATA

### 1.1 Name of the investment objective

The name of the investment objective is **„CREATION OF THE EXCELLENCE UNIT FOR MATERNAL AND FETAL ASSISTANCE WITHIN THE BUCHAREST INSTITUTE OF MOTHER AND CHILD CARE, POLIZU HOSPITAL” - UAMF.**

**The objective of the project** is the creation of an excellence Unit for Maternal and Fetal Assistance within the Institute for Mother and Child Care within the Bucharest Institute for Mother and Child Care, Polizu Hospital. This unit shall constitute the framework for the performance of research and practice activities (with the participation of young researchers and specialists), shall become a provider for medical highly performant medical and shall become a reference centre for youth guidance and qualification educational programs (students, resident doctors, specialists, post-graduates).

The activity of this unit shall contribute to the reduction of the gap between the level of approaching these subjects in our country and the European and worldwide level, in what the fundamental research plan and the application of results in modern medical practice is concerned. Furthermore this project shall constitute the departure point for the initiation and development of new and revolutionary fields, as fetoscopy

### 1.2 Location

**UAMF** project shall be performed at Beneficiary's office, The Institute for Mother and Child Care, Polizu Hospital.

**Location address: Bucharest, 38-52 Gh. Polizu St.**

### 1.3 Owner of the Investment

The owner of the investment is “Alfred Rusescu” Institute for Mother and Child Care, with its registered office in 120 Lacul Tei Blv. 2<sup>nd</sup> district, Bucharest.

**Fiscal registration number: 4266308**

The Institute for Mother and Child Care (IOMC) has been established more than half a century ago. In time, the institute suffered several organizational changes. In 1990, the Institute was named "Alfred D.Rusescu".

„Alfred Rusescu” Institute for Mother and Child Care is organized and operates as a first category unit, with departments and clinical laboratories of medical scientific research, mobile medical assistance and methological training collectives. **The Memorandum of Incorporation of the Institute is the Order no. 1131/18.11.1992 of the Ministry of Health.**

## 1.4 Beneficiary of the Investment

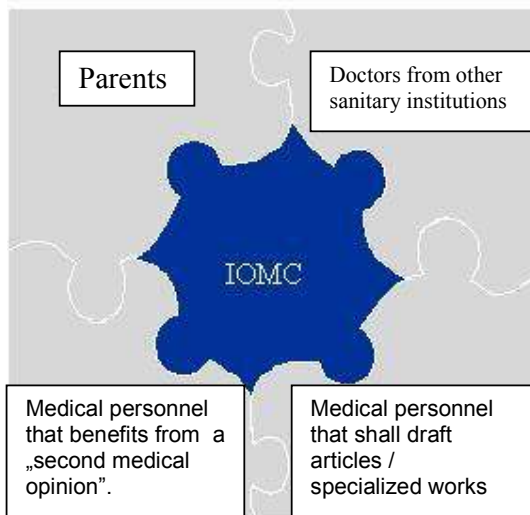
### 1.4.1 Beneficiary of the Investment

The Beneficiary of the investment is “Alfred Rusescu” Institute for Mother and Child Care, Polizu Hospital.

### 1.4.2 Other Beneficiaries of the project – target groups

The main target groups of the proposed project are the following:

- Specialized doctors and researchers of the institute;
- Parents (assistance of pregnant women);
- Specialized doctors of other sanitary units;
- Medical personnel that shall draft articles / specialized works for the participation in scientific communications;
- Medical personnel that benefits from a „second medical opinion”.



## 1.5 Study Draw Up

The organization in charge of the drawing up of this study is „Alfred Rusescu” Institute for Mother and Child Care, Polizu Hospital.

## 1.6 The main applicant for the grant

### OPERATIONAL PROGRAM FOR THE INCREASE OF ECONOMIC COMPETITIVENESS

Priority axis 2 – Competitiveness through research, development, technological development and innovation;

Main intervention field 2.2 – Investment in CDI infrastructure

Operation 2.2.1: Development of existent CD infrastructure and creation of new CD infrastructures (laboratories, research centres)

**Management Authority (AM)** for Sectoral Operational Program “Increase of Economic Competitiveness” (Government Decision no. 457/2008, Government Decision 738/2003, Government Decision no. 1720/2008, with subsequent modifications and addenda) operates within **The Ministry of Economy** and is responsible for POS CCE management, administration and implementation, according to the rigorous financial management principle, in accordance with the provisions of Article 60 of Council Regulation (EC) no. 1083/2006 of July 11<sup>th</sup>, 2006, with subsequent modifications and addenda.

**Intermediary Bodies (OI)**

For the efficient implementation of the program, the following Intermediary Bodies have been assigned for POS CCE for each priority axis.

For Priority Axis 2 – Competitiveness through research-development and innovation, the Ministry of Education, Research and Innovation, through the **National Authority for Scientific Research** has been assigned.

**The Payment Unit** is the structure within the Management Authority responsible for the transfer of pre-financing and co-financing amounts assigned from the State Budget, as well as of the amounts from financial assistance, irredeemable to beneficiaries, for the Sectoral operational Program, Increase of Economic Competitiveness.

**The Authority for Certification and payment** – is the organizational structure within **the Ministry of Public Finance**, responsible for the certification of amounts registered in the declarations of expenses submitted to the European Commission and for the receipt of funds transferred to Romania from the European Fund for Regional Development, from the Social European Fund and the Cohesion Fund and for ensuring their transfer to beneficiaries, as well as of pre-financing and co-financing amounts related to them from fund assigned from the State Budget.

**The Audit Authority** designates the public authority, at national level, responsible for the audit of management operations and of the control system for each operational program, independent from a functional point of view from the Management Authority and from the Authority for Certification and Payment. In Romania, for all operational programs, the Audit Authority functions near the Court of Accounts.

**Monitoring Committee** – is the deliberative body, without legal status, that ensures the supervision of the efficiency and quality of irredeemable financial assistance through the Sectoral Operational Program, Increase of Economic Competitiveness, the use mode and its impact, with the observance of common and national provisions in the field.

## 2 INFORMATION REGARDING THE ENTITY RESPONSIBLE FOR PROJECT IMPLEMENTATION

### 2.1 Field of activity and responsibilities

The Institute for Mother and Child Care (IOMC) has been established more than half a century ago. In time, the institute suffered several organizational changes. In 1990, the Institute was named "Alfred D.Rusescu" – after the coryphaeus of Romanian podiatry.

**IOMC Mission** is that of ensuring medical assistance for women and child, methodological guidance, scientific research and education according to the requests of progilactic and curative medicine.

In this respect, IOMC performs the following **activities**:

- Provides day and night medical assistance in hospital mobile units;
- Is a medical high education unit (obstetrical – gynecology, neonatology and podiatry), of post-graduate specialization and improvement, as well as of education for intermediate personnel;
- Scientific research (in the field of mother and child health) is one of the main objectives of IOMC ;
- IOMC is the technical and methodological body of the Ministry of Health in the two fields: mother and child health;
- IOMC is involved in education for health (promotes health).
- Coordination of National Programs for mother and child health.

Also, in its capacity of Management Unit of Woman, Child and Family Health Programs, IOMC monitors and evaluates all activities performed by the nation program for mother and child health.

According to Order no. 86/2006, the Programs Management Unit has the following **responsibilities**:

- Participates in the drafting of the program project by consulting with the directorates for public health, with the county commissions for mother and child health, with sanitary units, experts, institutes and specialized commissions of the Ministry of Health;
- Participates, together with and under the coordination of the Ministry of health to the monitoring, implementation and evaluation of the program, to the collection of the data reported by the Directorate for Public Health, to the drafting of synthesis and informs the Ministry of Health.

The main indicators monitored by IOMC, as Programs Management Unit, are the following:

- Increase of access to reproduction health services:
  - Number of generalists involved in the provision of family planning services;
  - Number of activities for the promotion of the use of contraceptives provided by the „Child and Family Health Program”;
  - Number of active users of modern contraception methods;
  - Number of abortions made in the public and private system;
  - Number of uterine fibroma embolization procedures;
  - Number of acute and chronic haemostatic embolization procedures;

- Number of radiological interventional procedures performed for ectopic pregnancy therapy;
  - Average cost/ active user of contraceptive measures;
  - Average cost/ uterine fibroma embolization procedures;
  - Average cost / acute and chronic haemostatic embolization procedures;
  - Average cost / radiological interventional procedures performed for ectopic pregnancy therapy.
- RH isoimmunisation syndrome prophylaxis:
    - Number of confined women with Rh negative, vaccinated with specific immunoglobine;
    - Number of Rh negative women who made an abortion, vaccinated with specific immunoglobine;
    - Number of Rh negative women that had ectopic pregnancy, vaccinated with specific immunoglobine;
    - Average cost/ antiD vaccination.
- Pre-delivery and post-partum malformations prophylaxis and diagnose:
    - Number of tested pregnant women with malformation and genetic risk;
    - Number of foetus/ embrionary malformations diagnosed;
    - Number of cytogenetic examinations performed on fetal cellule;
    - Number of child with congenital defects , clinically and para-clinically evaluated;
    - Number of child with congenital defects, genetically explored;
    - Average cost / pregnant women tested for malformation risk;
    - Average cost / fetal karyotype examination;
    - Average cost / child with congenital defects, clinically and para-clinically evaluated;
    - Average cost / child with congenital defects, genetically explored.
- Prophylaxis of iron deficiency to pregnant women:
    - Number of pregnant women who benefit from prophylactic administration of iron preparation;
    - Average cost / pregnant woman who benefits from prophylaxis of iron preparation.
- Improvement of pre-delivery consultation quality and efficiency:
    - Number of pregnant women registered;
    - Number of pregnant women that benefit from informational support;
    - Average cost / informational support.
- Prophylaxis of iron deficiency to the child:
    - Number of children who benefit from prophylactic administration of iron preparation;
    - Average cost / child who benefits from prophylaxis of iron preparation.
- Prophylaxis of racketsy deficiency at children:
    - Number of children who benefit from prophylactic administration of vitamin D;
    - Average cost/ child who benefits from vitamin D prophylaxis.
- Malnutrition prophylaxis at infants:

- Number of children who benefit from treatment;
- Average cost / beneficiary child. ‘
  
- Prophylaxis of dystrophy at children aged 0-1 year by administration of dried milk:
  - Number of beneficiary children;
  - Average cost/ beneficiary child.
  
- Promoting breast-feeding:
  - number of regional centres of breast-feeding promotion;
  - number of medical personnel trained in breast-feeding promotion;
  - number of pregnant / confined women who benefit from counselling activities regarding breast-feeding;
  - number of maternities evaluated for being certified as Children Friendly Hospital;
  - number of newly registered maternities in the Children Friendly Hospital initiative;
  - number of maternities that shall introduce / extend the rooming-in system;
  - average cost / breast-feeding promoting centre.
  
- Prevention of encephalopathy caused by phenylketonuria and congenital hypothyroidism:
  - Number of newborn tested for phenylketonuria;
  - Number of newborn diagnosed with phenylketonuria;
  - Number of newborn treated for phenylketonuria;
  - Number of newborn treated for congenital hypothyroidism;
  - Number of newborn diagnosed with congenital hypothyroidism;
  - Average cost / screening phenylketonuria;
  - Average cost / screening for congenital hypothyroidism;
  - average cost / child treated for phenylketonuria;
  - average cost / child treated for congenital hypothyroidism.
  
- Precocious diagnose and treatment of epilepsy, cerebral paralysis neuropsychomotor retards at a child, as well as precocious detection of deaf at newborns:
  - Number of children with cerebral paralysis treated with botulinus toxin;
  - Number of children with cerebral paralysis treated with electro-stimulation;
  - Number of children precocious diagnosed with paroxysmal phenomena, motor disorders, neuro-psychic retards;
  - Number of children on which screening for hearing deficiencies detection has been performed.
  
- Cecity prophylaxis at infants by precocious detection and retinopathy treatment for infants:
  - Number of infants examined for retinopathy detection;
  - Number of infants, with the risk of infant retinopathy, tested;
  - Number of infants treated with laser;
  - Number of children examined for amblyopia detection;
  - Number of children tested for amblyopia;
  - Average cost / infant tested for retinopathy;
  - Average cost / infant tested with laser;
  - average cost / infant tested for amblyopia;
  - Average cost / child tested for amblyopia.

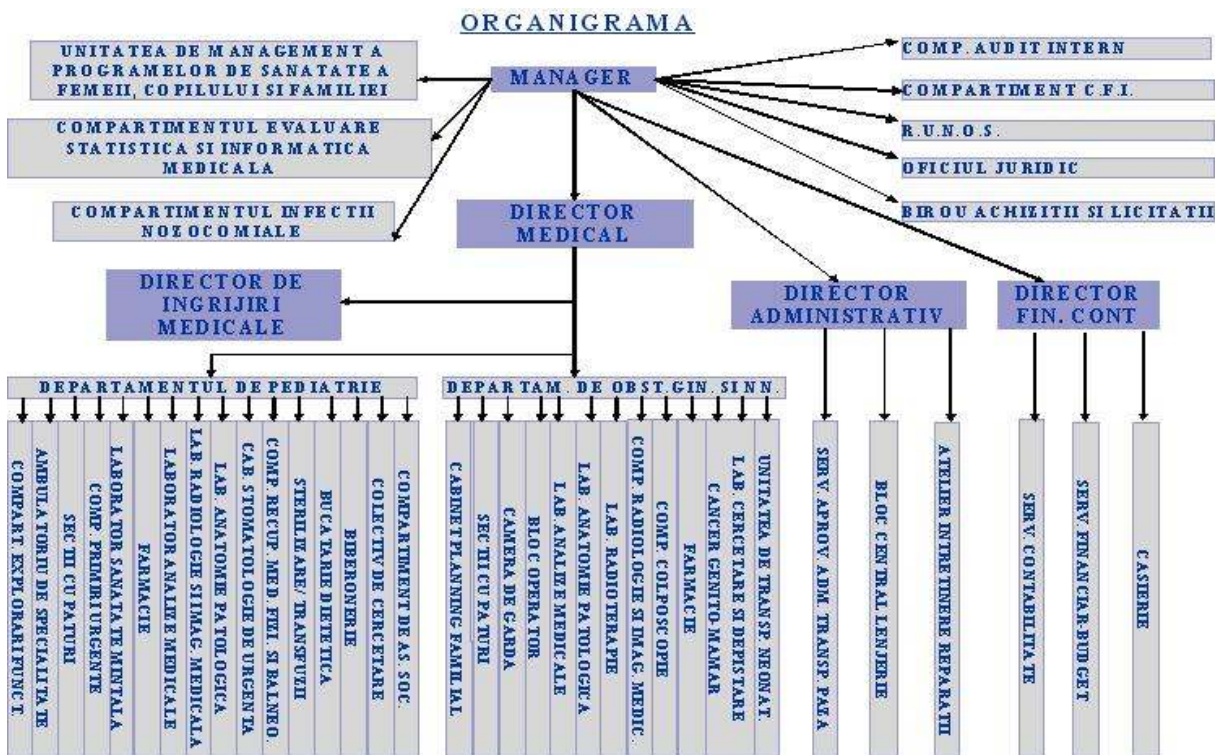
- Precocious diagnose, primary and secondary prophylaxis, monitoring and recovery of chronic affections at children:
  - Respiratory distress syndrome:
    - Number of newborn children with respiratory distress syndrome treated with surfactant;
    - Number of children deceased due to respiratory distress syndrome after administration of surfactant treatment;
    - Average cost / child with respiratory distress syndrome treated with surfactant.
  - Bromurated asthma:
    - Number of children tested for bromurated asthma;
    - Number of children with bromurated asthma treated;
    - Average cost / children tested for bromurated asthma;
    - Average cost / child with bromurated asthma.
  - Malabsorbtion syndrome and chronic diarrhoea:
    - Number of children investigated for chronic diarrhoea / malabsorbtion syndrome;
    - Number of children with chronic diarrhoea / malabsorbtion syndrome treated;
    - Average cost / child investigated for chronic diarrhoea / malabsorbtion syndrome;
    - Average cost / child with chronic diarrhoea / malabsorbtion syndrome treated.
  - Cystic fibrosis:
    - number of children tested for Cystic fibrosis;
    - number of children with Cystic fibrosis, treated;
    - average cost / child tested for Cystic fibrosis;
    - average cost / child with Cystic fibrosis, treated.
- Primary humoral immunodeficiencies:
  - Number of children tested for primary humoral immunodeficiencies;
  - Number of children with primary humoral immunodeficiencies, treated;
  - Average cost / child tested for primary humoral immunodeficiencies;
  - Average cost / child with primary humoral immunodeficiencies, treated.
- Chronic hepatitis at children:
  - Number of children tested for chronic hepatitis;
  - Number of children with chronic hepatitis, treated;
  - Average cost / child tested for chronic hepatitis;
  - Average cost / child with chronic hepatitis, treated.
- Support of intensive therapy care for newborns:
  - Number of sections of intensive therapy for newborns;
  - Number of transport units for newborns;
  - Number of patients in intensive therapy sections / compartments;
  - Number of newborn transported with neonatal transport units;
  - average cost / intensive therapy section;
  - average cost / transport unit for newborns.

## 2.2 Organizational structure

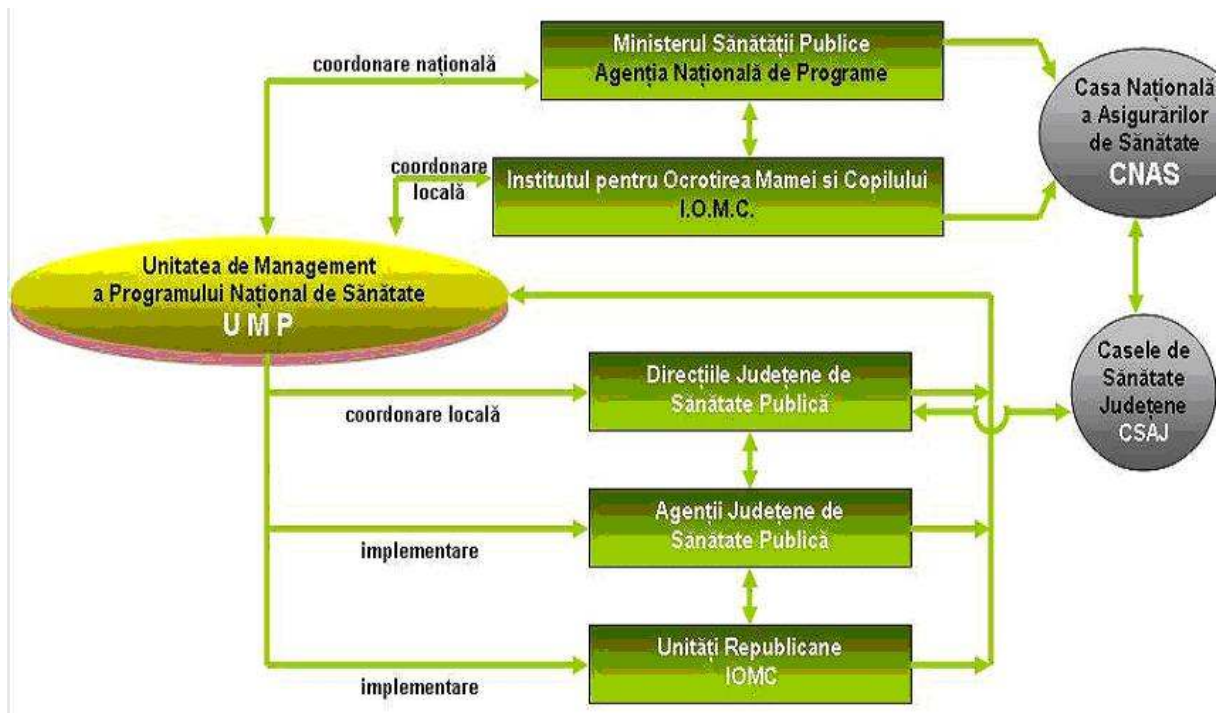
„Alfred Rusescu” Institute for Mother and Child Care has the following components:

- Department of Pediatrics;
- Department of Obstetrics and Gynecology;
- External sections: the centre for genitor-mammary cancer detection, recovery centre for children with neuropsychomotor disability, research and methodology teams.

Organization Chart of IOMC:



### IOMC Relations Chart:



### 2.3 Management and quality of the management team

Institute Management is ensured by Ms. Dr. **Draghici Aurelia Gratiela**, Obstetrics and Gynaecology head physician, with a wide experience in the field.

The Management Unit of Woman, Child and Family Health Programs performs its activity within the Bucharest Institute for Mother and Child Care, and is the Unit that monitors and evaluates all activities performed by the national program for mother and child care. IOMC personnel is made up of approximately 750 people, out of which around 150-160 faculty experts (doctors, biologists, biochemists, speech therapists, psychologists, physiotherapists etc.).

Superior medical personnel includes university experts (professors, lecturers, project leaders, tutors), first and second degree scientific researchers, head physicians, many of them with a double specialization.

Since the establishment of the Institute, many remarkable researches have been performed. These researches referred to:

- Reproductive health status of fertile population – longitudinal research that monitored reproduction health status and the modification of reproductive behavior in the new social context and was the departure point for grounding the national program of family planning of the Ministry of Health;
- Nutrition status of the child under 5 and of the pregnant woman, identifying an increased rate of anaemia due to iron deficit, grounding the national program for Iron Supplementation of the alimentation of pregnant woman and nursing fundament;
- Iodine deficit at children and pregnant women, grounding the Law for universal salt iodinate;

- Medical and social causes of infantile and maternal mortality, with the drawing up of several standards for medical parental monitoring and standards regarding the care for pregnant woman and of the newborn with risks;
- Causes for child abandon that grounded legislative measures for the protection of children rights in Romania.

The research activity within IOMC is performed within teams and laboratories, as well as in university clinics that perform their activity within IOMC.

The Institute is the coordination unit at national level of the Family and Child Program of the Ministry of Health .

Within IOMC, **research teams** are part of:

- Laboratory for Studies in Pediatrics and Social Obstetrics;
- Laboratory for Studies in Mental Health;
- Laboratory of Research for precocious detection of breast cancer;
- Personnel of Pediatrics and Obstetrics and Gynaecology University Clinics.

In accordance with Order no.86 / feb. 6<sup>th</sup>, 2006, The Programs Management Unit (UMP) has the following responsibilities:

- Participated in the drawing up of the program project by consulting with the directorates for public health, county commissions for mother and child health, sanitary units, experts, specialized institutes and commissions of the Ministry of Health ;
- Participates, together with and under the coordination of the Ministry of health to the monitoring, implementation and evaluation of the program, to the collection of the data reported by the Directorate for Public Health, to the drafting of synthesis and informs the Ministry of Health.

The purpose of the Program for Child and Family Health is the improvement of woman, child and family health status.

## **2.4 Project management, personnel and training**

The project management team shall plan, organize, coordinate and control the implementation of project activities. It will also ensure the implementation of the project within the deadline and quality conditions agreed, as well as financial reporting of results according to contractual provisions. The management team will provide logistic resources necessary to all project components and continuous implementation of quality management principles on the entire period of project performance.

The management team is made up of 5 persons, namely:

**1 project manager**, who will be directly responsible for all the activities of the project; he shall schedule the activities and shall monitor the implementation status of the project, from a qualitative and quantitative point of view; he shall organize the meetings of the project team and is responsible for maintaining the relationship with the financier; he shall coordinate the drafting of intermediary and final narrative reports.

**1 legal advisor**, who will be in charge of the execution and implementation of project phases from the point of view of legal validity of project consortium actions, ensuring the legal framework for the procurement of equipments and services, and resolution of possible litigations, etc.

**1 financial responsible**, who will be in charge of financial management of the project, will draft the procurement plan of the project in collaboration with the Project Manager, the Legal Advisor and with the partners and will monitor its implementation. He shall also draft intermediary and final financial reports.

**1 medical responsible**, who shall coordinate the project from the point of view of medical objectives fulfillment.

**1 person responsible for secretary ship specific activities** – as administrative, secretariat personnel etc

The tasks and responsibilities of the project team involve:

- Coherence, continuity and accuracy in the performance of project activities;
- Correlation between objectives, expected results and activities;
- Insurance of neutrality and transparency for the entire period of project performance, including in the field of public procurement;
- Insurance of the measures regarding project sustainability through the identification and maximization of income generating activities; insurance of financial and technical capacity as well as of human resources from the numeric and technical expertise for the maintenance of project results – internal and external periodical control (through CFP and audit activities) regarding funds usage, observance of legal provisions in force, etc.
- Drafting of reports, information etc. regarding the project performance and results
- Any other action/ activity necessary for adequate performance of the project

**The Management of the financing contract** will be provided by the **Project Manager**, who will coordinate and verify the manner of performance of the activities stipulated, as well as the manner of execution and the reporting correspondent to each project phase. The project manager will organize, coordinate and control the resources involved in this project; will supervise the activities performed by the contracted provider of project management services; will organize meetings of the working team members whenever necessary; will identify critical points in the implementation of the project and backup solutions. The project manager will also supervise the evolution of tender procedures for the components contracted through public procurement and shall monitor the fulfillment of the stages imposed by national regulations regarding public procurement.

**Procedural and financial management of the project** will take into account:

- Monitoring the observance of project objectives and of the responsibilities of the project team: general objectives, specific objectives, individual objectives, results, performance indicators, responsibilities;
- Supervision of deadlines schedule observance;
- Monitoring the observance of the budgets of expenses;
- Drafting the documentation of assignment for the procurement of hardware and software equipments;
- Provision of technical assistance in the performance of the procurement procedure;
- Provision of assistance in the drafting of monitoring documents and reimbursement requests;
- Permanent evaluation of the state of fulfillment of project results and objectives.

The provider of project management services must fulfill the following technical and economic requests:

The provider of project management services will monitor and analyze during the entire period of project performance the status of activities, the conditions and manner of performance, technical level of results, results analysis and interpretation mode, settling corrective action where necessary.

The provider of project management services will draw up quarterly an internal evaluation of the project, that will focus on the following points:

1. **Activities:** the performance of activities according to the project, within the planned schedule and with the human resources assigned will be presented; the purpose of the evaluation is that of adjusting delayed activities and taking measures for their retrieval , i.e. their reporting to the authorities involved in project implementation;

2. **Human resources:** the purpose will be that of evaluating the degree at which each member of the team fulfils the responsibilities undertaken through the project;
3. **Budget:** monitoring the performance of expenses according to the budget of the project for the purpose of adjusting the expenses made with proposed ones;
4. **Results:** the purpose of the evaluation is that of comparing the results planned within the project on the basis of account indicators with the results achieved;
5. **Impact:** the purpose of the evaluation is that of comparing the planned impact with that effectively produced.

The results obtained from internal evaluations will be included in:

- Activity plans, where the activities, resources, deadlines and indicators scheduled for the following period (4 months) will be specified.
- Progress reports, that will contain information up to the moment of reporting. This information will be related to: activities performed, status of fulfillment of public procurement, information and advertising activities performed, partial/ final results achieved, expected results, performance indicators, the way in which the project observes the legislation in the field of sustainable development and equal chances;
- Final Report (drafted at the end of the project implementation period) that will comprise: a brief presentation of the project, summary description of the activities performed, detailed and structured presentation of project results, the degree of performance of the activities settled within the project, information and advertising measures taken within the project, the way in which the implemented project observes the legislation in the field of sustainable development and equal chances, detailed presentation of the phases subsequent to the completion of the project (post-implementation analysis).

The project will permanently take into account the identification and application of specific measures for ensuring sustainable development and environmental protection on the project performance period, as well as for the application of project results.

The table below presents the project team, with the presentation of its members roles in the implementation of the project:

No.	Name/ First name	Responsibilities within the project
1	Conf.dr Suci Nicolae	Project Manager
2	Prof. dr. Anca Ioana	Medical responsible
3	Daniela Harabulea	Financial responsible
4	Liliana Gligor	Legal Advisor
5	Stela Stanescu	Responsible for secretary specific activities

The following persons will also be involved in the project:

Prof. dr Banceanu G. – Physician, Head of the Clinic.

Prof.dr Stoicescu Silvia –Physician, Head of Section

Dr. Mioara Ionescu – Physician, Head of Section

Dr. Daniela Oprescu – Physician, Head of the Ultrasound scan Compartment.

Dr. Pop Lucian-Gheorghe  
Dr. Conci Mihaela  
Dr. Dinca Gabriela Adriana  
Dr. Magurean Oana Maria Mihaela  
Dr. Toader Oana Daniela  
Conf.dr Ursu Horia  
Dr. Pechi Florin Laurentiu

The CVs of the persons involved in this project are included in Annex 1.

### **3 GENERAL INFORMATION RELATED TO THE PROJECT**

#### **3.1 Description of investment**

**The GENERAL OBJECTIVE of the project is the creation of the research and development infrastructure, necessary for the improvement of current maternal and fetal assistance programs.**

This objective can be reached by increasing the capacity of research and development of the institution, as well as through its active involvement in projects together with other actors from this sector, at national and international level.

#### **Specific objectives:**

##### **O1. Construction of the building in which the Maternal and Fetal Assistance Unit will perform its activity.**

The design of a new building in which IOMC Polizu Clinic of Obstetrics and Gynaecology can perform its research and development activities is necessary due to the fact that currently the infrastructure needed does not exist, or if it exists, it does not correspond to safety and use norms imposed by the European Union.

##### **O2. Procurement of equipments and instrumentation necessary for the research and development activity.**

Existent instrumentation, physically and morally worn out cannot be used due to the fact that it does not correspond anymore to European standards and research results can no longer be certified. The procurement of new equipments, that facilitate the performance of research in this field at the highest level of professionalism thus necessary.

This project falls in the specific strategic objectives of POSCCE/CDI of stimulating the increase of research capacity, of ensuring high economic and scientific economic competitiveness, of contributing to equal chances of young doctors by increasing the level of training and of attracting researchers and post-graduates from our country and from abroad.

The Excellence Unit for Maternal and Fetal Assistance within the Bucharest Institute for Mother and Child Care, Polizu Hospital will be create for the fulfilment of these objectives. This unit will be the framework for the performance of research and practice activities (involving young researchers and specialists), shall become a provider of highly performant medical services and shall become a reference centre for youth training and qualification educational programs (students, resident doctors, specialists, post-graduates).

A Maternal and Fetal Unit shall be established within Polizu Obstetrics and Gynaecology Clinic, on a total area of 1800 square meters, out of which 1160 underground. The building will have 2 underground floors, ground floor, and 3 floors and will be a new hospital unit, with 10 surgery beds for sampling and with laboratories.

Annexes specific for the access from outside, access facilities for persons with locomotion disability, consultation rooms, surgery, treatment rooms and their correspondent annexes, wards with sanitary squads and clothes closet for medical personnel and for the public, waiting rooms and cleaning annexes will be provided.

The unit will also be endowed with last generation and highly performant instruments, necessary for the performance of specific activity, sanitary specific furniture, informatics and peripheral

equipments, electronic devices, freezers and cooling devices for medical usage, phones and message centre, equipments for electric appliance monitoring and alerting.

The activity of this unit will contribute to the reduction of the gap existent between the level of approaching these themes in our country and European and worldwide level, in what fundamental research and application of results in modern medical practice is concerned. Furthermore, it shall constitute the departure point for the initiation and development of new fields, as fetoscopy.

### **3.1.1 Current situation, the need and opportunity of investment promotion**

#### **3.1.1.1 Current situation regarding the infrastructure for health services**

In the last 15 years, Romania has faced a complex social and demographic process. Natality decrease, general mortality and migration of working population has lead to the ageing of working population, as well as to the decrease of the total population of the country with 1,5 million inhabitants in the last 10 years, reaching the number of 21.623.849 inhabitants in July 1<sup>st</sup>, 2005.

All these aspects have led to the reduction of active population dimension (from 51,5% in 1999 to 45,55% in 2005) and have imposed the rethink of health services and social protection system for the extension of active life of the population, from the point of view of the services offered and of infrastructure endowment.

Thus, the objective of the law for the reformation of health filed, approved through Law nr. 95/2006 is that of regulating the services in the filed of public health, focusing on the increase of their efficient provision. This law promotes the development of a modern system for treatment and prevention, accessible to all categories of people, as well as of and efficient system for emergency situations.

In what sanitary units are concerned, they are organized on the basis of several criteria, according to the territorial level at which they operate and the degree of specialization. From a territorial point of view, hospitals can be: county hospitals, municipality hospitals, town hospitals, and recently, parish hospitals. According to pathology specific, hospitals are organized and operate as general hospitals, emergency hospitals, specialized hospitals and hospitals for chronic diseases. From the property point of view, these can be public and private hospitals or public hospitals in which private sections also function.

Thus, at local level (rural community, municipality, town), general hospitals operate (they usually have in their structure two of the basic specialities, e.g. internal medicine, podiatry obstetrics and gynaecology, general surgery). The degree of complexity grows according to hospital category (clinical, county, of emergency), these hospital providing specialized services to a wider territorial area, to emergencies and serious cases, that cannot be solved at the level of local hospitals.

The majority of the buildings where these sanitary units are hosted, as well as the equipments used are in a precarious state and need major investments so that they van provide services to the level of standards in the field.

Most of these units are state property. Their buildings are part of the patrimony of local authorities (county/local councils), that have the obligation of maintaining and rehabilitating them, and the management of material and human resources id performed at the level of the Ministry of Public Health. Equipments are procured from the state budget, under the coordination of the Ministry of Public Health. Hospitals can purchase the equipments they need, but the budget of local authorities is insufficient, being mainly assigned for financing of rehabilitation and maintenance expenses, that fall within their responsibility and thus, equipments procurement falls on the last place

In Romania, according to 2005 Statistical Yearbook, there were 422 public hospitals, with 142.377 beds and 11 private hospitals with 6504 beds, with an average of 6,6 beds for 1.000 inhabitants,

exceeding thus the EU average of 6,1 beds /‰, and the buildings that host them need to be rehabilitated, and in what the quality of the services provided is concerned, it is below EU standards. Split by region: Bucharest - Ilfov, with 10,45 beds/1000 inhabitants, west, Nord –west and centre have an over-dimensioned hospital beds endowment (7,4‰, 7,33‰ și 7,21‰).

The privatisation of primary medical assistance has lead to the disruption of the bond between primary, secondary and tertiary medical assistance, leading to a global decrease of health system performances. Generalists do not have financial power to ensure minimum necessary endowment. Thus many cases that could have been mobile treated to be sent to hospitals for common investigations. That why the time period and hospitalization costs increase.

**Hospital infrastructure** is in a precarious situation, most of the hospitals that need to be rehabilitated being for more than 50-100 years old. Many hospitals are hosted in buildings that do not have operating permit (South-west region - 94%, north-west region - 86% and west- 70%), which affects the quality of services provided and the safety of hospitalized patients. Central Region contains several buildings that do not have earthquake evaluation– 70%. Furthermore, in each region there are hospital buildings claimed, most of them being in West Region (16%) the fewest being situated in South-west (4%).

Health services deal with operational programs and due to morally and technically obsolete equipments – from boiler rooms, washing rooms and other correspondent infrastructures that ensure hospital functioning, which are usually more then 25 years old.

#### Hospitals situations on regions of development

Region	Number of hospital buildings	% hospitals >100 Years	% hospitals >50 years	% Hospitals without Operating permit	% Hospitals without evaluation in case of earthquakes	% Claimed hospitals	Rehabilitation on necessary estimate (mln. Euro)
NE	136	29%	29%	61%	8	6%	47, 215
SE	71	30%	34%	55%	4	6%	17, 867
S	101	18%	54%	66%	5	5%	25
SV	48	25%	46%	94%	2	4%	16, 330
V	106	17%	43%	70%	17	16%	46, 871
NV	125	19%	54%	86%	17	14%	100
C	221	33%	35%	22%	73%	11%	23,5

Source: Ministry of Public Health, 2005

In the same time, mobile health care infrastructure, weather hospital or specialized, is affected and does not allow the provision of efficient and quality services.

#### Hospital and specialized mobile health care

Region	NE	SE	S	SV	V	NV	C	BI	Total
Hospital mobile units	45	41	47	36	21	34	39	33	296
Specialized mobile units	3	1	15	4	2	4	8	5	42

Source: Ministry of Public Health, 2005

Medical equipments are old, with a high degree of wear and tear, some of them being obsolete from a technical point of view. The latest purchases were made in 2000, the normal operating period of an equipment being of 8 years. For example, over 700 radiology systems without de image intensifiers (TV chain) of the hospitals did not observe persons radio-protection norms, in

the case of medical exposures to ionized radiations. For this reason, they have been taken out of action at the beginning of 2006. Likewise, the equipments of emergency compartments, anaesthesia, intensive therapy, surgery and of mobile health units is scarce, very old and even dangerous. In this case, defections are frequent and the possibilities of repair are small, due to the fact that producers no longer produce the equipments.

**Equipments assignment and necessary for development regions in 2004**

Region	Inhabitants (no) <sup>1</sup>	CT Equipments (2004)		NMR Equipments (2004)		Vasograph - (2004)		Radio-therapy equipments (telecobalt) Necessary	Radio-therapy equipments – linear accelerator - 2004	
		Existen t	Neces sary	Existen t	Neces sary	Existen t	Neces sary		Existe nt	Neces sary
NE	3 734 546	6	12	1	4	2	5	3	1	
SE	2 846 379	6	9	1	3	1	5	1	0	
S	3 329 762	3	11	0	1	0	3		0	
SV	2 306 450	4	4	1	1	1	3		1	
V	1 930 458	6	11	1	2	2	7	1	1	1
NV	2 737 400	5	8	1	1	4	5		2	1
C	2 530 486	8	6	1	1	4	6		1	
BI	2 208 368	17	22	4	7	11	10		2	
<b>Total</b>	<b>21 623 849</b>	<b>55</b>	<b>83</b>	<b>10</b>	<b>20</b>	<b>25</b>	<b>44</b>	<b>5</b>	<b>8</b>	<b>2</b>

Source: Ministry of Public Health, 2006

The lack of necessary equipments delays rapid and in time disclosure of diseases, thus the number of diseases developed that need hospitalized treatment increase, as well as expenses with hospitalization and treatment. Indicators of standardized mortality on causes of the diseases in 2003/100 000 inhabitants present an alarming situation: 773,4 cases in north-west, followed by 771,2 in the west and the fewest - 641 in north – east in what the diseases of blood-vascular system, compared to EU average of 270,3 cases. Also, there are serious problems regarding the incidence of respiratory system diseases (in the NE region 82,3 compared to EU average of 62,9), of tumours, of accidents (72,9 in north-east down to 56,1 in Bucharest - Ilfov compared to the EU average of 10.4-11.6 for motor-vehicles and 22 in what transport is concerned) and of mortality due to digestive apparatus (81,8 in south-east compared to EU average of 33,13).

**3.1.1.2 Current situation regarding maternal and infant health**

Maternal and infant health is one of public health priority problems. The priority of this health sector springs from unique characteristics of targeted groups– mothers and children:

- Increased receptivity towards diseases;
- Low reactivity towards environmental factors aggressiveness;
- Child pathology specificity, especially in the first year of life, due to the immunological system lack of maturation;
- Major difficulties associated to childhood, because behaviours and habits with an important influence on the health and longevity of the future adult are formed during this period, and morbidity prevention measures in childhood are the most efficient.

The priority of mother and child health also derives from the vulnerability of target groups (mothers and children) and from their high importance from a demographical and social and economic point of view. That is why, mother and child health protection determines specific needs and requires particular care and preferential medical assistance.

In this context, the problem of mother and child health represents a national priority for Romanian Government. This fact is also reflected by the drafting and adoption of some strategies / national programs for the protection of these vulnerable groups:

- National program for the prevention and control of diseases with major impact on the population's health, 2007 – Health sub-program of woman and child health;
- Strategy of the Ministry of Public Health – action line regarding mother and child protection;
- National program for woman and child health, 2008.

From this point of view, Romanian authorities have identified a series of national objectives that must be accomplished for the improvement of mother and child health:

- Increased access to reproduction health services;
- Rh immunization syndrome prophylaxis;
- Prophylaxis and pre-delivery and post-partum malformations and/or genetic affections diagnose;
- Prophylaxis of iron deficiency anaemia at pregnant woman;
- Quality and efficiency improvement of pre-delivery consultation;
- Prophylaxis of iron deficiency anaemia at child;
- Prophylaxis of rickets deficiency at child;
- Malnutrition prophylaxis at infants;
- Prophylaxis of dystrophy at children aged 0-1 year, who do not benefit from maternal milk, by administration of dried milk;
- Promoting breast-feeding;
- Prevention of encephalopathy caused by phenylketonuria and congenital hypothyroidism;
- Precocious diagnose and treatment of epilepsy, cerebral paralysis neuropsychomotor retards at a child, as well as precocious detection of deaf at newborns;
- Cecity prophylaxis at infants by precocious detection and retinopathy treatment for infants as well as amblyopia prophylaxis and of refraction disorders at a child;
- Precocious diagnose, primary and secondary prophylaxis, monitoring and recovery of some child chronic affections, like for example: Respiratory distress syndrome at newborns, Bromurated asthma at children, Malabsorption syndrome and chronic diarrhoea at child, Cystic fibrosis, Primary humoral immunodeficiencies, Chronic hepatitis at children and Support of intensive therapy care for newborns.

In the context of the adoption of national programs dedicated to the solving of mother and child health problems, Romania has registered significant progress for the fulfilment of the development Objectives of the Millennium a facut progrese semnificative pentru indeplinirea (ODM indicators)<sup>2</sup>.

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<sup>2</sup> For the accomplishment of the Development Objective of the Millennium no. 5, maternal death at worldwide level must decrease by 5,5 % annually between 1990 and 2015. However, a joint study of the World health organization, UNICEF, UNFPA and of the World Bank shows that the decrease registered annually was less than one percentage.

Thus, **maternal mortality** in Romania has constantly decreased in the past years, from 82 maternal deaths at 100.000 live births in 1990 to 22 maternal deaths at 100.000 live births in 2006. This improvement is a consequence of increased access to family planning and pre-delivery and post-partum obstetrical care services. The improvement of this services has also led to the reduction of almost 5 times of the number of unwanted pregnancies and of the abortions, from 3.152 interruption of pregnancies to 1.000 live birth in 1990 to 685 abortions at 1.000 live born in 2006. However, the rate of maternal death is more than three times higher than in other EU countries, where there are 6 deaths at a hundred thousand live births. In the context of deviations from community average, the target proposed by Romania for 2015 is the reduction of maternal death rate at 10 deaths at 100.000 live births, which implies the continuation of the efforts made in this field. In this respect, the difference is made by the insurance of universal access to reproduction health services, family planning, prevention of unwanted pregnancy and pre-delivery and post-partum obstetrical care of the highest quality.

Regarding mother's health level evolution in Romania, there is a tendency of improvement of **birth and post-partum parental care** services. This fact is reflected by the evolutions registered within the period 1999-2004<sup>3</sup>. If in the year 1999, only 89% of the pregnant women received *parental care*, in 2004 most women received parental care (94%). A positive dynamics can be observed regarding the moment of first pre-delivery consultation: if in 1999, only 60% of the total of pregnant women had benefit from the first medical pre-delivery consultation in the first pregnancy quarter, in 2004 the rate had increased to 74%. However, the number of pregnant women that did not made any medical consultation was still high: 6,5% in 1999, compared to 5,8% in 1993. Regarding *birth care* services, in the time interval 1999-2004, approximately 80% of the birth given by women from city and approximately 60% of the births given by women from rural areas were assisted by an obstetrician, whether alone, or together with a midwife. In what the number of women who received *post-partum care* is concerned, a small rate of them is ascertained: only 38% in 2004, compared to 94% in the case of pre-delivery care form the same reference period.

**Infantile death** is a specific, synthetic, measuring and child health status description indicator, due to the fact that several factors are involved in the determination of the level of the phenomenon, that thus reflect simultaneous action upon the health of the child aged 0-1years, of the economic and social and environmental factors, as well as of those related to the health services system.

In the past years, Romania has registered important progress in significant reduction of infantile death. In 1990 its rate was of 26,9‰, while in 2004 it had decreased to 16,8‰. In spite of this general positive tendency, our country continues to have the highest rates of infantile mortality compared to the member states and to the candidate states to EU. Thus, according to statistic data provided by the Ministry of Public Health, although Romanian authorities in the field perform a great number of programs aimed at the protection of child health, the rate of infantile death is still high, positioning Romania on the top of the list, with a percentage of 16,8% death at a thousand of live births for 2004 (compared with 12,4% in the Republic of Moldavia, 11,7% in Bulgaria or 11,0% in Rusia)<sup>4</sup>. Furthermore, there is still a great percentage of deaths caused by diseases of respiratory system, in the context in which, in developed countries, the deaths in this category are considered preventable, half of the death of children under 1 are registered after the first month of life (in post-partum period), which represents a value of 2-3 times higher than that of other European countries. This situation is due to social, economic and administrative problems that Romania has been facing since the '90s. In this time interval, Romania has entered into a transition period from a totalitarian, centralized regime, to a democratic society, based on the development of market economy, the deep transformations of the society also influencing the development of health sector. The high level of infantile mortality in Romania can also be explained by maternal scarce education and the lack of parental abilities to recognize disease symptoms and to

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<sup>3</sup> The study of reproduction health in Romania, synthetic report, may 2005

<sup>4</sup> Breviary of sanitary statistics, 2006, the Ministry of Public Health

appreciate their seriousness, poverty, geographic marginalization, lack of access to basic medical services, lack of profession information of the doctors, contradictory regulations in the sanitary system, lack of parents information with respect to the services they can benefit from and the lack of parental abilities.

### **3.1.1.3 The opportunity of promoting the investment**

The national strategy of public health aims at the development of a modern and performant prevention and treatment system, accessible to all categories of persons affected, as well as of an efficient emergency services system. The infrastructure of these services is much under European standards, but the lack of adequate management and of investments has lead to a continuous process of deterioration.

For making the Romanian health system more efficient, so that it can treat at high standards urgent and difficult cases, the national strategy for health stipulates the improvement of hospital infrastructure, namely of the building and of equipments.

Maternal and infantile health is one of the main problems of public health. That is why the need of building a specialized medical centre imposes. This medical centre will provide assistance to pregnant women with high risk care, in accordance with European attitude, multiple benefits for the mother and foetus.

Although incubating a high risk, ultra specialized maternal and fetal medical practice, would offer through scientific diagnose, the certitude of some pre-delivery diagnoses, with tremendous advantages for families that suffered traumas in obstetrical background and through adequate behaviour, reducing thus social expenses that the society owes to those affected if pre-delivery diagnose is not fully elucidated.

This project will contribute to the reduction of social and economic burden through pre-delivery therapy of the diseases with cu long term disabilities.

In this context, the establishment, building and commissioning of such a medical excellence unit that supports the families and society as well as for the development of excellence obstetrical practice is necessary.

The unborn foetus has become a patient whose diagnose and treatment can be performed before birth.

As diagnose instrument, fetoscopy is a safe and reliable method for pre-delivery diagnose, as well as a pioneer surgery technique.

Fetoscopy is a performant investigation and treatment procedure, with impact on life quality of the future foetus and of his family.

The materialization and completion in 2004 of EURO-FETUS project, sustained by the European Commission gave a new impulse to fetoscopy, more and more hospitals supporting the establishment of fetoscopy centres.

Together with the issue of FIV techniques, the number of multiple pregnancies has suddenly increased, while the number of unique pregnancies has flattened out. The increase of multiple pregnancies has also lead to the increase of complications and at the birth and survival of foetus a growth of disabilities on long term takes place, in many cases post-partum treatment not being able to solve the problems arisen in utero.

The activity of this unit shall contribute to the reduction of the gap between the level of approaching these themes in our country and European and worldwide level, in the field of fundamental research, as well as in that of the application of results in modern medical practice. Furthermore, it shall constitute the starting point for the initiation and development of new fields, as fetoscopy.

The proposed project corresponds to the general lines of action identified by the **Ministry of Public Health** for making the health system more efficient, contributing to the growth of citizens' access to quality health services, as well as to the increase of the use of information technology in the health sector. In a specific sense, the project contributes to the accomplishment of the objectives of the **National Programs and Sub-programs of Mother and Child Health**, as well as to the fulfilment of **Development Objectives of the Millennium 4 and 5**, undertaken by Romania through the adoption of „The Declaration of the Millennium” within the “United Nations Organization Role in the XXI century” summit: reduction of infantile mortality and improvement of maternal death.

**Lisabona Strategy** aims at transforming EU in the most competitive and dynamic economy based on knowledge, capable of offering work places and sustainable development, in the context of the existence of highly qualified and adaptable work force. This project wishes to contribute to their performance by restructuring and improving education systems and initial professional training and continues the centre created, becoming a reference point for youth educational training and qualification programs (students, those physicians, specialists, post-graduates).

In the **National Plan for reforms 2007-2010** the priority is the increase of employment of the activity rate by developing the abilities, education and improvement of labor market, the performance of specific measures, designed for a good integration of disadvantaged groups and of the increase of their access on the labor market. The project proposed responds to this priority by employing some persons, regardless of their sex, colour, locomotion disabilities, age, professional training and religion.

The project also falls in the priorities of the National Development Strategic Framework that aims at creating a competitive, dynamic and prosperous Romania and especially the objectives regarding the development and efficient usage of human capital.

According to legislation, the project is a scientific development platform in the main field of research of the **National Development, Research and Innovation Strategy 2007-2013**.

A tendency of social services growth at European level can be observed (**Economic and social cohesion politics of the European Union**). The three objectives covered by the project are the following: Convergence, Regional Competitiveness and Employment and European Territorial Cooperation.

This project shall set the logistic framework for the performance of maternal and fetal research activity for the coverage at national level. The informatics support for the support of activity will also be provided (currently inexistent).

For the support of this investment – the option of using the subventions from the state budget is not at all an efficient and sustainable measure for the applicant, taking into account the current economic context, the speed with which technologies evolve and the high level of population's expectations and the request for qualitative public services generated by them.

Irredeemable financial support is essential for highly efficient project implementation in the shortest period of time.

In the absence of an irredeemable financial support that insures project implementation, the institution could be in the situations of not being able to perform the activity of maternal and fetal research according to national strategies in the field and to the legal provisions in force.

## **3.2 Technical data of the investment**

### **3.2.1 Area and location**

Location is situated at the address: Bucharest, 38-52 Gh. Polizu St.

### **3.2.2 Legal status of the land that shall be used**

The land on which project activities will be performed are the property of the Bucharest Institute for Mother and Child Care, Polizu Hospital – public health institution coordinated by the Ministry of Public Health.

### **3.2.3 Current situation of utilities**

The building will benefit from all facilities by joining to technical-edilitary networks existent in the area.

### **3.2.4 Technical data of the investment**

For reaching these objectives, an Excellence Unit of Maternal and Fetal Assistance will be created within the Bucharest Institute for Mother and Child Care, Polizu Hospital. This unit will be the framework for the performance of research and practice activities (involving young researchers and specialists), shall become a provider of highly performant medical services and shall become a reference centre for youth educational training and qualification programs (students, resident doctors, specialists, post-graduates).

A maternal and fetal unit will be build within Polizu Obstetrics and Gynecology Clinic, on a total surface of 1800 square meters, out of which 1160 underground. The building will have 2 underground floors, ground floor, and 3 floors and will be a new hospital unit, with 10 surgery beds only for sampling and with laboratories.

Annexes specific for the access from outside, access facilities for persons with locomotion disability, consultation rooms, surgery, treatment rooms and their correspondent annexes, wards with sanitary squads and clothes closet for medical personnel and for the public, waiting rooms and cleaning annexes will be provided.

The unit will also be endowed with last generation and highly performant instruments, necessary for the performance of specific activity, sanitary specific furniture, informatics and peripheral equipments, electronic devices, freezers and cooling devices for medical usage, phones and message centre, equipments for electric appliance monitoring and alerting.

It is necessary that a modern public health institute offers quality services to patients and doctors. Quality can be obtained through the integration of institute's information – their correlation at the level of different directorates; short time of response can be provided through a modern information system, with integrated applications. It is also necessary that these services can be available on-line, through a portal. All these requests must be completed by an IT infrastructure, capable of meeting the requests of an integrated IT system.

### 3.2.4.1 Construction of the building in which the Unit for Maternal and Fetal Assistance will perform its activity

The maternal and fetal clinic will be located between eastern wall of „Polizu” Obstetrics and Gynecology Clinic and the lowrise walls of „GENERALI” building, access being made from Buzești gate and through the demolition of two ground floor existent buildings.

The area of the „Polizu” obstetrics and Gynecology Clinical Hospital land is of 9261,90 square metres.

The footprint area of the existent building is of 3878,77 square metres.

Total built surface of the existent buildings is of 12 902,00 square metres.

P.O.T. (percentage of land occupation) and C.U.T. (coefficient for land occupation) provided for in urban regulations in force is of 60% and 3 respectively.

The building will have a footprint area of 360 square metres and a total build area of 2270 square metres.

Land area	=	9 261,90 square metres
Existent built area	=	3 878,77 square metres
Existent gross building area	=	12 902,00 square metres
Built area proposed	=	360,00 square metres
<u>Gross building area proposed</u>	=	<u>2 270,00 square metres</u>
Toatal built area	=	4 238,77 square metres
Total gross built area	=	15 172,00 square metres

$$\text{P.O.T. existent} = \frac{3\,878,77}{9\,261,90} = 0,41$$

$$\text{C.U.T. existent} = \frac{12\,902,00}{9\,261,90} = 1,39$$

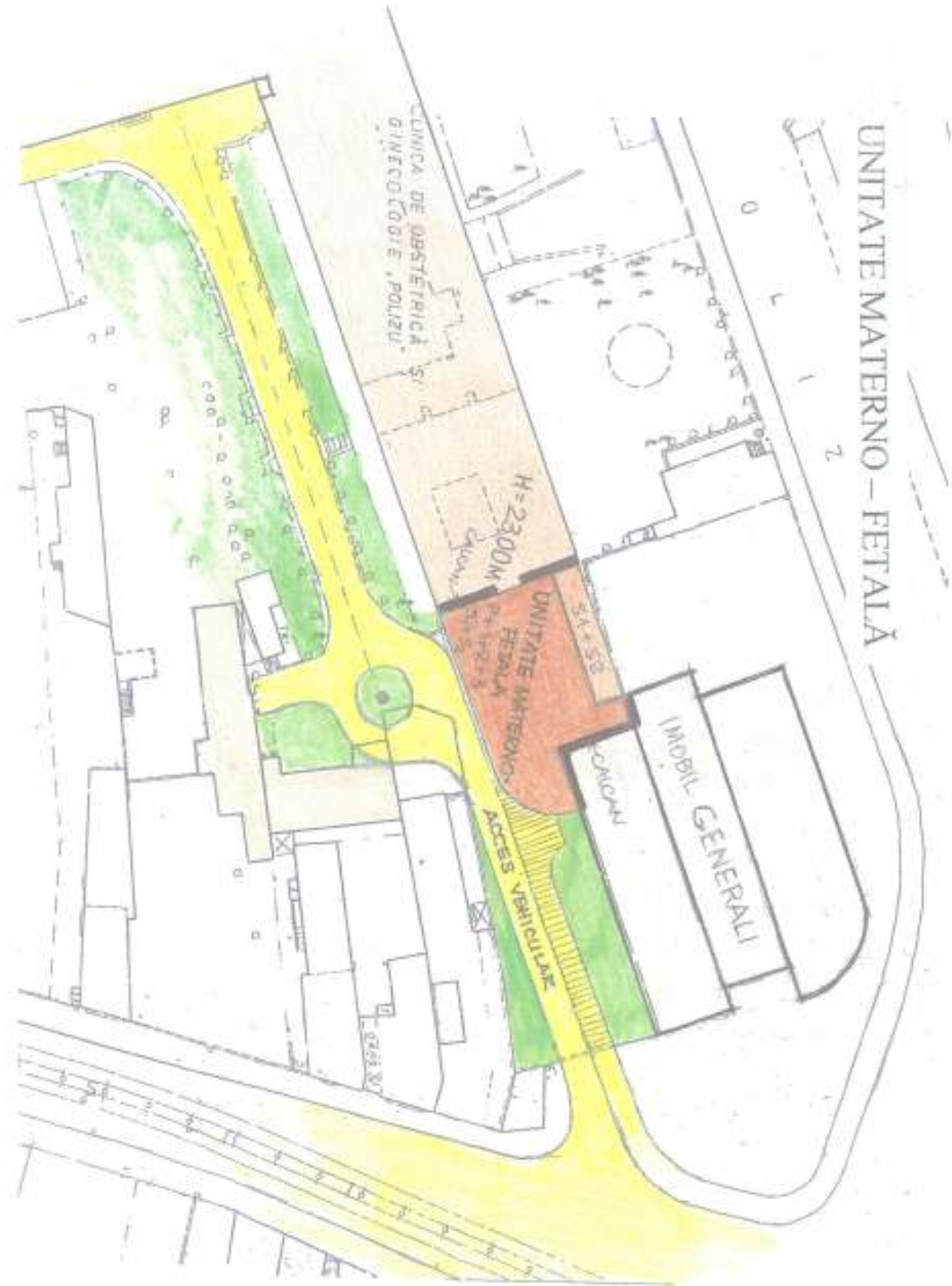
$$\text{P.O.T. proposed} = \frac{4\,238,77}{9\,261,90} = 0,45$$

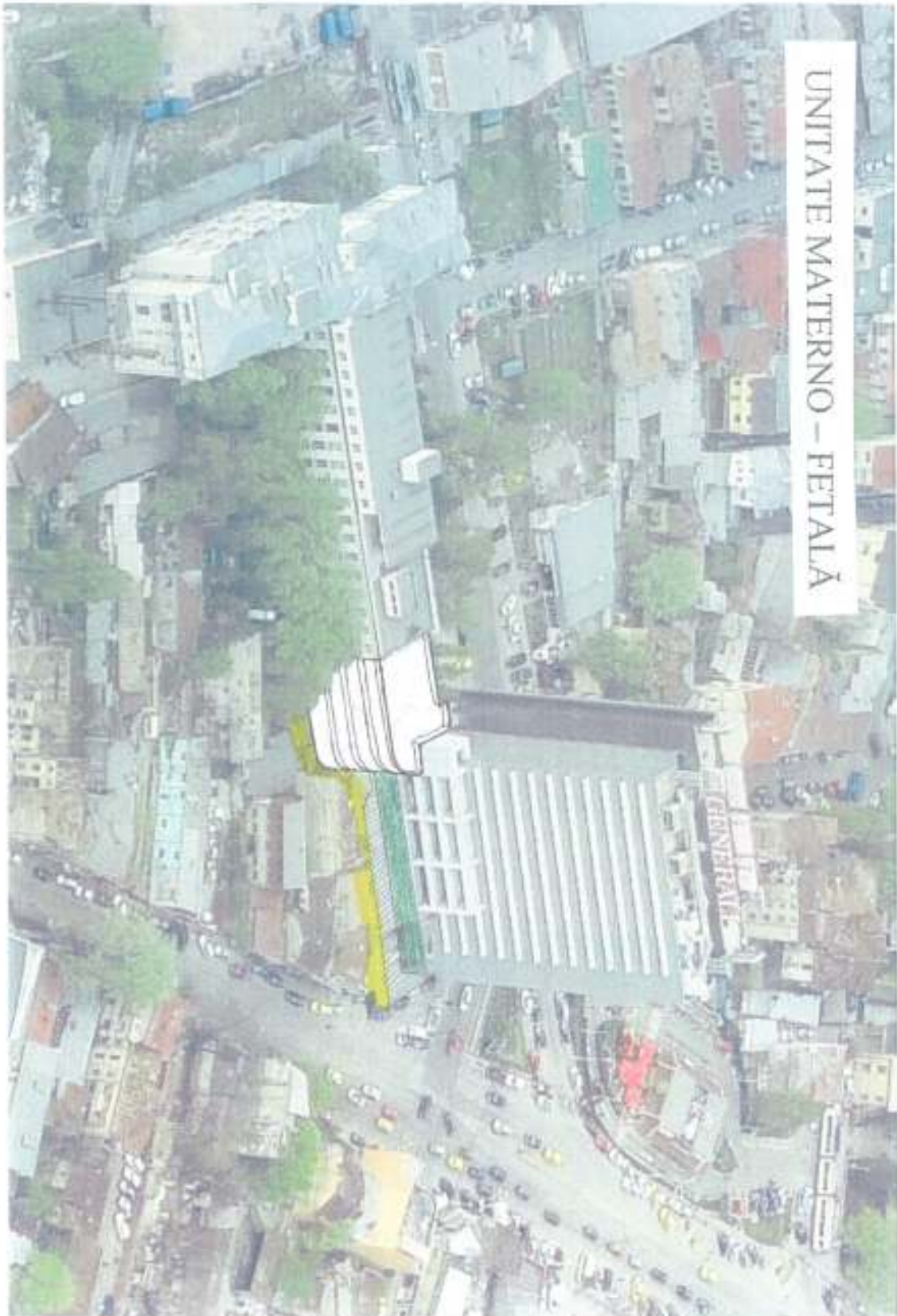
$$\text{C.U.T. proposed} = \frac{15\,172,00}{9\,261,90} = 1,63$$

The building will have two basements (laboratories and technical endowment), ground floor and 3 floors and shall be built from reinforced concrete frames and slabs and front panels of the curtain wall type. Interior finishing will be made according to functionalities.

Underground building will be 3 metres off the north border of the land.









THE MATERNAL AND FETAL UNIT will be a new hospital unit within „POLIZU” HOSPITAL, with a total of approximately 10 beds, surgical unit for „in utero” surgery, rooms for sampling, ultrasound scan offices and laboratories located in the basement.

Interior finishing (floors, walls, ceilings) shall be made up of performant materials, heat insulation and sound-proofing with thermo-system for walls and heat-insulating carpentry.

Facilities (water supply, sewage etc.) shall be ensured according to current norms in force.

The building must have:

- Specific annexes for access from outside: cloakroom, information and access point, appointment and patience evidence office, phone booths,
- Facilities for access from outside of the persons with locomotive disabilities,
- Consultancy rooms, surgical unit, rooms for treatments and their annexes, hospital wards,
- Sanitary squads for public
- Waiting rooms annexed to the offices,
- Cleaning annexes,
- Hospital access.

Endowments will resume to:

- Leading-edge specific medical equipments,
- Surgery instrumentation,
- Specific furniture for endowment of all spaces and rooms: cabinets for emergency medication, gynecological examination chairs, beds and bed-stands, office furniture, etc.
- Peripheral IT equipments: computers with colour printers, server etc., that shall be provided for each medical office and the information and appointment office,
- Radio and TV devices,
- Freezers and cooling devices for medical use, specific for laboratories and medical rooms,
- Telephones and telephone switchboard,
- Any other device or equipment necessary, identified during the drafting of technical and economic documentation,
- Monitoring, surveillance and alerting devices,
- Electric wiring, including low current (telephones, IT networks, CATV), heating, sanitary and air conditioning installations shall be sized according to the functionality proposed and to the specifications of the norms in force, including the endowment with sanitary, electric and heating objects and devices.

#### **3.2.4.2 Equipments and devices necessary for research and development activity**

A laboratory for molecular pathology and one for molecular genetics and biology will be build and endowed within the project proposed for financing.

Main equipments to be purchased: ultrasound scanner, equipment for invasive procedures (laser, transfusion), tococardiograph, monitoring devices etc.

Features of the equipments:

**A) Videofestoscopy system**, that contains:

##### **Basic set for embryoscopy and fetoscopy**

- Miniature Straight-Forward Telescope, semirigid, with remote eyepiece, rotating and locking LUER- Lock-adaptor, fiber optic light transmission incorporated, including protection tube 11510 P Direction of view: 0° Viewing angle: 70° Working length: 20 cm Outer diameter: 1 mm
- Protection tube for Miniature Straight-Forward Telescope 11510 A / 11510

- Examination Sheath,  $\varnothing$  1.3mm, with pyramidal Obturator, with 1 LUER -Lock adaptor, single use only, package of 2, for use with Miniature Straight- Forward Telescope 11510 A
- Operating Sheath, with pointed tip, size 6.5 Fr., with 2 obturators, with working channel for laser fibers up to 600 Micron-core (maximum O.D.900 micron) or Puncture Needle 11510 KC, with 2 LUER- Lock adaptors, single use only, package 2 for use with Miniature Straight-Forward Telescope 11510 A
- Puncture Needle,  $\varnothing$  0.6 mm, length 265 mm, single use only, package of 6, for use with operating sheath
- Biopsy Forceps, single action jaws, semirigid, 3 Fr., length 25 cm
- Fiber Optic Light Cable, size 2.5 mm  $\varnothing$ , length 230 cm

**Full set for trocars and cannulas for access in amniotic cavity**

- Trocar, 7 Fr.,  $\varnothing$  2.5, length 160 mm, package of 2
- Trocar, 8 Fr., 2 Pieces  $\varnothing$  2.8, length 160 mm, package of 2
- Trocar, 9 Fr., 2 Pieces  $\varnothing$  3.0, length 170 mm, package of 2
- Trocar, 10 Fr., 2 Pieces  $\varnothing$  3.3, length 170 mm, package of 2
- Trocar, 11 Fr., 2 Pieces,  $\varnothing$  3.6 mm, length 170 mm, package of 2
- Trocar, 12 Fr.,  $\varnothing$  3.9 mm, length 170 mm, package of 2
- Trocar, 13 Fr.,  $\varnothing$  4.2 mm, length 170 mm, package of 2
- Trocar, 14 Fr.,  $\varnothing$  4.7 mm, length 170 mm, package of 2
- Trocar, size 4.7mm, length 10cm, Color Code: blue, consisting of: 11518S Trocar only,with Pyramidal Tip 11518A2 Cannula, length 10cm, with LUER-Lock Connector 30118L1 Silicon Leaflet Valve
- Trocar, size 3.9mm, length 10cm, Color Code: red, consisting of: 11517S Trocar only,with Pyramidal Tip 11517B2 Cannula, length 10cm, with LUER-Lock Connector 30117L1 Silicon Leaflet Valve
- Trocar, size 3.9mm, length 13cm, Color Code: red, consisting of: 11517L Trocar only,with Pyramidal Tip 11517B1 Cannula, length 13cm, with LUER-Lock Connector 30117L1 Silicon Leaflet Valve
- Trocar, size 2.6mm, length 10cm, consisting of: 11516S Trocar only,with Pyramidal Tip 11516C1 Cannula, length 10cm, with LUER-Lock Connector 11603L1 Silicon Leaflet Valve
- Trocar, size 2.6mm, length 13cm, consisting of: 11516L Trocar only,with Pyramidal Tip 11516C2 Cannula, length 13cm, with LUER-Lock Connector 11603L1 Silicon Leaflet Valve

**Set for fetoscopy in the second quarter – primary state**

- Miniature-Endoscope, semi-rigid, 0°, diameter 1.2 mm, magnification 40x, length 30.6 cm, fiber optic light transmission incorporated
- Operating Sheath, straight, size 7 Fr., with 2 obturators, with working channel size 1 mm, with 1 stopcock and 1 LUER-Lock adaptor, for use with Miniature Straight- Forward Telescope 11530AA
- Operating Sheath, curved, size 7 Fr., with 2 obturators, with working channel size 1 mm, with 1 stopcock and 1 LUER-Lock adaptor, for use with Miniature Straight- Forward Telescope 11530AA
- Set recomandat pentru fetoscopia in al II-lea trimestru - stadiu primar
- Grasping Forceps, double action jaws, semirigid, 3 Fr., length 35 cm

**Set for fetoscopy in the second quarter – posterior placenta**

- Miniature Straight Forward Telescope 0°, diameter 2 mm, semi-rigid, length 26 cm, autoclavable, fiber optic light transmission incorporated, Color Code: green
- Miniature Straight-Forward Telescope, semirigid, autoclavable, fiber optic light transmission incorporated, color code: green Direction of view: 0° Viewing angle: 95° Working length: 30 cm Outer diameter: 2 mm

- Miniature Straight-Forward Telescope, semirigid, autoclavable, with remote eyepiece, fiber optic light transmission incorporated Direction of view: 0° Viewing angle: 95° Working length: 30 cm Outer diameter 2 mm
- HOKPINS II Forward Oblique- Telescope 0°, enlarged view, diameter 2 mm, length 26 cm, autoclavable, fiber optic light transmission incorporated, color code: green
- Operating Sheath, size 9 Fr., with pyramidal obturator 11605 FO, with working channel for laser fibers up to 600 Micron-core (maximum O.D. 900 micron), with 1 stopcock and 1 LUER-Lock adaptor, for use with Miniature Straight-Forward Telescope 11630 AA / 11605 AA
- Operating Sheath, with pointed tip, size 9 Fr., with 2 obturators, with working channel size 1 mm, with 1 stopcock and 1 LUER - Lock adaptor, for use with Miniature Straight- Forward Telescope 11630AA /
- Operating Sheath, with blunt tip, size 9 Fr., with 2 obturators, with working channel size 1 mm, with 1 stopcock and 1 LUER-Lock adaptor, for use with Miniature Straight-Forward Telescope 11630AA / 11605
- Operating Sheath, size 9 Fr., with pyramidal Obturator 26161 UO, with working channel for laser fibers up to 600 micron- core (maximum O.D. 900 micron) with 1 stopcock and 1 LUER-Lock Adaptor, for use with HOPKINS II telescope 26008 AA
  
- **Set for fetoscopy in the second quarter – anterior placenta**
- HOPKINS II Forward- Oplique Telescope 30°, diameter 2 mm, length 26 cm, autoclavable, fiber optic connector on opposite side, fiber optic light transmission incorporated, color code: red
- Operating Sheath, size 11.5 Fr., with pyramidal Obturator 26161 UFO, with working channel for laser fibers up to 600 Micron-core (maximum O.D. 900 micron), with 1 stopcock and 1 LUER-Lock Adaptor, for use with working insert 26161 UH
- Working insert, with steering lever, for use with operating sheath 26161 UF

#### **Set for Chorionic Villus sampling**

- CVS-Biopsy Forceps, curved, size 2.2 mm, length 22 cm, with LUER-Lock adaptor for cleaning
- CVS-Biopsy Forceps, straight, size 2.2 mm, length 22 cm, with LUER-Lock adaptor for cleaning
- CVS Cannula, with opening to the left, size 2 mm, length 22 cm, with 1 LUER-Lock adaptor
- CVS Cannula, with opening to the right, size 2 mm, length 22 cm, with 1 LUER-Lock adaptor

#### **Set for bipolar coagulation**

- TAKE-APART Bipolar Grasping Forceps, flat jaws, size 2.4 mm, length 26 cm consisting of: 26167 FGR Handle 26167 FGF Outer Sheath 26167 FGE Working Insert, package of 5
- Fetoscopy Trocar, size 3.2 mm, length 10 cm, with LUER-Lock connector
- TAKE-APART Bipolar-Grasping Forceps, flat jaws, serrated, size 3 mm, length 30 cm, consisting of: 26184 HM Ring Handle 26184 HS Outer Tube 26184 KLS Working Insert
- Trocar, size 3.5 mm, color code: green, consisting of: 30114 K Trocar only, with pyramidal tip 30114 G1 Cannula, length 5 cm, with LUER-Lock connector for insufflation 30114 L1 Silicone Leaflet Valve
- Trocar, size 3.9mm, length 13cm, Color Code: red, consisting of: 11517L Trocar only,with Pyramidal Tip 11517B1 Cannula, length 13cm, with LUER-Lock Connector 30117L1 Silicon Leaflet Valve

#### **Set for feto-amniotic shunting**

- Shunting Set, consisting of: 11660 A 1 Outer Tube, ø 3 mm, length 19.5 mm 11660 B 3 Obturator with pyramidal tip 11660 C 1 Pusher

#### **Set for guidance and fine manipulation of the fiber laser on the instrumentation channel**

- ALKEN Motion Control Device, for attachment to the instrument channel, for instruments up to 5 Fr., enables precision introduction and fixation of LASER fibers or instruments, advanced in 1/10 mm steps
- Touhy Borst Y-Connector, rotatable, sterile, single use only, package of 5

- Measuring equipment to determine the diameter in Charr.

**B) High definition compact ultrasound scanning system:**

- Digital ultrasound of high power and wideband
- 10,4" monitor
- 2D focus due to Dynamic Focal Tuning
- 256 channels
- LCD screen
- Tapered module – M mode
- THI tissues image
- Triplex module – P Mode
- Cineloop
- Doppler PW module
- Cd-rom
- Doppler color
- Operating manual
- Philips colour option
- Abdominal probe for soft parts
- Convex probe – C7-3 between 7 – 3 MHz

**3.2.4.3 IT solutions necessary for the reserch and development activity**

For the provision of quality services to patients and doctors, a modern IT system, with two main components, will be implemented within this project:

- A document management solution (for the increase of in research processes)
- The design of a multimedia database, created for storage of medical imagistic data (algorithms for search based on the content within these medical images will be implemented)

The purpose of the project is that of creating an integrate IT system capable of ensuring the fulfilment of the following objectives:

- Improvement of information exchange and processing;
- Improvement of inter-professional collaboration;
- Improvement of diagnose process;
- Reduction of the time of decision.

The purpose of **the document management solution** is that of increasing the efficiency in research processes and of improving the quality and efficiency of medical services provision. The applicant needs work flows automation, the elimination of delays and productivity maximisation and of a document management system that provides rapid access to information and of course, and IT system that supports all this initiative.

The module of unstructured content management must be flexible, rugged and scalable. This module must allow users to cooperate, contribute and access content from any location. System must be based on unitary architecture, to allow users to access any function related to content management and manipulation from a single interface.

This module must comprise functionalities of document management, cooperation between users, multimedia content management and the definition and administration of saving policies.

The module must also provide users with a full web interface, so that they can access module's functionalities by accessing a simple web browser. The solution must contain a document flow engine, so that document exchange on IT circuits within IOMC can be easily made. Besides this

flow engine, a strong browser is also needed, for allowing users to access the information needed in the shortest time interval.

Another important component of this module is represented by security functionalities, so that each user will be able to access only the content for which he is authorized.

This system implemented through the financing project will support the activities of all entities/departments involved in the research. It will provide management for multiple types of documents (e.g. Microsoft Word, Excel documents, pictures, drawings and other electronic documents), being able, in the same time identify versions, and maintain access to all previous versions of the documents created.

The system will also be able to administer the content on the web portal. This functionality will allow users to publish, contribute textually on the web, edit, review as well as automatic native conversion. The solution proposed will electronically transpose the classical way of using documents and will allow document management on their entire life cycle, from initialization, to creation, archiving, indexing and storage, which leads to a more efficient work flow.

Besides integration of all documents of the institution in a single interface and their easy management, this solution will offer the possibility of collaborative work, by establishing the path a document must follow within the institution, the advantage of logical reorganization of the archive, preserving the same organizational structure (cabinets, lockers, records, documents), to the securization of access to archived documents or submission of different tasks through the network.

**Design of a multimedia database** created for the storage of medical imagistic for the purpose of facilitating the disclosure of different congenital malformations in fetal imagistic explorations on the basis of algorithms of search based on content (methods of search and analysis of complex non-linear dependencies).

The main objective is the creation of some artificial intelligence methods and algorithms that support the design and development of software system for advanced search and recognition of presets within medical images, for the increase of diagnose accuracy and for the reduction of the time for decision. The purpose of the system is the improvement of diagnose process through detailed analysis of a large number of images in the shortest time.

Methods for the finding presets will be drafted. These methods will be automatically improved through automatic learning algorithms. With the help of these presets, the areas with medical risk will be searched within images (congenital malformations).

The method used is „image mining”, i.e. automatic search within presets in big image data warehouses, using statistic information and pattern recognition. Currently, medical databases are widely spread and medical data stored are numerous. There are search instruments in such data collections but the development of some instruments for knowledge disclosure has currently become critical, especially in the process of medical decision. These instruments refer to the discovery of the relationship between image areas, image classification on content type and interpretation of semantic content of images.

### **Hardware Architecture:**

The minimum requests for infrastructure and communications will be presented below.

For meeting the requests mentioned in the above modules, hardware and communications architecture is needed. This architecture must be structured on 3 levels, as follows:

- user level – access;
- applications level;
- database level.

The solution will have a modern architecture, with a high degree of performance and scalability. Each level will be made up of all the equipments necessary for good functioning. Hardware infrastructure must also be based on the latest IT standards.

The architecture of the data centre must have a high availability degree in the storage and applications strategic data processing area and must allow the extension of performances without the modification of the basic architecture.

All equipments will be installed in racks with the following features:

- maximum 42U height, to allow rapid access and correct ventilation of the room dedicated to the IT infrastructure ;
- key-locked door, to prevent access of unauthorized persons;
- detachable side walls and perforated front and rear door for optimum ventilation;
- a minimum of 2 side plugs so that each equipment is connected at two different power supply sources.

All critical equipments will be plugged in to a redundant power supply (UPS) capable of ensuring electric supply for 10 minutes minimum. The loading capacity of the UPS must be of maximum 60% so that new equipment can be installed without the modification of the solution proposed.

The console system for centralized management will be installed in the rack. This equipment must include a 17" monitor and keyboard of maximum 1U high and kvm switch with minimum 16 ports and all cables necessary to equipments plugging in.

Server and storage equipments must be provided by the same producer, thus ensuring more efficient management.

The servers for the test database and commissioning must have a performance level of minimum 1.550.000 tpc-c published on the official site [www.tpc.org](http://www.tpc.org).

**Database level** will have a very fast communications line, to allow data storage. For this level (commissioning), optical fibre connections with 4Gb/s speed. The connection to the storage unit is provided by two optical fibre switches, redundantly configured.

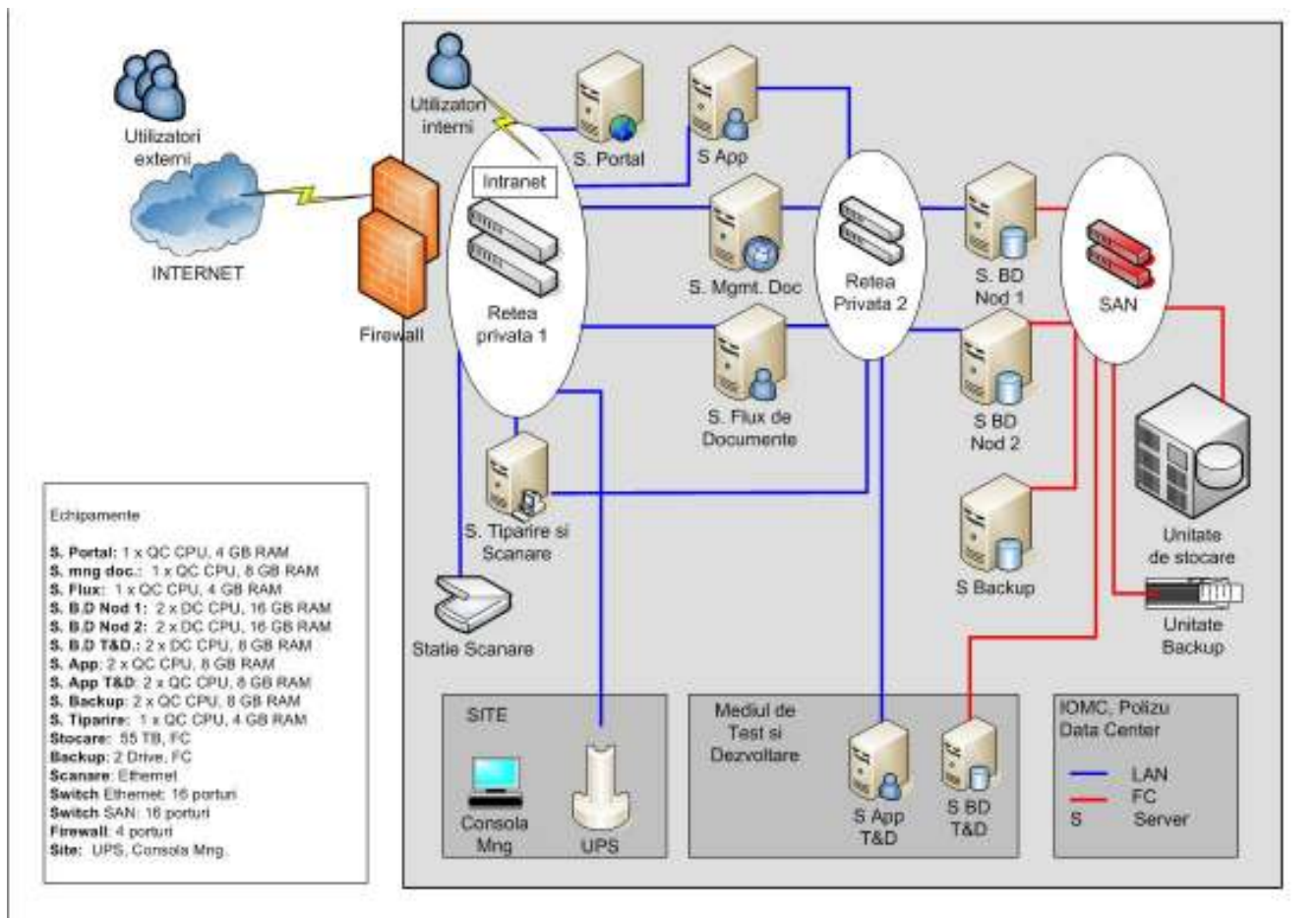
This level is made up of two server systems that will have installed on them the databases for the document management solution and the image databases and a test and development server where the database search algorithms will be tested. The two systems for commissioning databases are configured in cluster, for high availability. The main component is the storage unit that centralizes all information and archives some of the information that is not frequently used. The database level also includes the backup unit, that make backup for critical data. In case of data loss, they shall be restored from tapes.

**Applications level.** This level contains the following equipments: Server for the application of search within the database, server for the document management module, server for the administration of document, server for portal, server for document printing and scanning, test server for the application of search in the database. For good functioning, security and availability of the system, the following equipments are necessary: backup server in charge of backup policies and equipments. The communications infrastructure contains 4 switches with management system. Switches will be paired so that each private network has redundancy.

**User/access level** includes user equipments: two firewall security systems for secure access, professional scanning station for document scanning, management console for infrastructure centralized management. User equipments: two laptops, one multifunctional equipment, one colour printing equipment and one light projector. The two private networks with Gbit connections of 1000 BT provide rapid and highly performant access to applications and data.

Servers will be equipped with state-of-the-art processors, capable of running a software on 64 bits. Servers will be rack-mountable, equipped with redundant gigabit network interface and FC interface, if necessary.

The functional diagram is presented in the chart below:



See below the table with technical specifications of equipments:

Echipament	Descriere Echipament	Cantitate
Printing and scanning server	1 x Quad Core processor, 4 GB RAM memory, 4 x 146 GB Disc, 64 bits operating system,	1
document management server	1 x Quad Core Processor, 8 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1
Document flow server	1 x Quad Core Processor, 4 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1
Backup and management server	2 x Quad Core Processor, 8 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1
Backup unit	2 x drive, 50 slots, FC connexion to SAN	1
Portal server	1 x Quad Core Processor, 4 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1

server app	2 x Quad Core Processor, 8 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1
server app T&D	2 x Quad Core Processor, 8 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1
server DB	2 x Quad Core Processor, 16 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	2
server DB T&D	2 x Dual Core Processor, 16 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1
Storage unit	Useful space 50TB, upgradable online to 980 TB, 8 GB cache upgradable to 128 GB cache FC connexions to SAN	1
server test app	1 x Quad Core Processor, 8 GB RAM memory, 2 x 146 GB Disc, 64 bits operating system,	1
server test db	1 x Quad Core Processor, 8 GB RAM memory, 6 x 146 GB Disc, 64 bits operating system,	1
firewall	2 access ports	2
SAN switch	16 FC ports	2
switch	16 ports 16 X 100/1000	4
rack	rack 42U with own ventilation and key-locked door	2
console and kvm	1U management console and kvm with 16 ports	1
Air conditioning	Air conditioning equipment that provide the necessary btu/h	1
ups	Uninterruptable power supply with a capacity that ensures the above-mentioned conditions	1

### Requests regarding system security

The system will have a security system that allow information protection from internal and external unauthorized access. This protection will be provided both at hardware and at software level.

The database will also contain sensitive information from the field ort level point of view. This information will be protected. In this respect, the system must fulfil certain security requests, like single authentication of users and their access in the system through single authentication mechanisms through roles.

The system will support a flexible and unitary mode for the administration of users access policies and rights to all resources of the integrated system (applications, modules, information categories)by definition. Modification, deletion, exploring, access sessions log keeping.

The system will be designed and implemented from the security point of view in accordance the legislation, regulations and instructions in force, regarding data security, confidentiality an protection.

The end user will be able to access the database only through the application. He will be able to visualize, modify or delete only those data for which he has rights granted by professional tasks. Internal users will connect to the system through the intranet, and external users will connect to the system through the internet. System access security will be ensured by the two firewall systems.

### **Requests regarding system availability**

The IT system delivered will be redundant and rugged, will prevent operating interruptions and will ensure minimum time of recovery at an operating interruption. The purpose is that most interruption have no or minimum impact on system availability.

Servers have a redundant configuration at the level of power supplies, ventilation supplies and of the memory with redundant connexions in private networks and to the storage equipment, if needed.

System security is also redundant – two firewall equipments.

In case of errors at servers level or at the level of the information stored, backup infrastructure (made up of backup server, backup unit and specialized application) will allow information restore. Restoring will be made automatically with the help of dedicated backup equipment. Several security policies will be set for preserving a backup copy of critical data for as long as possible.

### **Requests related to centralized management**

This system will contain web based instruments for the analysis of applications, systems and all critical equipments performance.

An easy, rapid and unitary administration of the entire IT system will be performed, as well as integrated monitoring of infrastructure elements related to network, systems, heterogeneous applications - Operating systems and the applications of Integrated IT System – from the point of view of performances, at Data Center level. The management server will include specialized applications for the management of the entire infrastructure: network equipments, storage equipment and server.

The management network will be a dedicated one, independent of private networks.

### **Software functional requirements**

Functional requests for unstructured content management mode:

- The solution must be based on a fully scalable 3-leveled architecture.
- Application access must be fully performed through a WEB interface.
- The document management solution must provide an administrative instrument that can be accessed through a web browser.
- The solution must allow document storage in the database.
- To allow document storage in electronic format.
- To provide the possibility of attaching metadata to any document stored in the system.
- To allow definition and management of virtual folders where documents can be stored.
- The solution must allow saving of search criteria for the purpose of reuse.
- The solution must permanently preserve all documents in original format.
- The solution must allow the creation of document flows..

Functional requests for the database:

- To ensure the independence of the database with respect to the hardware platform, providing portability and functionality for all applications types that that will access the database.

- To be capable of running on any of the Windows, UNIX and major Linux distribution platforms.
- To be a system that accepts new existent standards, open to future technical evolutions.
- To provide graphical utility for components administration.
- To have the possibility of encrypting all network traffic from and to the database.

Functional requests for the search mode in the database:

- To contain an instrument that allows rapid development of web applications for the database
- To contain a web based development instrument that allows the design of applications based on a database
- To contain an SQL query instrument, as well as an instrument for graphical interrogations
- To allow information upload and deletion from simple files and worksheets
- To include design abilities for applications, migration, reporting and security tools (PDF printing, Flash Chart integration, migration support, elements and designs creation through Drag and Drop) .

IOMC Polizu Hospital will provide a room in its present facilities for the IT infrastructure, which will be implemented at the same time with the starting of the building in order to be opened in the same time.

If the institute will change the location or room or will dismantle the IT infrastructure, a new room will be provided with at least the same size and amenities.

### **3.3 Duration of the investment**

The duration of this project achievement is **24 months**.







### **3.5 Project sustainability**

The project includes operations and activities to ensure the integrated approach in terms of continuing and adding value after the ending of the project.

Project results can be transferred at different levels (sectorial, regional, local, institutional) and will also work after the project ending.

#### **3.5.1 Financial sustainability**

The infrastructure achieved through this project will be financially supported at least 5 years after removing funding requested in this grant application by budgeting the operating and maintenance costs.

IOMC Polizu Hospital will provide a room in its present facilities for the IT infrastructure, which will be implemented at the same time with the starting of the building in order to be opened in the same time.

If the institute will change the location or room or will dismantle the IT infrastructure, a new room will be provided with at least the same size and amenities.

From the financial point of view, the project will not generate incomes, the operating expenses being covered by the owner budget:

The operating expences of the beneficiary are:

- Salary costs associated with the management team and the related new jobs created;
- Expenditure for the maintenance of the new building;
- Maintenance and support costs for the IT infrastructure resulting from the project: licenses and hardware;
- Maintenance and support costs for medical equipment purchased in the project;
- Expenditure to support the sustainability objectives.

All of the operating expenditure will be included in the solicitant budget on a minimum period of 5 years after the implementation of the project.

The next table shows that IOMC has all the necessary resources to maintain the object of the project for at least 5 years after the implementation.

**PROJECT SUSTAINABILITY**

Description	UM		
<b>Table no.0</b>			
<b>GENERAL DATA USED FOR FINANCIAL ANALYSIS</b>			
Analisis period	year	7	
<b>Investment</b>			
Total cost with the investment	RON	<b>57.608.489</b>	
Eligible costs	RON	<b>57.608.489</b>	
<b>Financing through POS-CCE/CDI program</b>	%	<b>100%</b>	
Building lifecycle	years	80	
Equipment lifecycle	years	10	
<b>PROJECT FINANCIAL ANALYSIS</b>	<b>an</b>	<b>1</b>	<b>2</b>
<b>Table no.1- TOTAL CAPITAL INVESTMENT</b>			
Expenses on the land purchase	RON/year	0	0
Expenses on the land arrangement	RON/year	0	0
Expenses on the land arrangement and environment protection	RON/year	522.000	783.000
Expenses on the utilities necessary to the objective	RON/year	280.000	420000
Expenses on design	RON/year	600.000	0
Expenses on the organization of the acquisition procedure	RON/year	5000	0
Expenses on consulting and expertise	RON/year	271.000	0

Institutul pentru Ocrotirea Mamei si Copilului "Alfred Rusescu"

Cheltuieli pentru asistență tehnică	RON/year	1.840.000	0					
Expenses on the buildings and installations	RON/year	7896000	11.844.000					
Expenses on the technological tools and equipments fitting	RON/year	1.476.000	2.214.000					
Expenses on the technological tools and equipments purchase	RON/year	6253200	9379800					
Expenses on the site organization	RON/year	420000	630000					
Expenses on legal taxes	RON/year	480.000	720.000					
Various and unpredictable expenses on the infrastructure project	RON/year	448.000	672000					
Expenses on commissioning	RON/year	0	1160000					
Expenses on building and room purchase	RON/year	0	0					
Expenses on renting equipments and tools (different from the CD ones)	RON/year	0	23.000					
Expenses on equipments (assets or physical inventory objects)	RON/year	1.305.000	4.050.000					
Expenses on the intangible asset purchase	RON/year	1.305.000	264.000					
Expenses on information and advertising on the project	RON/year	51.750	26.750					
Expenses related to the project management	RON/year	962.700	962.700					
General administration expenses	RON/year	171.795	171.795					
<b>Total investment costs</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>					
<b>Eligible costs</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>					
	<b>an</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Table no 2- MAINTAINANCE AND OPERATING COSTS</b>	<b>RON/year</b>							
Salaries costs	RON/year	0	0	3.288.600	3.617.500	3.979.300	4.377.200	4.814.900
Material costs	RON/year	0	0	753.000	828.300	911.100	1.002.200	1.102.400
Administrative costs	RON/year	0	0	1.949.264	2.046.700	2.149.000	2.256.500	2.369.300

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Replacing tangible assets with short life cycle	RON/year	0	0	0	0	0	0	0
Maintainance costs – for the RD infrastructure (building/equipment)	RON/year	0	0	82.295	86.409	90.730	95.266	100.030
Construction	RON/year	0	0	2.711	2.846	2.989	3.138	3.295
Equipment	RON/year	0	0	79.584	83.563	87.741	92.128	96.735
<b>Total maintainance and operating costs</b>	<b>RON/year</b>	<b>0</b>	<b>0</b>	<b>6.155.454</b>	<b>6.665.318</b>	<b>7.220.860</b>	<b>7.826.432</b>	<b>8.486.660</b>
<b>Table no 3- Investment amortisment</b>								
Equipment amortisment	RON/an	0	0	1.591.676	1.591.676	1.591.676	1.591.676	1.591.676
	<b>an</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Table no 4 – FINANCING SOURCES</b>								
	<b>UM</b>							
Grants	RON/year	<b>24.287.445</b>	<b>33.321.045</b>					
Financing from other sources:	RON/year							
State budget( Ministry of Health)	RON/year			4.222.296	4.534.409	4.872.130	5.246.736	5.642.724
International projects	RON/year			1.911.634	2.108.233	2.324.786	2.554.358	2.817.064
Sponsorships	RON/year			21.524	22.676	23.944	25.338	26.872
<b>Total financial resources</b>	<b>RON/year</b>	<b>24.287.445</b>	<b>33.321.045</b>	<b>6.155.454</b>	<b>6.665.318</b>	<b>7.220.860</b>	<b>7.826.432</b>	<b>8.486.660</b>
	<b>an</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Table no 5 – FINANCIAL SUSTAINABILITY</b>								
	<b>UM</b>							
Total financial resources	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	6.155.454	6.665.318	7.220.860	7.826.432	8.486.660
<b>Total entries</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	<b>6.155.454</b>	<b>6.665.318</b>	<b>7.220.860</b>	<b>7.826.432</b>	<b>8.486.660</b>
Total manintaing and operating costs	RON/year	0	0	6.155.454	6.665.318	7.220.860	7.826.432	8.486.660
Total investment costs	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	0	0	0	0	0
<b>Total exits</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	<b>6.155.454</b>	<b>6.665.318</b>	<b>7.220.860</b>	<b>7.826.432</b>	<b>8.486.660</b>
	RON/year							
<b>Total cash flow</b>	<b>RON/year</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Cumulated cash flow</b>	<b>RON/year</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### **3.5.2 Institutional sustainability**

This project will contribute to the applicant's active participation in healthcare reform through specific research activities and by developing social services for maternal-fetal health, strategic activity that will continue beyond project financing.

The results and experience of the project will be integrated into policies and strategies of the applicant, in Strategy of the Ministry of Public Health - action directions for maternal and child care, in the national program to prevent and control diseases with major impact on population - sub-program health of women and children.

The results and experience in the project will be transferred to different levels (sectoral, regional, local, institutional), the beneficiary developing infrastructure and capacity to ensure transfer of knowledge and expertise to other target groups involved with maternal-care assistance fetal.

The dissemination of project results will be achieved through the information and advertising campaign in order to make information about the project and its results available to the largest possible number of users.

The endowment of this center facilities to European standards will result in a reduction in the disparities between Romania and the other developed countries, through the developemnt of the infrastructure of the maternal-fetal unit under the thematic areas of the 7th Framework Program (FP7) and a net improvement of women and children's health programs, with direct implications for health care community, for the period after accession, a medical and social priority.

Because the endowments purchased by this project, the maternal-fetal unit will become a reference in this field in the European Union, allowing training courses and practice and experience exchanges with the specialists from other member countries.

The activity of this unit will help reduce the existing gap between the approach of these issues in our country and the European countries, both in terms of fundamental research and application results of modern medical practice. Moreover, it will be the starting point of initiation and development of new areas of great future as fetoscopy.

The project team, with vast scientific expertise, given the profile of their work in labs in the country or abroad, the results obtained in research (publications, patents, designs, etc.), the ability to train the research team with these laboratories / equipment young master, doctoral students will ensure the sustainability of the project by continuing the project activities on a minimum period of 5 years from its completion.

The CVs of the persons involved in the project are found in Annex 1.

The project will create 25 jobs from which 9 positions in research.

## **3.6 Anticipated results after the project**

A maternal and fetal unit will be build within Polizu Obstetrics and Gynecology Clinic, on a total surface of 1800 square meters, out of which 1160 underground. The building will have 2 underground floors, ground floor, and 3 floors and will be a new hospital unit, with 10 surgery beds only for sampling and with laboratories.

Annexes specific for the access from outside, access facilities for persons with locomotion disability, consultation rooms, surgery, treatment rooms and their correspondent annexes, wards with sanitary squads and clothes closet for medical personnel and for the public, waiting rooms and cleaning annexes will be provided.

The unit will also be endowed with last generation and highly performant instruments, necessary for the performance of specific activity, sanitary specific furniture, informatics and peripheral equipments, electronic devices, freezers and cooling devices for medical usage, phones and message centre, equipments for electric appliance monitoring and alerting.

The activity of this unit will contribute to the reduction of the gap existent between the level of approaching these themes in our country and European and worldwide level, in what fundamental research and application of results in modern medical practice is concerned. Furthermore, it shall constitute the departure point for the initiation and development of new fields, as fetoscopy.

This project will create 25 workplaces, 9 of them in RD:

3 medical specialists obstetrics and gynecology

1 medical geneticist + 2 nurses

1 biologist + 2 nurses

1 doctor neonatology

1 laboratory medical specialist

1 psychologist

5 midwives / nurses

1 laboratory assistant in pathology

1 software engineer

1 registration assistant

1 public relation person

4 nurses

### **3.7 Project advertisement and publicity**

IOMC will provide visibility and promote the objectives and results achieved, in accordance with the Corporate Identity Manual for contractors that received funding from the European Union. In accordance with Regulation EC Nr. 1083/2006 laying down general rules on Structural Funds, with Regulation EC Nr. 1828/2006 on rules for implementing Council Regulation EC No. 1083/2006 and with Regulation No. 1080/2006 of the Parliament and Council of the European Regional Development Fund which define the information and publicity measures on the operations financed from the structural instruments in the proposed project will be provided the following information and publicity measures:

- press release in a regional newspaper on the start of the project;
- press release in a regional newspaper on closing the project;
- stickers for fixed assets acquired in the project;
- leaflets;
- conference for launching the maternal - fetal excellence unit.

**Press releases** on the beginning and closing of the project will be published in local daily newspaper with the largest audience (according to National Audience Study). Ads will include the EU logo, the logo of the Romanian Government, the logo of the Structural Funds in Romania, project title, the project beneficiar logo. The text of the press releases will require the prior approval of intermediate body, and transmission for their opinion will be done at least 15 days before the intentioned publication date. Also, in the press releases the site of the European Commission Representation in Romania ([www.infoeuropa.ro](http://www.infoeuropa.ro)) will be indicated as the official source of information on relations between Romania and the European Union. The press release on the start of the project will contain information on project goals supported by structural funds, while the press release on the project closure will mention the results of the implementation.

**Stickers** will be used to identify fixed assets purchased under the project funded by the EU. For the medical equipment and IT the stickers will be applied in a visible place. The stickers contain the following information: European Union logo, Romanian Government logo, the project title and its value. Minimum size of stickers will be 1 / 16 of the most visible surface of the equipment. Draft sticker sticker will be sent for approval to the Intermediate Body at least 15 days before the scheduled use.

IOMC will compile a file (in print and / or electronic) in which will record all of the information and related advertising activities. Also, the beneficiar will describe the progress reports of all information and publicity activities carried out in the project and will attach to copies of press releases.

**The leaflets** will be distributed at events and scientific sessions that will be organized in the institute and will present the benefits / results obtained through project implementation, while ensuring the promotion of services provided to target groups.

**The conference for launching the maternal - fetal excellence unit** will take place on completion of investment objectives, will cover the participation of local and international specialists in the field and will consider a debate about the main objectives, steps and achievements of the project.

## 4 ESTIMATED INVESTMENT COSTS

### 4.1 Detailing the project costs per each expense category

Code	Expense name	Expense value	Eligible value	Non-eligible value	Strength of public intervention	Value of non-reimbursable financial aid
1	2	3	4	5	6	7
<b>CHELTUIELI ELIGIBILE DIRECTE</b>						
1	Expenses on the land purchase	0	0	0	0	0
2	Expenses on the land arrangement	0	0	0	0%	0
3	Expenses on the land arrangement and environment protection	1305000	1305000	0	100%	1305000
4	Expenses on the utilities necessary to the objective	700000	700000	0	100%	700000
5	Expenses on design	600000	600000	0	100%	600000
6	Expenses on the organization of the acquisition procedure	5000	5000	0	100%	5000
7	Expenses on consulting and expertise	271000	271000	0	100%	271000
8	Technical assistance expenses	1840000	1840000	0	100%	1840000
9	Expenses on the buildings and installations	19740000	19740000	0	100%	19740000
10	Expenses on the technological tools and equipments fitting	3690000	3690000	0	100%	3690000
11	Expenses on the technological tools and equipments purchase	15633000	15633000	0	100%	15633000
12	Expenses on the site organization	1050000	1050000	0	100%	1050000
13	Expenses on legal taxes	1200000	1200000	0	100%	1200000
14	Various and unpredictable expenses on the infrastructure project	1120000	1120000	0	100%	1120000

15	Expenses on commissioning	1160000	1160000	0	100%	1160000
16	Expenses on building and room purchase	0	0	0	0%	0
17	Expenses on renting equipments and tools (different from the CD ones)	23000	23000	0	100%	23000
19	Expenses on equipments (assets or physical inventory objects)	5355000	5355000	0	100%	5355000
20	Expenses on the intangible asset purchase	1569000	1569000	0	100%	1569000
22	Expenses on information and advertising on the project	78500	78500	0	100%	78500
25	Expenses related to the project management	1925400	1925400	0	100%	1925400
<b>TOTAL DIRECT ELIGIBLE EXPENSES</b>		<b>57264900</b>	<b>57264900</b>			<b>57264900</b>
<b>INDIRECT ELIGIBLE EXPENSES</b>						
24	General administration expenses	343589	343589	0	100%	343589
<b>TOTAL INDIRECT ELIGIBLE EXPENSES</b>		<b>343589</b>	<b>343589</b>	<b>0</b>	<b>100%</b>	<b>343589</b>
<b>SUBTOTAL</b>		<b>57608489</b>	<b>57608489</b>		100%	<b>57608489</b>
<b>INTEGRALLY NON-ELIGIBLE EXPENSES</b>						
1	VAT	10945613		10945613		
<b>TOTAL NON-ELIGIBLE EXPENSES</b>		<b>10945613</b>	<b>0</b>	<b>10945613</b>	<b>0%</b>	<b>0</b>
<b>GRAND TOTAL</b>		<b>68554102</b>	<b>57608489</b>	<b>10945613</b>		<b>57608489</b>

PRICES ARE IN RON.

#### Budget breakdown:

No need to purchase land (expenditure 0 EUR), therefore, the project is included in the rule of eligible expenditure only up to 10% of eligible project (GD 759/2007).

The expenditure for land planning is 0 RON. Not required dismantling, decommissioning, clearings, evictions resulting materials, deviations of the site utilities, vertical systematization, drains and epuismente.

Expenditure for land planning for environmental protection 7200000 RON. This includes works and actions to protect and restore the natural environment after the completion of work, such as: tree planting, green space redevelopment.

Expenditures for providing utilities necessary for the objective 700,000 RON. This includes costs

for water supply, sewerage, gas, heat, electricity, communication networks (telephone, radio, TV, Internet), the cost for access roads and utility connections to networks.

Projecting expenditure 600,000 RON. This included field studies (geotechnical studies, geological, topographical, etc.), obtaining approvals, agreements and authorizations (to obtain / renewal of certificate of urban planning, obtaining / renewal of permission to construct, obtaining approvals and agreements for joints and connections to public water systems, sewer, gas, heat, electricity, telephone, etc.), design and engineering: a feasibility study, technical design, details, technical verification of the design, development of documentation required to obtain agreements, notices and authorizations related to the objective.

Expenses for organizing the public auction procedures 5000 RON. This included costs of organising and conducting the procurement procedures, such as expenses related to the preparation of the award and its multiplication (excluding those bought by bidders); announcements of intent, participation and award of contracts, correspondence by mail, fax , email, etc., in connection with public procurement procedures.

Consultancy, advise and expertise expenses 271,000 RON. This included expenditure on consultancy services in implementation of investment management or administration contract execution, reception of the works, consulting services for studies and analysis needed during the project implementation, advisory services, technical expertise, financial, accounting and legal expertise.

The expenditure for technical assistance 1840000 RON include: technical assistance from the designer, project supervisors payment services for installation and operation of equipment not included in acquisition costs (install IT equipment) and financial audit and verification services, with compliance with contracts.

Construction and installation costs 19740000 RON. This included the construction, the implementation of building related construction plant, such as electrical, sanitary, interior installations of natural gas, heating, ventilation, air conditioning, PSI, electronic communications networks.

Costs for installation of technological equipment including costs of installation 3690000 RON.

Expenditure for the purchase of plant and equipment 15633000 RON include machinery, equipment and operational technology, transport equipment technology, including mobile equipment developed for research.

Expenses for organizing the site 1050000 RON. This included construction and facilities related to the organization of the site (expenditure related to natural land leveling work, connections to utilities, the development of access roads, construction, dismantling costs of site) and associated costs of site organization (getting authorization for the execution of the work of organizing the site, location fees, rental signs, temporary interruption of transmission or distribution of water, sewer, heat, electricity, gas, road safety, with police assistance contracts road, temporary contracts with utility providers, with sanitation facilities, environmental filing fees).

Allowances pay legal expenses 1200000 RON. This includes share of inspection for quality control of construction works, the rate for state control in urban planning, urban planning and authorization of construction works and share of Social House of Constructors.

Miscellaneous and unforeseen expenditure for infrastructure projects are 1120000 RON up to 10% (ie 2.3%) of the aggregate value of the categories: expenses for land planning, land planning expenses for environmental protection, costs for providing facilities to the target, costs for design, consultancy expenses, expenditure for technical assistance, construction and installation costs, installation costs for technological equipment, expenditure for purchase of plant and machinery, equipment expenses.

Expenditure for commissioning of 1160000 RON, including preparing the operating personnel and technological tests and trials.

Expenditure for acquisition of buildings and spaces 0 USD. No need to purchase the buildings and spaces.

Expenditures for rental of the equipment and machinery, other than for RD 23000 RON.

Expenditures for equipment (fixed assets and inventory items) 5355000 RON. This category includes IT and communications equipment, installations, equipment and tools for independent research and their components, laboratory furniture, equipment PSI, household equipment, labor protection facilities and spare parts.

Expenditure for acquisition of intangible fixed assets 1569000 RON. This includes applications, licenses and rights.

Expenditure on information and publicity for the project 78500 RON. The proposed project will be provided the following information and publicity measures:

- Press release in a regional newspaper on the start of the project;
- Press release in a regional newspaper on closing the project;
- Stickers fixed assets acquired in the project;
- Leaflets;
- Conference launching the Unity of maternal - fetal assistance.

Expenditure for the project management 1925400 RON, 3.4% of the eligible project. They meet the eligibility criteria, are eligible to 10% of the eligible project, but not more than 2.000.000 RON (OM no. 2508/2007). In the project the public funds ensure the personnel costs for the 5 people in the project management team.

General administrative expenses 343,589 RON, representing the costs incurred for the overall functioning of the recipient and may not be directly attributed to certain activities in the project. They are eligible up to 1% of eligible direct costs of the project and in our project they represent 0.6%.

VAT is 10945613 RON (19%). This expense is noneligible. Amounts to cover the payment of VAT, eligible project expenditure will be reimbursed in accordance with Ordinance No. 64/2009.

#### 4.2 Staggering costs in conjunction with the investments chart

Schedule of activities				
No.	Activity name	From	To	Expenses (RON)
<b>1</b>	<b>Management, monitoring and control</b>			
1.1.	Team mobilization	Month 1	Month 1	0
1.2.	Raporting	Month 1	Month 24	
1.3.	Monitoring	Month 1	Month 24	1925400
1.4.	Control	Month 1	Month 24	

<b>2</b>	<b>Administrative activities of the project</b>			
2.1.	Selection of consultants for preparing specifications for procurement of services / goods / works	Month 1	Month 1	0
2.2.	Preparation and approval of specifications for selection of designer and checker for the technical design	Month 2	Month 2	65250
2.3.	Preparation and approval of specifications for execution of construction / facilities	Month 2	Month 2	65250
2.4.	Preparation and approval of specifications for purchase of equipment	Month 17	Month 17	65250
2.5.	Preparation and approval of specifications for purchase of IT solutions	Month 2	Month 2	65250
2.6.	Preparation and approval of specifications for purchase of advertising services	Month 1	Month 1	10000
2.7.	Selecting a financial auditor	Month 20	Month 20	0
2.8.	Financial audit	Month 23	Month 24	43500
<b>3</b>	<b>Construction of the maternal-fetal unit</b>			
3.1.	Auction for selection of the projectant of the construction	Month 3	Month 4	1000
3.2.	Obtaining permits and agreements	Month 3	Month 4	100000
3.3.	Technical project and authorization	Month 5	Month 6	500000
3.4.	Auction for selection of the construction works and selection of contractor works	Month 7	Month 8	1000
3.5.	Execution of construction works	Month 9	Month 20	44438000
3.6.	Technical assistance and supervision during the work execution	Month 9	Month 20	56500
3.7.	Reception of the works	Month 21	Month 21	1160000
<b>4</b>	<b>Endowment of the maternal-fetal unit</b>			
4.1.	Auctions for selection of the providers of goods (equipment)	Month 18	Month 19	1000
4.2.	Purchase medical equipment and install them	Month 20	Month 21	4337000
4.3.	Training staff that will use the medical equipment	Month 22	Month 23	0
4.4.	Auctions for selection of the IT solutions provider	Month 3	Month 4	1000
4.5.	Acquisitions: hardware, applications and licenses	Month 5	Month 5	2610000
4.6.	Implementing the IT solutions	Month 6	luna 13	1740000
4.7.	Acceptance of the information technology solutions	Month 14	Month 14	0

4.8.	Training the staff that will use the IT equipment and software implemented and the staff that will operate it	Month 15	Month 16	0
<b>5 Activities to promote the project</b>				
5.1.	Selecting the service provider for advertising	Month 2	Month 3	1000
5.2.	Press release on the start of the project	Month 4	Month 4	2000
5.3.	Realization and application of marks for equipment purchased	Month 4	Month 5	3000
5.4.	Making posters, leaflets and booklets	Month 4	Month 5	30875
5.5.	Making a specific website for projects funded	Month 6	Month 13	10875
5.6.	Making a link on the website of IOMC which will promote the project	Month 14	Month 14	0
5.7.	Making specialized articles to be disseminated through stating the project financing benefits	Month 1	Month 24	10000
5.8.	Conference to launch the maternal-fetal unit	Month 24	Month 24	21750
<b>TOTAL</b>				<b>57264900</b>

## 5 COST BENEFIT ANALYSIS

The cost benefit analysis is an economical evaluation method to quantify the results of investment projects in different economic fields (constructions, industry, transportation, turism and agriculture).

The cost benefit analysis is a tool very useful in taking resource allocation decisions ( the resources are limited).The specific analysis is based on cashflows.

The cost benefit indicator has four directions:

- Economic (economical efforts – costs);
- Ecological (ecological effects – affecting/ improving the natural environment );
- Social (social effects regarding the creation and cut of work places, protecting people heath, improving the living standard, benefits that result in education, qualification, requalification of people)
- Technological.

Through its nature, any economical objective is fulfilled in risc and incertitude conditions. These are determined by a series of objective and subjective causes, through which:

- Changing economical conditions;
- Technological changes;
- The exaggerated optimistic or pessimistic attitude of the analysis team;
- Technical, economical and financial errors.

The method used for quantifying the riscs and incertitudes of a certain economical objective is to carry cost benefit anaysis in more than one variants, modifying different directions, favorable or unfavorable.

Stages in cost benefit analysis:

- Identifying costs;
- Identifying incomes (economies or avoided costs);
- Changing the time frame for the study, placing the costs and the incomes in the time scale;
- Establishing the financial structure and the associated costs;
- Establishing the work hypothesis – forecasting the costs and the incomes on the entire project life cycle;
- The calculation and the update of the net cashflow;
- Calculation of the profitability indicators and their interpretation;
- Identifying critical factors (with considerable effect) which positive or negative evolution effects the profitability indicators;
- Sensitivity analysis – “the resistance” of the project no matter the variance of the critical factors;
- Probability and risc – scenario analysis;

The fundamental components of taking an economical decision regarding starting the project include:

- Total cost (financial liquidity flow);

- Total benefit (the consequences);
- Cost – benefit rates (investment rate of return);
- Intangible costs and benefits (company image, etc.).

When analyzing the costs we must consider the moment the project needs the highest expense and the moment in which all the expenses updated with the inflation rate are recovered. The costs and the benefits follow different time curves.

In conclusion, the cost benefit analysis in investment projects is based on reporting the relevant efforts and effects (economical, financial, ecological, social) to impact effects (pollution, lack of resources, estethical and cultural values).

For the cost benefit analysis of an investment project, the financial projections are carried on a 7 year time frame, splitted in to phases:

- The execution phase (year 1- year 2);
- The operation phase (year 3- year 7).

The costs and the incomes of the project are presented related to the euro current buying power.

## 5.1 Project objectives

**The GENERAL OBJECTIVE of the project is the creation of the research and development infrastructure, necessary for the improvement of current maternal and fetal assistance programs.**

This objective can be reached by increasing the capacity of research and development of the institution, as well as through its active involvement in projects together with other actors from this sector, at national and international level.

**Specific objectives:**

**O1. Construction of the building in which the Maternal and Fetal Assistance Unit will perform its activity.**

The design of a new building in which IOMC Polizu Clinic of Obstetrics and Gynaecology can perform its research and development activities is necessary due to the fact that currently the infrastructure needed does not exist, or if it exists, it does not correspond to safety and use norms imposed by the European Union.

**O2. Procurement of equipments and instrumentation necessary for the research and development activity.**

Existent instrumentation, physically and morally worn out cannot be used due to the fact that it does not correspond anymore to European standards and research results can no longer be certified. The procurement of new equipments, that facilitate the performance of research in this field at the highest level of professionalism thus necessary.

## 5.2 The reference period

The project was analysed on a 7 year period  
Proiectul a fost analizat pe o perioada de 7 ani, splitted in to phases:

- The execution phase (year 1- year 2);

- The operation phase (year 3- year 7).

### 5.3 Options analysis

#### 5.3.1 Zero variant

<b>Variant 0</b>	<b>an</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Category</b>	<b>UM</b>							
Total financial resources	RON/year	0	0	0	0	0	0	0
<b>Total entries</b>	RON/year	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total manintaing and operating costs	RON/year	0	0	0	0	0	0	0
Total investment costs	RON/year	0	0	0	0	0	0	0
<b>Total exits</b>	RON/year	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	RON/year							
<b>Total cash flow</b>	RON/year	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Cumulated cash flow</b>	RON/year	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

The zero variant assumes that no investment is done and in that case no other expenses will be generated at the institute level.

#### 5.3.2 Proposed variant

The maximal variant (the variant with maximal investment) implies making the total investment in order to attain the desired objectives.

<b>Proposed variant</b>	<b>an</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Category</b>	<b>UM</b>							
Total financial resources	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	6.155.454	6.665.318	7.220.860	7.826.432	8.486.660
<b>Total entries</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	<b>6.155.454</b>	<b>6.665.318</b>	<b>7.220.860</b>	<b>7.826.432</b>	<b>8.486.660</b>
Total manintaing and operating costs	RON/year	0	0	6.155.454	6.665.318	7.220.860	7.826.432	8.486.660
Total investment costs	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	0	0	0	0	0
<b>Total exits</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>	<b>6.155.454</b>	<b>6.665.318</b>	<b>7.220.860</b>	<b>7.826.432</b>	<b>8.486.660</b>
	RON/year							
<b>Total cash flow</b>	RON/year	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Cumulated cash flow</b>	RON/year	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

The total cashflow calculated on the entire project duration in not negative, the costs will be assured from the budget of the institute.

For the cost benfit analysis we considered this variant.

### 5.4 The forecasted evolution of the costs

#### 5.4.1 Implementation phase

In the implementation phase the forecasted costs are the costs related to the investment.

<b>Table no.1- TOTAL CAPITAL INVESTMENT</b>	<b>RON/year</b>	<b>1</b>	<b>2</b>
Expenses on the land purchase	RON/year	0	0
Expenses on the land arrangement	RON/year	0	0

Expenses on the land arrangement and environment protection	RON/year	522.000	783.000
Expenses on the utilities necessary to the objective	RON/year	280.000	420000
Expenses on design	RON/year	600.000	0
Expenses on the organization of the acquisition procedure	RON/year	5000	0
Expenses on consulting and expertise	RON/year	271.000	0
Technical assistance expenses	RON/year	1.840.000	0
Expenses on the buildings and installations	RON/year	7896000	11.844.000
Expenses on the technological tools and equipments fitting	RON/year	1.476.000	2.214.000
Expenses on the technological tools and equipments purchase	RON/year	6253200	9379800
Expenses on the site organization	RON/year	420000	630000
Expenses on legal taxes	RON/year	480.000	720.000
Various and unpredictable expenses on the infrastructure project	RON/year	448.000	672000
Expenses on commissioning	RON/year	0	1160000
Expenses on building and room purchase	RON/year	0	0
Expenses on renting equipments and tools (different from the CD ones)	RON/year	0	23.000
Expenses on equipments (assets or physical inventory objects)	RON/year	1.305.000	4.050.000
Expenses on the intangible asset purchase	RON/year	1.305.000	264.000
Expenses on information and advertising on the project	RON/year	51.750	26.750
Expenses related to the project management	RON/year	962.700	962.700
General administration expenses	RON/year	171.795	171.795
<b>Total investment costs</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>
<b>Eligible costs</b>	RON/year	<b>24.287.445</b>	<b>33.321.045</b>

#### 5.4.2 Operating phase

For the operating phase the following costs were forecasted:

- Salaries costs
- Material costs
- Administrative costs
- Replacing tangible assets with short life cycle
- Maintenance costs – for the RD infrastructure (building/equipment)
- Total maintenance and operating costs

Table no 2- MAINTAINANCE AND OPERATING COSTS								
	RON/year	1	2	3	4	5	6	7
Salaries costs	RON/year	0	0	3.288.600	3.617.500	3.979.300	4.377.200	4.814.900

Material costs	RON/year	0	0	753.000	828.300	911.100	1.002.200	1.102.400
Administrative costs	RON/year	0	0	1.949.264	2.046.700	2.149.000	2.256.500	2.369.300
Replacing tangible assets with short life cycle	RON/year	0	0	0	0	0	0	0
Maintainance costs – for the RD infrastructure (building/equipment)	RON/year	0	0	82.295	86.409	90.730	95.266	100.030
Construction	RON/year	0	0	2.711	2.846	2.989	3.138	3.295
Equipment	RON/year	0	0	79.584	83.563	87.741	92.128	96.735
<b>Total maintainance and operating costs</b>	<b>RON/year</b>	<b>0</b>	<b>0</b>	<b>6.155.454</b>	<b>6.665.318</b>	<b>7.220.860</b>	<b>7.826.432</b>	<b>8.486.660</b>

## 5.5 The forecasted evolution of the results

The project will not generate any incomes.

The costs related to the operating phase will be covered from the budget of the institute.

## 5.6 Financial analysis of the investment

### 5.6.1 Cumulated cash flow

We consider that this updating rate of 5% is adequated taking into consideration the sector in which the project is developed and its location. According to the Guide for the Cost benefit analysis of Investment Projects, this rate is established taking into consideration the field of activity and the geographical area.

The cumulated cash flow is **not a negative one**.

### 5.6.2 Internal rentability rate

The financial internal rentability rate of the investment is calculated taking into consideration the total investment costs as cash exits (with the exploiting costs), and the incomes as an entry. It measures the capacity of the exploiting incomes to sustain the investment costs.

**The value of the internal rentability rate is 0%.**

The internal rentability rate is a minimal threshold of the rentability of an investment, the interest rate on the capital market with zero net present value. For updating the cashflows and calculating the net present value, we must define the coresponding interest rate. The level of the internal rentability rate is the maximul level of the updated rate for which the investments and the exploiting costs are covered by the project incomes.

### 5.6.3 Period of investment recovery

The project doesn't generate any income, and for this reason we can not speak about a period of recovery.

#### **5.6.4 Cost benefit ratio**

The indicator cost benefit is the ratio between the updated value of the entries and the updated value of the exists.

The value of this indicator is 0 € incomes obtained for a 1 € initial investment expence.

**The financial analysis results sustain the investment need and opportunity.  
The project will not generate losses.**

### **5.7 Risk analysis**

#### **5.7.1 Identified risks**

The identified risks are classified into the following major cathegories:

- Economic and financial
- Technical
- Institutional
- Legal
- Demographic.

# Institutul pentru Ocrotirea Mamei si Copilului "Alfred Rusescu"

Evaluarea probabilitatii si impactului riscurilor																			
Sursa de risc	Categoria de risc	Generator	Zone afectate	Probabilitate	Impact	Matricea probabilitatii si impactului													
Economia locala	Riscuri economice	Lipsa fondurilor la nivelul entitatilor locale	Scopul proiectului	Scazuta	Moderat	<table border="1"> <tr> <td rowspan="5">Probabilitate</td> <td>FR</td> <td rowspan="5">FS</td> <td rowspan="5">S</td> <td rowspan="5">M</td> <td rowspan="5">R</td> <td rowspan="5">FR</td> </tr> <tr> <td>R</td> </tr> <tr> <td>M</td> </tr> <tr> <td>S</td> </tr> <tr> <td>FS</td> </tr> <tr> <td>F</td> <td>Impact</td> </tr> </table>	Probabilitate	FR	FS	S	M	R	FR	R	M	S	FS	F	Impact
Probabilitate	FR	FS	S	M	R	FR													
	R																		
	M																		
	S																		
	FS																		
F	Impact																		
Tehnologia	Riscuri tehnologice	Utilizarea necorespunzatoare; Solutii costisitoare	Durata proiectului Costul proiectului	Scazuta	Moderat	<table border="1"> <tr> <td rowspan="5">Probabilitate</td> <td>FR</td> <td rowspan="5">FS</td> <td rowspan="5">S</td> <td rowspan="5">M</td> <td rowspan="5">R</td> <td rowspan="5">FR</td> </tr> <tr> <td>R</td> </tr> <tr> <td>M</td> </tr> <tr> <td>S</td> </tr> <tr> <td>FS</td> </tr> <tr> <td>F</td> <td>Impact</td> </tr> </table>	Probabilitate	FR	FS	S	M	R	FR	R	M	S	FS	F	Impact
Probabilitate	FR	FS	S	M	R	FR													
	R																		
	M																		
	S																		
	FS																		
F	Impact																		
Durata estimata a activitatilor	Riscuri organizationale	Intarzierea depunerii cererii de brevetare	Graficul activitatilor Costul proiectului	Scazuta	Ridicat	<table border="1"> <tr> <td rowspan="5">Probabilitate</td> <td>FR</td> <td rowspan="5">FS</td> <td rowspan="5">S</td> <td rowspan="5">M</td> <td rowspan="5">R</td> <td rowspan="5">FR</td> </tr> <tr> <td>R</td> </tr> <tr> <td>M</td> </tr> <tr> <td>S</td> </tr> <tr> <td>FS</td> </tr> <tr> <td>F</td> <td>Impact</td> </tr> </table>	Probabilitate	FR	FS	S	M	R	FR	R	M	S	FS	F	Impact
Probabilitate	FR	FS	S	M	R	FR													
	R																		
	M																		
	S																		
	FS																		
F	Impact																		
Personalul	Riscuri organizationale	Lipsa de experienta; Lipsa de training.	Calitatea solutiilor Costul proiectului	Foarte scazuta	Moderat	<table border="1"> <tr> <td rowspan="5">Probabilitate</td> <td>FR</td> <td rowspan="5">FS</td> <td rowspan="5">S</td> <td rowspan="5">M</td> <td rowspan="5">R</td> <td rowspan="5">FR</td> </tr> <tr> <td>R</td> </tr> <tr> <td>M</td> </tr> <tr> <td>S</td> </tr> <tr> <td>FS</td> </tr> <tr> <td>F</td> <td>Impact</td> </tr> </table>	Probabilitate	FR	FS	S	M	R	FR	R	M	S	FS	F	Impact
Probabilitate	FR	FS	S	M	R	FR													
	R																		
	M																		
	S																		
	FS																		
F	Impact																		
Nu exista control privind prioritatile personalului	Riscuri specifice managementului proiectului	Lipsa de coordonare; Lipsa descrierii rolurilor in cadrul echipei.	Graficul activitatilor Costul proiectului	Foarte scazuta	Ridicat	<table border="1"> <tr> <td rowspan="5">Probabilitate</td> <td>FR</td> <td rowspan="5">FS</td> <td rowspan="5">S</td> <td rowspan="5">M</td> <td rowspan="5">R</td> <td rowspan="5">FR</td> </tr> <tr> <td>R</td> </tr> <tr> <td>M</td> </tr> <tr> <td>S</td> </tr> <tr> <td>FS</td> </tr> <tr> <td>F</td> <td>Impact</td> </tr> </table>	Probabilitate	FR	FS	S	M	R	FR	R	M	S	FS	F	Impact
Probabilitate	FR	FS	S	M	R	FR													
	R																		
	M																		
	S																		
	FS																		
F	Impact																		
Modificarea legislatiei	Riscuri politice	Decizii guvernamentale	Costul proiectului	Foarte scazuta	Scazut	<table border="1"> <tr> <td rowspan="5">Probabilitate</td> <td>FR</td> <td rowspan="5">FS</td> <td rowspan="5">S</td> <td rowspan="5">M</td> <td rowspan="5">R</td> <td rowspan="5">FR</td> </tr> <tr> <td>R</td> </tr> <tr> <td>M</td> </tr> <tr> <td>S</td> </tr> <tr> <td>FS</td> </tr> <tr> <td>F</td> <td>Impact</td> </tr> </table>	Probabilitate	FR	FS	S	M	R	FR	R	M	S	FS	F	Impact
Probabilitate	FR	FS	S	M	R	FR													
	R																		
	M																		
	S																		
	FS																		
F	Impact																		

FR - probabilitate foarte ridicata; impact foarte ridicat;  
R - probabilitate ridicata; impact ridicat;  
M - probabilitate medie; impact mediu;  
S - probabilitate scazuta; impact scazut;  
FS - probabilitate foarte scazuta; impact foarte scazut.

## 5.7.2 Measures for diminishing risks

For the identified risks we developed risk diminishing strategies. Also, we pointed specialized persons responsible for monitoring these risks, which is an essential element in risk management.

Strategii de raspuns la risc				
Sursa de risc	Categoria de risc	Strategie de raspuns	Persoana responsabila	Frecventa evaluarii
Economia locala	Riscuri economice	Relaxare	Managerul de proiect	Lunar
Tehnologia	Riscuri tehnologice	Eliminare	Responsabil Achizitii	La nivel de activitate
Durata estimata a activitatilor	Riscuri organizationale	Acceptare activa	Responsabilul de pachet de activitati	La nivel de activitate
Personalul	Riscuri organizionale	Eliminare	Managerul de proiect	Lunar
Nu exista control privind prioritatile personalului	Riscuri specifice managementului proiectului	Eliminare	Managerul de proiect	Saptamanal
Modificarea legislatiei	Riscuri politice	Acceptare activa	Managerul de proiect	Semestrial

## 5.8 Workforce estimations for the investment

### 5.8.1 Number of workplaces created in the execution phase

This project will create 25 workplaces, 9 of them in RD:

3 medical specialists obstetrics and gynecology

1 medical geneticist + 2 nurses

1 biologist + 2 nurses

1 doctor neonatology

1 laboratory medical specialist

1 psychologist

5 midwives / nurses

1 laboratory assistant in pathology

1 software engineer

1 registration assistant

1 public relation person

4 nurses

### 5.8.2 Number of workplaces created in the operation phase

In the operation phase 50 workplaces will be created.

## 5.9 Equal opportunity

The described project will foster equal opportunities, non-discrimination and social inclusion by promoting non-discriminatory methodology, clear and transparent selection of people involved directly and indirectly in the project. On the new created jobs both female and male will be able to work, regardless of race or religious affiliation. Being an innovative hospital unit, the project facilitates access to young researchers and doctoral students in human medicine in innovative technology, currently nonexistent in our country. Professional competence will be the main factor in the selection of all persons involved. In order to ensure equal opportunities of any group of people with physical or mental disabilities, the building requires the provision of all facilities: personnel and freight elevators equipped with the alert, access ramps for each entry and floor in accordance with European standards, special toilets equipped with all necessary facilities for people with physical disabilities, level switches, sockets and devices. All these devices will allow easy access for the disabled people. The equipment will be purchased so that it does not restrict access to any group of people with disabilities. All these elements have been provided in the technical description and corresponding estimated budget of the application.

The Institute for Mother and Child Care has developed its own ethical code, defining the values that the institution wishes to promote. Among the principles that IOMC has assumed are: personal autonomy (equal opportunity for each member to apply decisions about his career) non-discrimination and equal opportunities to access employment, promoting in research programs, professionalism and transparency in recruitment and promotion. From this point of view, the proposed project is included in the institute's general policy on equal opportunities. Thus, in determining the composition of the project team we had in mind the following issues: the consent of the individual on the participation in the proposed project, non-discrimination and equal opportunities for women and men, personal merit, commitment to profession and research, creativity and talent, previously proven efficiency and performance, etc..

Therefore, the principle of equal opportunities has been taken into account in establishing the project team. Relevant in this regard is the inclusion in the project of 11 women of all the 16 persons proposed, which are selected based on competence and training. In the process of attraction, selection and recruitment of labor for the newly created jobs (25 jobs) the same principle of equal chances will be applied. Jobs created will be open equally to men or women and all social groups regardless of belonging to minority groups, race, religion, disabilities, according to the requirements of European strategies for employment creation and social inclusion. Furthermore, in filling vacancies will be created conditions to attract young specialists in pediatric.

Concluding, in the development of the project (including the establishment of the project team and the identifying of the target groups) the principle of equal opportunities was incorporated, stimulating the youth and women participation in project management or in the activities intended to take place during operation of the project.

The principle of equal opportunities will be met in the project implementation period (24 months). Thus, for the purchase the preparation of tender documentation is necessary to be carried as required by law. The award of the public contracts will comply with the principles of equal opportunities, transparency and equal treatment irrespective of nationality, race, sex, religion, disability, age.

#### **5.10 The principle "The polluter pays"**

The proposed project complies with the application of "The polluter pays" principle as HCL 393/2005 because of the sewage discharge into sewerage networks complies with the legislation in force and assuring that:

- the network construction and installation of sewerage and treatment plant is not degraded;
- the transport capacity of channel deposition or obstruction is not diminished;

- the public health or hygiene of the operating personnel will not be affected;
- the treatment process of wastewater from the treatment plants is not affected;
- there is no danger of explosion;
- the quality of waste water and rain of public sewers is not affected.

The contract for connections and utilization of public water and sewer will specify the conditions for disposal / acquisition of wastewater in public sewers, rights and obligations of operators and users, including the maximum permissible concentrations of pollutants in wastewater discharged / taken, according to HG 188/2002, GD 352/2005.

The waste water from the construction site and from the operation of the medical research unit will be downloaded in the village sewerage networks and wastewater treatment plants on condition that have been carried on all disinfection / sterilization provided by the health legislation. The sewage waste water will be collected in collecting pipes located in the basement and the sewage disposal will be done in the sewerage system of the hospital premises. The pollutants in wastewater will not exceed the maximum limits.

The garbage from the construction will be managed according to European norms in force, the beneficiary of the project is assuming the payment of any fines for breaches of regulations in force. After completion of the building, water overflows from the building will be evacuated through pouches to the ground.

## **5.11 Sustainable development**

The project meets the provisions of the World Commission on Environment and Development (WCEF) of the report "Our Common Future" (Report BRUNTLAND) and satisfies the need for infrastructure for the research and development - development in the medical field, without compromising the ability of future generations to satisfy their own needs. Moreover, the urgent need to modernize the healthcare infrastructure in Romania fully justify the project idea.

The construction of such units, unique in the country, could give an excellent research jump start in applied medicine to the highest European standards. Fetoscopy is a method of investigation and performant treatment, with future impact on quality of life of the future child, his family, reducing the use frequency, decreasing the social burden by the appearance of the malformed fetuses, requiring a national network of fetoscopy and training for as many specialists as possible in intrauterine therapies. Such awareness is relevant first to the medical world, then the society about the importance of this method and the social impact.

Defining the concept of sustainable development requires careful consideration of the four pillars (economic pillar, the social pillar, environmental and cultural – educational pillar), each of these components bringing contribution to achieving balanced development.

In economic terms, the proposed project involves the implementation of medical technologies and next generation computer techniques, which will result in energy savings when using them. The project implementation will allow the "dematerialization" of many online medical procedures and services, also making energy savings, which will generate a positive impact on economic performance of the institute.

The social dimension of sustainable development aims to increase primary health and life quality of population. Thus, the proposed project directly contributes to the improvement of access to quality medical services and the provision of integrated health services.

The environmental component of sustainable development requires the promotion of eco-efficient systems to remove, on one hand, the current waste of resources and, on the other hand, the

process of environmental pollution and degradation of the biosphere - meaning systems that no longer produce waste or unusable nereintegrabile in nature. From this perspective, the latest generation equipment to be purchased will meet the "clean technology" and will provide a low energy consumption, respecting standards for energy efficiency. We have provided radiation protection of persons involved. Also, the hardware will have configurations with as little lead in the component, so reducing negative environmental impact. In addition, the heat dissipated by equipment will be reduced, air-conditioning equipment providing a symmetrical heat map.

The proposed project contributes to the development of cultural and educational pillar of sustainable development by:

- Increasing education among citizens about the health of mother and child;
- Enhancing exchange of medical information and increasing inter-professional collaboration between physicians and specialized IOMC staff and from other health institutions of profile;
- Providing new knowledge in the field ob obstretics – gynecology to general public and professionals.

The proposed project and all these specifications are in full compliance with the National Strategy for Sustainable Development of Romania 2013 - 2020 - 2030 but also with the Sustainable Development Strategy for an expanded European Union (June 2006) and the Treaty of Lisbon in 2007 which includes additional protocols on climate change and the fight against global warming.

## 5.12 Information technology and innovation

For the provision of quality services to patients and doctors, a modern IT system, with two main components, will be implemented within this project:

- A document management solution (for the increase of in research processes)
- The design of a multimedia database, created for storage of medical imagistic data (algorithms for search based on the content within these medical images will be implemented)

The purpose of the project is that of creating an integrate IT system capable of ensuring the fulfilment of the following objectives:

- Improvement of information exchange and processing;
- Improvement of inter-professional collaboration;
- Improvement of diagnose process;
- Reduction of the time of decision.

The purpose of **the document management solution** is that of increasing the efficiency in research processes and of improving the quality and efficiency of medical services provision. The applicant needs work flows automation, the elimination of delays and productivity maximisation and of a document management system that provides rapid access to information and of course, and IT system that supports all this initiative.

This system implemented through the financing project will support the activities of all entities/departments involved in the research. It will provide management for multiple types of documents (e.g. Microsoft Word, Excel documents, pictures, drawings and other electronic documents), being able, in the same time identify versions, and maintain access to all previous versions of the documents created.

Besides integration of all documents of the institution in a single interface and their easy management, this solution will offer the possibility of collaborative work, by establishing the path a document must follow within the institution, the advantage of logical reorganization of the archive, preserving the same organizational structure (cabinets, lockers, records, documents), to the securization of access to archived documents or submission of different tasks through the network.

**Design of a multimedia database** created for the storage of medical images for the purpose of facilitating the disclosure of different congenital malformations in fetal imagistic explorations on the basis of algorithms of search based on content (methods of search and analysis of complex non-linear dependencies).

The main objective is the creation of some artificial intelligence methods and algorithms that support the design and development of software system for advanced search and recognition of presets within medical images, for the increase of diagnose accuracy and for the reduction of the time for decision. The purpose of the system is the improvement of diagnose process through detailed analysis of a large number of images in the shortest time.

### 5.13 Public acquisitions

All the activities of the construction and design, procurement of medical equipment, hardware, solutions and all services included in this project shall be subject to existing legal regulation in the field of public procurement, according to the Ordinance 34/2006.

To ensure unity, uniformity, balanced and coherent procurement process, the principles that led to the award of public contracts are:

- non-discrimination;
- equal treatment;
- mutual recognition;
- transparency;
- proportionality;
- efficient use of funds;
- accountability.

For an efficient use of funds and taking into account the products to be procured will apply the following procedures:

- open auction, that is the procedure in which any interested operator is entitled to submit a tender;
- negotiation, that is the procedure whereby the contracting authority develops consultations with selected candidates and negotiate contract terms, including price, with one or more of them. Negotiation will be used without prior publication of a contract notice;
- for contracts with values less than 100.000 Euro, excluding VAT, for goods and services the procedure applied is the call for proposals, the simplified procedure whereby the contracting authority requests offers from more operators;
- for products and services whose value does not exceed EUR 15,000 the contract will be awarded directly. In this case, the public contract is considered the justifying document.

In order to respect these principles, the management team will pursue the establishment of a framework based on trust, fairness and impartiality and will seek to limit the occurrence of errors in the process of public procurement.

#### **5.14 Inter – regional approach**

The applicant defined the mechanisms of interregional communication in order to facilitate dissemination of project results. Due to geographical spread in the number of medical units, the results and experience in the project will be transferred to various levels irrespective of the region, the beneficiary developing the infrastructure and capacity to provide expertise and knowledge transfer to other target groups involved in maternal and fetus health.

#### **5.15 Transnational approach**

The endowment of this center facilities to European standards will result in a reduction in the disparities between Romania and the other developed countries, through the developemnt of the infrastructure of the maternal-fetal unit under the thematic areas of the 7th Framework Program (FP7) and a net improvement of women and children's health programs, with direct implications for health care community, for the period after accession, a medical and social priority.

Because the endowments purchased by this project, the maternal-fetal unit will become a reference in this field in the European Union, allowing training courses and practice and experience exchanges with the specialists from other member countries.

The activity of this unit will help reduce the existing gap between the approach of these issues in our country and the European countries, both in terms of fundamental research and application results of modern medical practice. Moreover, it will be the starting point of initiation and development of new areas of great future as fetoscopy.

### **6 THE MAIN TECHNICAL AND ECONOMICAL INDICATORS**

#### **6.1 Total value**

The total value of the investment is **15.759.564 Euro**, equivalent of **68.554.102 RON**, of which:  
- eligible costs are of **13.243.331 Euro**, equivalent of **57.264.900 RON**  
- noneligible costs are of **2.516.233 Euro**, equivalent of **10.945.613 RON**

The average euro exchange rate is of **4.35 RON/EURO**.

#### **6.2 Staggering investment**

Procurement of equipment and services will be made in phases according to the implementation schedules of the investments.

The financing of the investment will be achieved as follows:

- 100% of grants;

Further details are presented in the chapter that covers the estimated costs of investment and the chapter that covers the cost benefit analysis.

### 6.3 Duration of achievement

The duration of this project achievement is **24 months**.

The implementation plan and the presentation of the detailed activities is presented in Chapter 3.4 – Breakdown chart of the investment.

### 6.4 Specific indicators

#### 6.4.1 Quantitative indicators

- **New buildings (number) : 1 building resulted from the project;**
- **RD Labs new created by the project (number): 3** research labs;
- **IT solutions** implemented by the project **(number): 1** IT solution able to sustain the research and the colaboration between scientists;
- **RD equipment** with a value of over 100.000 euro purchased per project **(number): 5 units;**
- **Modernized/Build Surface** (square meters):**1800 sq.**

#### 6.4.2 Quantitative indicators

- Created working places due to the project (number): **25** new workplaces created
- Created in RD working places due to the project (number): **9** new workplaces created with research and development duties;
- International projects in which the infrastructure will be implicated (number): **1** with the University of Florence ( anexx 2)

## 7 CONCLUSIONS

Although incubating a high risk, ultra specialized maternal and fetal medical practice, would offer through scientific diagnose, the certitude of some pre-delivery diagnoses, with tremendous advantages for families that suffered traumas in obstetrical background and through adequate behaviour, reducing thus social expenses that the society owes to those affected if pre-delivery diagnose is not fully elucidated.

This project will contribute to the reduction of social and economic burden through pre-delivery therapy of the diseases with cu long term disabilities.

In this context, the establishment, building and commissioning of such a medical excellence unit that supports the families and society as well as for the development of excellence obstetrical practice is necessary.

The unborn foetus has become a patient whose diagnose and treatment can be performed before birth.

The activity of this unit shall contribute to the reduction of the gap between the level of approaching these themes in our country and European and worldwide level, in the field of fundamental research, as well as in that of the application of results in modern medical practice. Furthermore, it shall constitute the starting point for the initiation and development of new fields, as fetoscopy.

#### Coherence and realism

The implementation plan is consistent and realistic, supported by a number of factors, such as:

- realism of the project proposal is supported by the current state of research and health services market and the priorities manifested by Romanian organizations, as well as the European ones as shown in the "General information on the project" of this feasibility study;
- usable results provided by the research team, linked to reality and gained through the experience in similar projects detailed in the "Experience in operating similar projects";
- quantifying the results as presented in the chapter "Cost-benefit analysis";
- study and risk assessment detailed in the chapter "Risk Assessment";
- quality management expertise supported by the project coordinators as mentioned in the "project management" of the feasibility study.

### **The structure and the continuity**

The main activities and the activities of post-operation is well defined because there are:

- description of the stages and activities of the project, located in an obvious interdependence that gives continuity throughout the project;
- determining a reasonable time and responsibilities connected with the project; human resources with different levels of training ensuring a total coverage of the needs created by the activities;
- a reasonable budget with a breakdown by activity coherent structure.

In terms of macroeconomic objectives, the project will create new jobs, both in research as well as in the medical field, supported by the concept of equality between women and men.

### **Analysis strategy**

The strategy adopted in this project aims to plan both macroeconomic and microeconomic one, characterized by the following aspects:

- contribution to the achievement of key EU policies, and improving economic competitiveness of Romania;
- supporting development of research and development and innovation and facilitate collaborative projects between universities and enterprises and technological transfer;
- request a reasonable capital;
- investment costs of the project involve pecific equipment;
- operating costs with a direct influence on employment, and economic partnership.

### **The need for co-financing**

Project sustainability is possible only in case of obtaining grants, other possible variants with a negative result, as can be seen in the "cost-benefit analysis.

The project will not deploy if not obtain the grant from the Structural Funds.

**8 ANNEX**

**8.1 Annex 1: CVs of the project management team**

**Project acronym: UAMF**

**Function within the Project: Project manager**

1. **Name** Suciu
2. **Surname:** Nicolae
3. **Date and place of birth:** Auseu jud. Bihor
4. **Nationality:** Romanian
5. **Marital status:** married

**6. Education:**

Institution	The Period	Obtained grades and
UMF – „ Iuliu Hateganu „ Cluj Napoca	1975-1981	Doctor

**7. Professional Experience:**

Institution	The Period
Practitioner O-G	1987-1992
Medic Primar O-G	1992-prez
Medic Primar Sef Sectie	1995-prez

**8. Scientific title:** Associate Professor

**9. Foreign languages:** English

**10. Patents , :**

**11. Works developed and / or published:**

- Histerectomia de hemostaza N Suciu, O Toader, G Banceanu, M Ionescu S Esanu, O Magureanu , D Ilina , L Iurco , revista Medico-chirurgicala a societatii de Medici si Naturalisti Iasi , vol 11, nr 2 /2007 ( CNSIS B )
- Patofiziologia prolapsului genital si a incontinentei urinare de efort, Suciu Nicolae coautor, ED Universitara Carol Davila Bucuresti 2006,ISBN 973-708-014-9,978-973-708-014-1,144 pag ( CNCSIS)
- Modificarile organismului matern in sarcina si lauzie – Manual; N. Suciu, D. Nanu, M.I. Nanu, Editura Renaissance, București 2005 ( CNCSIS )
- Ghid practic de infertilitate; N. Suciu; Editura Renaissance, București 2005( CNCSIS )
- Modificari fiziologice in sarcina; Nanu D , F. Isopescu, M. Georgian, N. Suciu Editura Renaissance, București 2005
- Stilul de viata al femeii gravide; M.I. Nanu, N. Suciu; capitole în OBSTETRICĂ sub redacția D. Nanu, B. Marinescu, M. Moga; Editura Universitară „Carol Davila”, București 2005 ( CNCSIS )
- Sarcina si lupusul-N. Suciu, L. Pechi, F. Cioban, M. Vasilescu Medical Update, apr. 2006( CNCSIS C )
- Infectiile tractului urinar in sarcina -N. Suciu, C. Șai, L. Pechi, F. Cioban Medical Update, Iun.2005; 208-209(CNCSIS C )
- Medicatia antitrombonica in sarcina -N. Suciu, F. Cioban, L. Pechi, M. Vasilescu Medical Update, dec. 2005; 200-204( CNCSIS C )
- Operativ Laparoscopy vs Laparotomy in ovarian tumor pathology at reproductive age.Elisaveta . Maior, N.G. Saba, Mioara Ionescu, N. Suciu - The 19th World Congress on Fertility & Sterility April 29 – May 03, 2007 International Convention Center Durban, South Africa.

**12. Member of professional associations**

- Vicepresident of Romanian Society Gynecology - Oncology( 2009) ,
- Member of Romanian Societyde Obstetrics and Ginecologie
- member of E.A.G.O. ( The European Association of Gynaecologic and Obstetrician )
- 1994 member of A.A.G.L. ( The American Association of Laparosopists)
- 1999 member of J.S.P.S. (The Japan Society for Promotion of Science )
- 2001 member of A.S.R.M. ( The American Society for Reproductive Medicine)
- 2002 member of E.S.H.R.E. ( The European Society of Human Reproduction and Embryology )

**13. Skill and Qualifications:**

- 1995 Laparoscopic Skills Enhancement and Suturing Course –Yale University School of Medicine , Department of Surgery
- 1997 Ultrasound in Obstetrics - Gynecology
- 2005 Minimal invasive surgery for female genital Prolapse by C.Y.Liu MD  
Diagnosis & Treatment of Urinary Incontinence

**14. Experience (including management experience) in other programs / projects of national / international :**

<b>Project</b>	<b>Title</b>	<b>The Period</b>
Prenatal diagnosis and fetal therapy	Team member	2006-2008
Laparoscopic and hysteroscopic equipment, Studiu clinic mult centru, 2006 Investigator principal Beneficiar Olympus Medical Systems Europe GMBH, Hamburg, Germania	Team member	2006
Establish an integrated network for studying microbial biofilms on cellular and protein substrates to improve diagnosis and treatment of infections caused by biofilme, 2006-2008 Project 2006 program CEEEX	Project manager	2005-2008

**15. List of most important publications / patents :**

I declare under our responsibility that the data presented are consistent with reality.

**Project acronym: UAMF**

**Function within the Project: Medical responsible**

**1. Name:** : ANCA

**2. Surname:** ALINA IOANA

**3. Date and place of birth:**

**4. Nationality:** Romanian

**5. Marital status:** married

**6. Education:**

Institution	The Period	Obtained grades and
Facultatea de Pediatrie IMF, "Carol Davila", Bucharest	1977-1983	Medic

**7. Professional Experience:**

Institution	The Period	Title
IOMC – Bucharest	01.12.1983 - 01.11.1985	Doctor in training
IMF Bucharest, Pediatrics Department Emilia Irza– Bucharest.	01.11.1985 - 15.09.1986	medic level II year III
IMF Bucharest, Department Pediatrics Emilia Irza– Bucurest	15.09.1986 - 16.02.1990	medic
IOMC – Bucharest	1990	specialist pediatrician
IOMC – Bucharest	1994	physician pediatrician
Clinic nr. I prof. Dr. Alfred Rusescu Bucharest	2003 - present	Head of department of pediatric and neonatal
IMF Bucharest, Department Pediatrics Emilia Irza– Bucharest	16.02.1990 - 01.10.1990	substitute teaching assistant
UMF Carol Davila Bucharest, Department Pediatrics Hospital Clinic Al. Rusescu– Bucurest	01.10.1990 - 03.10.1994	Assistant Professor Holder
UMF Carol Davila Bucharest, Department Pediatrics Sp. Clin. Al. Rusescu– Bucharest.	03.10.1994 - 01.10.2002	Lecturer
UMF Carol Davila Bucharest, Department Pediatrics Sp. Clin. Al. Rusescu– Bucharest	01.10.2002 - present	University Professor
Clinic of Pediatrics Hospitalul Prof. Dr. Alfred Rusescu	2003	Head of Department

Bucharest.		
Faculty of Medicine	2004 – 2008	<b>representative in the Council</b>
Faculty of Medicine	2004 – 2008	<b>represented in the Senate</b>
Clinic I and II Pediatrics Hospitalul Prof. Dr. Alfred Rusescu Bucharest, department M 37 Disciplina Pediatrics I.	2008	<b>Head of Department</b>
Facultatii de General Medicine	2008	<b>representative in the Council</b>
Facultatii de General Medicine	2008	<b>represented in the Senate</b>

**8. Scientific title: University Professor**, Doctor of medical sciences, specialty Pediatrics

**9. Foreign languages:** English

**10. Patents , :**

**11. Works developed and / or published,**

**Singular Author:**

**Ioana Alina Anca:** ULTRASOUND TRANSFONTANELARA In infants and sugar - practical approach . Medical Publishing House Bucharest, 2007 (Cod CNCSIS 167) ISBN 978-973-39-0624-4.

**Coauthor:**

*MEMOMED* - memorator al medicamentelor de uz uman înregistrate în România. ISBN 973-98183-8-9 editiile **1998, 1999, 2000, 2001**.

**Author :**

- Georgescu, **Ioana Alina Anca**, M, Craiu, D. Predescu, Alina Stanescu - COMPENDIU DE PEDIATRICS - **Ed.BIC ALL cod CNCSIS 240 Bucharest - 2002. author a 12 capitole** ISBN 973-571- 370-5

- A. Georgescu, **Ioana Alina Anca**, M, Craiu, D. Predescu, Alina Stanescu - Compendium of Pediatrics – editia a II revazuta - **Ed.BIC ALL Cod CNCSIS 240 Bucharest 2005** ISBN 9735715880.

- Radu Ion Badea, Sorin Marian Dudea, Petru Adrian Mircea, Mircea Stamate: Ultrasound TREATY CLINIC VOL III Medical Publishing House Bucharest 2008 ISBN 978-973-39-06-40-7

**12. Member of professional associations**

- Board member and General Medicine Faculty Senate
- Head of Department at Clinica I Pediatrics Hospitalul Prof. Dr. Alfred Rusescu Bucharest.
- expert evaluator Pediatrics of European Medicine Agency (EMEA) from National Medicines Agency (NMA) Romania.

**Member of international professional associations**

1. **2005 – present** - Member **CEVAG** - Central European Vaccination Advisory Group

2. **2006 - present** - Member **EFSUMB** - European Federation of Societies for Ultrasound in Medicine and Biology.

3. **2006 - present** - Member of **WFUMB** - World Federation for Ultrasound in Medicine and Biology.

**Member of national professional associations**

1. **1994** - Founding Member of Pediatric Cardiology Group of the Romanian Society of Cardiology.

2. **2005 – present** - Member of **SRUMB** - Romanian Society of Ultrasound in Medicine and Biology.

3. **2006 – present** - Member **ACV** Romanian Vaccinologie Consultative Association

4. **2007 – present** - Member of Romanian Society of Pediatrics

**Member of the editorial prestige collective**

1) Member in the journal editorial committee Therapy Clinical Pharmacology and Toxicology ISSN 1583-0012 **din anul 1999 – present**

2) Member a Central European Vaccination Advisory Group (CEVAG) and coauthor of **Inoculum** newsletter-ul

3) Member in the editorial review board of the journal Medical ultrasonography, ISSN 1844-4172

**13. Skill and Qualifications:**

**Pediatrics generala**

a) Practitioner Pediatrician by Order of the Minister of Health nr. 33/23.01.1990

b) General Doctor Pediatrician by Order of the Minister of Health nr. 1083/07.07.1994

c) Authorization for the free practice nr. 57094 issued of the Ministry of Health Public Health Department of the City i Bucharest Nr. 15139 / 15.09.2005

d) Member of the College of Physicians of Romania cf certificate series B05 Nr. 2200 din 15.09.2005

e) member of Romanian Society of Pediatrics

f) Expert ANM pentru EMEA în specialitatea Pediatrics.

**2) Ultrasound general including Ultrasound pediatrics**

a) General Ultrasound Course competencies

i) Competence in Ultrasound generally achieved in 1997 cf. Certificate of competency nr. 1445 / 16.05.1997

ii) Euroschool Course *Ultrasonography in digestive tumors* Cluj Napoca 25-26 Mai 2005.

iii) Euroschool Course *Ultrasonography in Emergencies* Oradea 25-26 Mai 2006.

iv) Euroson School *Guidelines in Gastroenterological Ultrasound Emergencies* Craiova 31 mai – 1 iunie 2007.

v) Euroson 2008 Timisoara 2008

b) Member of Romanian Society of Ultrasound in Biology and Medicine (SRUMB)

c) Member of European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB)

d) Member of World Federation for Ultrasound in Medicine and Biology (WSUMB)

**3) Pediatric Cardiology**

a) Decembrie 1994 - Founding Member al grupului de cardiologie pediatria al Societatii Române de Cardiologie.

b) Certificate of Education complemetare in pediatric cardiology Nr. 19423 / 07.09.2006 certificate issued in accordance with approved MS nr. GH / 4194 / 05.06.2000.

c) The Children s Hohospital of Philadelphia: Annual Up date on Pediatric Cardiovascular Disease  
Scottsdale Arizona 8-12 febr. 2006.

#### 4) Vaccinologie pediatric

- a) Member of Asociatiei Consultative de Vaccinologie din Romania (ACV)
- b) Member of Central European Vaccination Advisory Group (CEVAG)
- c) 2-nd International Vilnius Course **Vaccines as a Tool for Achieving a Better Quality of Life** 2-3 aprilie 2008 Vilnius Lithuania

#### 5) Others domains

- a) Graduate of the training session Central Eastern European Evidence Based Health Care Workshop dec **2002** Visegrad, Hungary
- b) Graduate of the training session Central Eastern European AGREE Workshop oct **2003** Budapest, Hungary.
- c) Graduate of the training session: *Managementul Hospitalelor Publice* - cf. Certificatului de absolvire nr. 1 Bucharest, oct. **2006**.
- d) Graduate module *Management of Hohospitals in Transition* - Georgetown University Center for Intercultural Education and Development oct. **2006**.
- e) **2004 - 2006** Member in the board of directors of the Senate UMF Carol Davila Bucharest la Hospitalul Central de Copii Gr Alexandrescu Bucharest
- f) **2004 - 2006** Board member in the Senate UMF Carol Davila Bucharest la Hospitalul M.S. Curie

#### 14. Experience (including management experience) in other programs / projects of national / international :

1. **1991 member** of the team of investigators in the study of the nutritional status of children in Romania colaborare UNICEF / CDC Atlanta - Georgia and the WHO.
2. **1998-1999 Principal investigator** in the international multicenter study.  
Contribute a better translation: "Open clinical trial to verify the efficacy and safety of dosage schedule of the investigational drug adiuretin spray for the treatment of primary enurezis nocturna with children from 6-18 years of age" AD/S 10/ PNE-03 initiat de Ferring Leciva.
3. **2002 Principal investigator** in the study "A Randomized, Investigator-Blind, Multicenter Study to Assess the Efficacy of Oral Augmentin ES-600 Twice Daily for 10 Days Versus Oral Zythromax Once Daily for 5 Days in the treatment of Acute Otitis Media in Infants and Children ".
4. **2005 - 2007 Principal investigator** in the international multicenter study"Propiverine hydrochloride in children suffering from overactive bladder and urinary incontinence – a randomised, double-blind, placebo-controlled, parallel-grouped multicentre clinical trial" initiat de Apogepha Arzneimittel GmbH Dresden– Germania. .
5. **2005 Member** in the research team on "celiac disease: research on the incidence and diagnosis, providing food-fortified flour dietary treatments for 'long - life. Domestic research funded by the Ministry of Research - contract CEEX nr.1/2005:
6. **2006 – 2008 Scientific Manager of the IOMC** the project "Study of Clinical and pathologoanatomic nephritis syndrome in children: evaluation of etiology and behavior therapy early" grant agreement no. 4182/2006. National Program of Research Excellence, Project CEEX number 4182/2006 (Module 1: research and development complex projects, the competition in January 2006), currently in progress.
7. **2007** „Familial risk and genetic factors in celiac disease” - Research International – Partner, collaborator EU FP 6 Mobility Marie Curie Excellence Grant – project manager from UMF Carol Davila.
8. **2007 – 2010 Responsible Scientific** from UMF Carol Davila „ Creating and clinical testing of functional foods for prevention dietoterapiei deficiencies in iron, the vulnerable groups of the population "Internal Research funded by the Ministry of Research nr. 1261 - contract CEEX/2007.
9. **2007 -ongoing:** Principal investigator in a multicenter study "Hohospital based surveillance to estimate the disease burden of rotavirus gastroenteritis in children <5 years in Romania" - sponsored by companiaGlaxoSmithKline.

#### 15. List of most important publications / patents :

I declare under our responsibility that the data presented are consistent with reality.

**Project acronym: UAMF**

**Function within the Project: Legal responsible**

1. **Name:** Gligor

2. **Surname:** Liliana

3. **Date and place of birth:** 15.11.1968 Sarichioi jud. Tulcea

4. **Nationality:** Romanian

5. **Marital status:** married

6. **Education:**

Institution	The Period	Obtained grades and
Faculty of Law, Universitate Hyperion	1992-1996	jurist
Universitatea Spiru Haret	2005-2006	masters

7. **Scientific title:**

8. **Professional Experience:**

Institution	The Period	Title	Description
IOMC Polizu	2008-2009	jurist	
Bucharest Bar Association	2002-2008	lawyer	

9. **Foreign languages:** English, French

10. **Patents:**

11. **Works developed and / or published:**

14. **Experience (including management experience) in other programs / projects of national / international :**

I declare under our responsibility that the data presented are consistent with reality.

**Project acronym: UAMF**

**Function within the Project: Financial responsible**

1. **Name:** Harabula
2. **Surname:** Daniela
3. **Date and place of birth:** 22.12.1968
4. **Nationality:** Romanian
5. **Marital status:** married

**6. Education:**

Institution	The Period	Obtained grades and
Academy of Economic Studies	2005-2007	masters
Academy of Economic Studies, Faculty of Economics agribusiness and the environment,	2000-2005	graduate

**7. Scientific title:**

**8. Professional Experience:**

Institution	The Period	Title	Description
Filatura de In si Canepa, Balotesti, Ilfov	1988-1993	office worker	
IOMC POLIZU	1997-2009	expert in the science of commodities, Head of purchasing, administrative director	

**9. Foreign languages:** English, Russian

**10. Patents:**

**11. Works developed and / or published:**

**14. Experience (including management experience) in other programs / projects of national / international :**

Project	Titla	The Period	Bugetul administrat
<b>Clinical Study-pathologoanatomic in nephritis syndrome in children "-CEEX 186/2006</b>	Financial Officer	2006-2008	
<b>Integrated approach clinical, biochemical and cytogetics of pediatric diseases neurogenetice in order to open a regional registry for pediatric neurological disease</b>	Financial Officer	2006-2008	

<b>surveillance-CEEX Nr.150/2006-</b>			
<b>control of vertical transmission of infections associated with pregnancy by testing pregnant women and infant-National Research Institute CEEX Nr.164/2006- contract with the Institute</b>	Financial Officer	2007-2009	
<b>Establish an integrated network for studying microbial biofilms on cellular and protein substrates to improve diagnosis and treatment of infections caused by biofilme- CEEX Nr.142/2006-cu UMF- Bucharest</b>	Financial Officer	2005-2008	

I declare under our responsibility that the data presented are consistent with reality.

**Project acronym: UAMF**

**Function within the Project: Secretarial responsible**

1. **Name:** Stanescu

2. **Surname:** Stela

3. **Date and place of birth:** 6.06 1941, Bucuresti

4. **Nationality:** Romanian

5. **Marital status:** married

6. **Education:**

Institution	The Period	Obtained grades and
High School Spiru Haret	1954-1959	

7. **Scientific title:**

8. **Professional Experience:**

Institution	The Period	Title	Description
UMF Carol Davila	1962-2000	secretary	
IOMC ALFRED RUSESSCU	2000-2009	secretary	

9. **Foreign languages:** English, French

11. **Works developed and / or published:**

14. **Experience (including management experience) in other programs / projects of national / international :**

Project	Titla	The Period	Bugetul administrat
<b>Clinical Study-pathologoanatomic in nephritis syndrome in children "-CEEX 186/2006</b>	secretary	2006-2008	
<b>Integrated approach clinical, biochemical and cytogenetics of pediatric diseases neurogenetice in order to open a regional registry for pediatric neurological disease surveillance-CEEX</b>	secretary	2006-2008	

I declare under our responsibility that the data presented are consistent with reality.

**Members resumes:**

1. **Name:** Conci
2. **Surname:** Mihaela
3. **Date and place of birth:** 14.08.1976
4. **Nationality:** Romanian
5. **Marital status:** married

**6. Education:**

Institution	The Period	Obtained grades and
UMF " Carol Davila " Bucharest- General Medicine	1995-2001	doctor
High School Dinicu Golescu- Campulung-Muscel	1991-1995	

**7. Scientific title:**

**8. Professional Experience:**

Institution	The Period	Title	Description
I.O.M.C. Polizu	2007-2009	Practitioner ATI	
Institutul Clinic Fundeni Clinica ATI	2002-2006	Resident physician ATI	

**9. Foreign languages:** English

**10. Patents:**

**11. Works developed and / or published:**

- 1) Multiple organ dysfunctions in a patient with pulmonary aspergillosis  
National Conference ATI ( Eforie Nord 2005) Autori: M. Conci , D. Tomescu , D. Tulbure
- 2) Liver dysfunction in pregnancy  
National Congress ATI ( Sinaia -2009) Autori: M. Conci , R. Munteanu , G. Dumitru

**14. Experience (including management experience) in other programs / projects of national / international :**

I declare under our responsibility that the data presented are consistent with reality.

Date:

1. **Name:** Dinca
2. **Surname:** Gabriela Adriana
3. **Date and place of birth:** 24.05 1962 Cluj-Napoca
4. **Nationality:** Romanian
5. **Marital status:** married
6. **Education:**

Institution	The Period	Obtained grades and
Carol Davila' - Faculty of Medicine - Bucharest	1980-1986	Medical doctor

**7. Professional Experience:**

Institution	The Period	Title	Description
Sibiu County Hospital	1986-1989	General practitioner	
Hospitalul Clinic Polizu - Bucharest	1990-1994	Resident physician	
Polizu Hohospital Clinic	1994-1998	Specialist in obstetrics - gynecology	
Polizu Hohospital Clinic	1998-prez.	General Doctor	

8. **Scientific title:** Masters in 'Sanatate Publica and Management Sanitar'

9. **Foreign languages:** English , French

10. **Patents** , :

11. **Works developed and / or published,**

DINCA, Gabriela, Tarlea Virginia, Mociulschi R., Coman Niculina, Ionescu Mioara - COLPOSCOPY DIRECTED BIOPSY OR LLETZ IN THE DIAGNOSIS OF CERVICAL INTRAEPITHELIAL NEOPLASIA – 18 th International Papillomavirus Conference, Barcelona – Spain, July 2000.

DINCA Gabriela, Tarlea Virginia, Mociulschi R., Ionescu Mioara, Coman Niculina – DETECTION OF HIGH RISK ONCOGENIC HUMAN PAPILOMAVIRUS IN WOMEN PATIENT WITH CIN 3 LESIONS – 5th International Multidisciplinary Congress EUROGIN 2003, Paris, April 2003 , published in INTERNATIONAL PROCEEDINGS DIVISION – MONDUZZI EDITORE , pag.253-257.

DINCA Gabriela, Tarlea Virginia, Mociulschi R., Ionescu Mioara, Coman Niculina, Sarbu Georgeta, Uzum Raluca – HIGH RISK ONCOGENIC HUMAN PAPILOMA VIRUS AND CIN 3 LESIONS – 11th World Congress of Cervical Pathology and Colposcopy, Cancun – Mexic, June 2005.

The edge of solifenacin treatment in patients with OAB and haemorrhagic cystitis after radiotherapy for cervical neoplazia Authors: Associate Professor Suci N. MD. Phd.\* , Pop L. MD. \*\*, Dana Oprescu MD \*\*, Dinca Gabriela MD \*\*, Oana Magurean MD.\*\*

Correlation between colposcopy, Pap smears, cone biopsy and HPV Authors: G. A. Dinca –MD <sup>1</sup> , G. Banceanu-Professor <sup>1</sup> , M .Ionescu –MD , Phd D.N. Oprescu -MD , Phd <sup>1</sup> , O . Magurean MD <sup>1</sup> , L. Pop MD <sup>1</sup> , Sirbu Georgeta

**12. Member of professional associations:**

Din 1994 – Member of Romanian Society of Obstetrics and Gynecology

Din 1996 – Member of the French Society of Colposcopy and Cytology

Din 1997 – Member of EUROGIN

Din 2004 – Member of Balkan Medical Union.

**13. Skill and Qualifications**

1996 – April – September : Certificate of Specialty in Obstetrics - Gynecology : Colposcopy and Cervicografie – University 'Jules Verne'- Clinica de Obstetrics – Gynecology Amiens – France

1998 – Certificate of Competence in Colposcopy and Citodiagnostic

1999 – Certificate of Competence in Gynecologic ultrasound

2003 –International Training of Colposcopy : Complexity and clinical activity Developments - London, England

**14. Experience (including management experience) in other programs / projects of national / international:**

<b>Project</b>	<b>Title</b>	<b>The Period</b>
'A MULTI-CENTER, CONTROLLED, PHASE III STUDY TO INVESTIGATE THE SAFETY AND EFFICACY OF INTRAVENOUS INFUSION OF VIT-45 IN WOMEN SUFFERING FROM POST PARTUM ANEMIA', PAREXEL International Romania srl.	Team member	2004-2005
2006 – ACIC 01 – 02 STUDY - EFFICACY AND TOLERABILITY OF TOPICAL 5% ACYCLOVIR GEL (ACL5/GEL) FOR TREATMENT OF CUTANEOUS INFECTIONS BY HERPES SIMPLEX GENITALIS ON FIRST OR RECURRENT CLINICAL EPISODE. RANDOMIZED, OPEN LABEL , MULTICENTRIC CLINICAL TRIAL, CONTROLLED VERSUS ACTIVE REFERENCE FORMULATION (5% ACYCLOVIR CREAM). OPERA Contract Research Organization Genova, Italy	Team member	2006
2007 – 2008 – EPI-HPV-HERACLES – UN STUDIU EPIDEMIOLOGIC INCRUCISAT-SECTIONAL, MULTICENTRIC, PRIVIND DISTRIBUTIA TIPURILOR DE PAPILOMAVIRUS UMAN (HPV, Human Papillomavirus) LA FEMEI ADULTE DIAGNOSTICATE CU LEZIUNI CERVICALE PRECANCEROASE DE GRAD INALT : STUDIUL HERACLES, GlaxoSmithKline Biological S.A	Team member	2007-2008

**15. List of most important publications / patents:**

I declare under our responsibility that the data presented are consistent with reality.

1. **Name:** Magurean
2. **Surname:** Oana Maria Mihaela
3. **Date and place of birth:** 25.07 1973
4. **Nationality:** Romanian
5. **Marital status:** married
6. **Education:**

Institution	The Period	Obtained grades and
Institution UMF Iuliu Hateganu "Cluj Napoca, Faculty of Medicine Ministry of Health	1992 – 1998	Doctor-medic
IOMC Polizu Ministry of Health	2000-2006	resident physician
IOMC Polizu Ministry of Health	2006- present	obstetrics-gynecology specialist

7. **Scientific title:**
8. **Professional Experience:** IOMC –Poizu
9. **Foreign languages:** English, French
10. **Patents:**

**11. Works developed and / or published:**

- The edge of surgical and adjuvant treatment in ovarian cancer  
 Authors: Conf. dr. Suciu N , Dr. Pechi L , Dr. Magureanu O \* , Dr. Ilinca Gussi , Dr. Pop L \*  
 \*Department of Gynecology and Obstetrics – “Polizu” Maternity, Mother and Child Care Institute, Bucharest, Romania  
 Al V-lea Congres of Romanian Societyde Gynecology– Oncologica , Gura Humorului 2009

- Correlation between coloscopy , Pap smears , cone biopsy and HPV  
 Authors:  
 G. A. Dinca –MD <sup>1</sup> , G. Banceanu-Professor <sup>1</sup> ,M .Ionescu –MD , Phd <sup>1</sup>  
 D.N. Oprescu -MD , Phd <sup>1</sup> , O . Magurean MD <sup>1</sup> , L. Pop MD <sup>1</sup> , Sirbu Georgeta <sup>1</sup>  
 Al V-lea Congress of Romanian Societyde Gynecology– Oncologica , Gura Humorului 2009

- The overall economic impact of endometriosis  
 Authors: Conf.dr.Suciu N . , dr. Pechi L , Magureanu O , dr. Gussi I. , dr.Pop L  
 al IV-lea congres of Romanian Societyde Ginecologioe Endocrinologica-Sinaia 2009

- Utilizing SOS Bakri Intrauterine Tamponade In Postpartum Hemorrhage Treatment  
 Suciu N , M.D. Phd , Pechi L MD , Oana Magurean MD , Robe F , Pop L

- Scientific Communications Session at I.O.M.C. Polizu decembrie 2009

- HISTERECTOMIA DE HEMOSTAZA ; N. Suciu, O.Toader, G. Banceanu, M. Ionescu, S. Esanu, O. Magureanu, D. Ilina, L. Iurco, Revista Medico-Chirurgicala a Societatii de Medici and Naturalisti Iasi, vol 111, nr. 2/2007

**12. Member of professional associations:** Romanian Society of Obstetrics and Gynecology, Romanian Society of Biomaterials, Romanian Society of Transplantation ROMTRANSPLANT

**13. Skill and Qualifications:**

- Competence in Ultrasound and Colposcopy
- 4th World Congress in Fetal Medicine , 26 – 29 iun 2005, Istanbul , Turcia
- „Tehnici inovative în chirurgia incontinenței și prolapsului utero-vaginal” 15 – 16 apr 2004 București
- „International Congress of Perinatal Medicine” 1 – 4 oct 2003, Cluj-Napoca
- „Ureterosopia” 15 – 16 nov 2002, București
- Primul Congres National al ARCE and alte tehnici intervenționale cu participare internațională, 17 – 18 oct 2002, București
- Competenta Ultrasound 2007

**14. Experience (including management experience) in other programs / projects of national / international:**

- Member in the project PF 6 - European Network of Excellence on Biomaterials, Secretary to the team besides UPB Center applications BIOME, 2006
- Minimally invasive treatment by cryotherapy parenchymal tumors, member of Coordinating team besides ICUTR, Cluj Napoca, grant type CEEEX 1 / 2006
- Control of vertical transmission of infections associated with pregnancy by testing pregnant women and newborn. Work performed in collaboration with the National Research - Development in Microbiology and Immunology "Cantacuzino, 2007

I declare under our responsibility that the data presented are consistent with reality.

Date:

1. **Name:** Oprescu
2. **Surname:** Nuti Daniela
3. **Date and place of birth:** 11.12.1965
4. **Nationality:** Craiova
5. **Marital status:** married
6. **Education:**

Institution	The Period	Obtained grades and
High-School Buzesti Brother	1980- 1984	Bachalaurat
University of Medicine and Pharmacology Craiova	1986-1992	Doctor

7. **Professional Experience:**

Institution	The Period	Title	Description
Municipal Hohospital of Craiova	1992-1994	General practitioner	
I.O.M.C. "Alfred Rusescu ", Clinica de Obstetrica-Gynecology Polizu	1994-1998	Resident ob-gyn	
I.O.M.C. "Alfred Rusescu ", Clinica de Obstetrica-Gynecology Polizu	1998-prez.	Ob-GYn	

8. **Scientific title:** Doctor of Science - Medicine  
Master in Management of Public Health and Health Services
9. **Foreign languages:** English, French

10. **Patents** , :

11. **Works developed and / or published:**

- Investigation of fetal suffering in high-risk pregnancy - Modern Medicine, 2006, vol. XIII, nr 8 – author Daniela Oprescu
- Velocimetriei umbilical and cerebral Doppler study in the diagnosis of acute fetal suffering – Craiova Medicala , vol 9, Nr.3 ,2007 –autori : Daniela Oprescu, Liliana Novac, Codruta Popa, Stefania Tudorache, G. Adam, Nicolae Cernea
- Study the importance of monitoring for diagnosis cardiotocografice acute fetal hypoxia Craiova Medicala ,Vol. 9, Nr.2 , 2007- Autori : Daniela Oprescu, Liliana Novac, Codruta Popa, Stefania Tudorache, Al. Comanescu, Nicolae Cernea
- Cancer with double topography genitor-mammary and at the level of other organs, synchronone and metachrone diagnostic, therapeutical andevolutive peculiarities – XIX FIGO World Congress of Gynecology and Obstetrics 2009 – autori : Elisabeta Maior, S.M. Nicolescu, N.G. Saba, Daniela Oprescu, Maria Ocrim
- The edge of solifenacin treatment in patients with OAB and haemorrhagic cystitis after radiotherapy for cervical neoplazia Authors: Assoaciate Professor Suci N. MD. Phd. , Pop L. MD. , Dana Oprescu MD Dinca Gabriela MD , Oana Magurean MD.

**12. Member of professional associations:**

Romanian Society of Obstetrics and Gynecology

,

Romanian Society of perinatal medicine

**13. Skill and Qualifications:**

1999 – Competence in Ultrasound ginecologica

2002 – Competence in Colposcopy

1998 – Curs de Histeroscopie diagnostic and terapeutica

**14. Experience (including management experience) in other programs / projects of national / international :**

<b>Project</b>	<b>Title</b>	<b>The Period</b>
Project CEEX „ Presented biofilm on prosthetic material's level	volunteer	2006-2008

**15. List of most important publications / patents :**

I declare under our responsibility that the data presented are consistent with reality.

Date:

1. **Name:** Pop

2. **Surname:** Lucian-Gheorghe

3. **Date and place of birth:** 6.10.1980

4. **Nationality:** Romanian

5. **Marital status:** single

**6. Education:**

Institution	The Period	Obtained grades and
National College AL.Papiu Ilarian	1995-1999	Bachalaurat
UMF Tiargu-Mures	1999-2005	

**7. Professional Experience:**

Institution	The Period	Title	Description
Sp. Cl. de Urgenta Sf. Ioan	2006-prez.	Rezident	

**8. Scientific title:**

9. **Foreign languages:** English , French , hungarian

10. **Patents , :**

**11. Works developed and / or published:**

- Correlation between colposcopy , Pap smears , cone biopsy and HPV G. A. Dinca –MD<sup>1</sup>, G. Banceanu-Professor ,M .Ionescu –MD , Phd D.N. Oprescu -MD , Phd , O . Magurean MD , L. Pop MD , Sirbu Georgeta
- Histeroscopia diagnostica . Indicatii. Perspective and Limite. G. Banceanu , L. Pop
- IMPACT AND SUBSEQUENT CONSEQUENCES OF PERINATAL OBSTETRICAL CARE OVER THE SECOND TWIN
- Banceanu – Professor ;N. Suciuc – Associate Professor; O. Toader - M.D., Phd; O. Magurean - M.D.; L. Pop-M.D.
- The edge of solifenacin treatment in patients with OAB and haemorrhagic cystitis after radiotherapy for cervical neoplazia Assoaciate Professor Suciuc N. MD. Phd. , Pop L. MD. , Dana Oprescu MD Dinca Gabriela MD , Oana Magurean MD.
- The overall economic impact of endometriosis Conf.dr.Suciuc N . , dr. Pechi L , Magureanu O ,dr. Gussi I. , dr.Pop L

**12. Member of professional associations:**

Romanian Sositatea of Obstetrics and Gynecologydin Romania,  
Romanian Sositatea of Perinatal medicine

**13. Skill and Qualifications:**

**14. Experience (including management experience) in other programs / projects of national / international :**

Project	Title	The Period
Proiect CEEX „Presenta biofilmelor la level ul materialelor protetice	volunteer	2006-2008


**15. List of most important publications / patents :**

I declare under our responsibility that the data presented are consistent with reality.

Date:

1. **Name:** STOICESCU

2. **Surname:** SILVIA – MARIA

3. **Date and place of birth:** 17 08 1954, Bucharest

4. **Nationality:** Romanian

5. **Marital status:** single

**6. Education:**

Institution	The Period	Obtained grades and
Department of Pediatrics IMF Bucharest	1973 - 1982	Doctor Diploma

**7. Professional Experience:**

Institution	The Period	Title	Description
I.O.M.C.-Polizu	1985-1992	Specialist Doctor	
I.O.M.C.-Polizu	1992-2009	Head of department	

8. **Scientific title:** Professor Doctor

9. **Foreign languages:** English

10. **Patents:**

**11. Works developed and / or published:**

- 2009 - Erythropoietin versus restrictive transfusion guidelines", Prophylactic methods to prevent and reduce the severity of anemia and the severity of anemia and Erythropoietin use as an alternative therapy in anemia of prematurity, prim autor, Gineco.ro vol.5.No.1.february.
- 2009 – "Abordarea bioetica a Sindromului Down"(sub tipar), prim autor Journal of Bioethics Romanian
- Risk of hemolysis and iv immunoglobulin therapy in izoimunizare Rh, A XII A Risk of hemolysis and iv immunoglobulin therapy in izoimunizar.
- Neonatal mortality rate in Romanian NICU(level III), prim autor, 2st Congress of paediatrics – EAP, Nice, France.
- Newborn risk resulting from pregnancy marked by addiction, National Conference of Obstetrics and Gynecology, Medical Days V.Dobrovici, Iasi.

**12. Member of professional associations:**

Member of European Association of Perinatal Medicine ;  
 Member of UENPS;  
 Member of Medical Academy of Natural Food (SUA) ,

**13. Skill and Qualifications:**

- 1999 – competences in neonatology,
- extra specialized in pediatric cardiology

**14. Experience (including management experience) in other programs / projects of national / international :**

Project	Title	The Period

<p>"Proiectul Romano-Elvetian de Neonatology" "Roneonat", coordinator, Holder Swiss Agency for Development and Cooperation, Ministry of Health of Romania partner, implementer, Swiss Center for International Health / Foundation</p>	<p>Project Coordinator</p>	<p>2002 – 2007</p>
<p>"Multicenter, randomized, double - blind, parallel, reference controlled one-year long study to evaluated the growth of infants fed from birth to twelve month of age with biologically and chemically acidified form from acidified low protein starter and follow-up form from containing Probiotics, starter versus the low protein formula and a standard follow-up formula, principal investigator, the country coordinator for studio Nestle Nutrition, protocol number 07.18.INF.</p>		<p>2009</p>
<p>Vermont Oxford Database" coordinator, only State in the field of neonatal intensive care in Romania</p>		<p>2009</p>

**15. List of most important publications / patents :**

I declare under our responsibility that the data presented are consistent with reality.

Date:

1. **Name:** Toader

2. **Surname:** Oana Daniela

3. **Date and place of birth:**

4. **Nationality:** Romanian

5. **Marital status:** divorced

6. **Education:**

Institution	The Period	Obtained grades and
Art School "George Enescu"	1973-1981	
Faculty of Medicine, UMF Carol Davila Bucharest	1985-1991	Doctor

7. **Scientific title:** Lecturer, Doctor of Medicine

8. **Professional Experience:**

Institution	The Period	Title	Description
Clinical Hospital of Obstetrics and Gynecology Panait Sarbu	1991-1992	Trainee	
I.O.M.C. POLIZU	1992-PREZ	Assistant Professor, Specialist, lecturer	

9. **Foreign languages:** English

10. **Patents :**

11. **Works developed and / or published :**

-IMPACT AND SUBSEQUENT CONSEQUENCES OF PERINATAL OBSTETRICAL CARE OVER THE SECOND TWIN G. Banceanu – Professor ;N. Suciuc – Associate Professor; O. Toader - M.D., Phd; O. Magurean -M.D.; L. Pop-M.D.

- Hysterectomy of Haemostasis , N. Suciuc, O. Toader, G. Banceanu, M. Ionescu, S. Esanu, O. Magureanu, D. Ilina, L. Iurco, surgical journal of the Society of Physicians and Naturalists of Iasi, vol 111 , no. 2 / 2007.

12. **Member of professional associations:** Romanian Society of Obstetrics and Gynecology

13. **Skill and Qualifications:** Competence in Ultrasound , colposcopy

14. **Experience (including management experience) in other programs / projects of national / international :**

Project	Title	The Period
control of vertical transmission of infections associated with pregnancy by testing pregnant women and newborns applying modern methods and techniques	Team member	

of serology and molecular biology in order to validate a diagnostic algorithm cost effective, responsible project		

**15. List of most important publications / patents :**

I declare under our responsibility that the data presented are consistent with reality.

Date:

1. **Name:** URSU

2. **Surname:** Horia

3. **Date and place of birth:** 15. 09. 2009 Cluj-Napoca

4. **Nationality:** Romanian

5. **Marital status:** married

**6. Education:**

Institution	The Period	Obtained grades and
Graduate of Faculty of Medicine of Bucharest	1971-1977	Doctor

7. **Scientific title:** Professor, Doctor of Medicine

**8. Professional Experience:**

Institution	The Period	Title	Description
Institute of Endocrinology Cl Parhon.	1981-1983	Doctor secondary	
I.C. Parhon	1983 - 1990	Practitioner	

9. **Foreign languages:** English , French

10. **Patents :**

**11. Works developed and / or published:**

- R Trifanescu, S Fica, H Ursu, D Dimulescu, I Coman, C Ceck, C Barbu, Triiodothyronine as a risk factor for atrial fibrillation in amiodarone induced thyrotoxicosis, Acta Endocrinologica (Buc) 2006, 2, 187 – 202.
- F Pacini, M Schlumberger, H Dralle, R Elisei, JWA Smit, W Wiersinga and the European Thyroid Cancer Taskforce ( inclusiv H Ursu ),
- European Consensus for cancer terapy differentiated thyroid, European Journal of Endocrinology 2006, 154, 787 – 803.
- H Ursu, R Trifanescu, M Belgun, G Tatu –Chitoiu, C Podia – Igna, T Serban, E Gudovan, A Goldstein, The Outcome of Radioiodine treatment in Amiodarone – Induced Hyperthyroidism, Acta Endocrinologica ( Buc ) 2007,3, 55 – 68.
- H Ursu, Iulia Barbu, Dorina Sima, Mirela Manea, Ioana Suciu, Daniela Alexandrescu, Thyrotoxic psychosis – two case reports, Acta Endocrinologica (Buc) 2008, 4(1), 99 – 105.
- H Ursu, Mariana Purice, Maria Belgun, Ioana Suciu, Doina Ioan, Down syndrome and Turner syndrome associated with Graves disease: two case reports and review of the literature, Acta Endocrinologica (Buc) 2008

**12. Member of professional associations:**

Member of European association of Tiroidologie ( 2004).

Member of Romanian Society of Endocrinology

Member of Societati International of Endocrinology

Member of Romanian Society of Psihon euroendocrinologie

Member of International Society of neuroendocrinology

Member of Romanian Society of Senologie

**13. Skill and Qualifications:**

**14. Experience (including management experience) in other programs / projects of national / international :**

**15. List of most important publications / patents :**

I declare under our responsibility that the data presented are consistent with reality.

Date:

1. **Name:** PECHI

2. **Surname:** FLORIN LAURENTIU

3. **Date and place of birth:** Pitesti

4. **Nationality:** Romanian

5. **Marital status:**

6. **Education:**

Institution	The Period	Obtained grades and
"Victor Babes" Timisoara, Faculty of Medicine Ministry of Health Ministry of Health	1992 – 1998	medical degree
Ministry of Public Health	1998 - 1999	Doctor in training
Ministry of Public Health	2002 - 2006	Specialist in obstetrics and gynecology

7. **Scientific title:**

8. **Professional Experience:**

Institution	The Period	Title	Description
Arges County Hohospital	1998-1999	Doctor in training	Clinical activity in sections of internal medicine and surgery
Polizu Hohospital	2002 - 2006	Resident physician	Specialty Obstetrics & Gynecology
IOMC Alfred Rusescu	In present	Specialist in obstetrics and gynecology	

9. **Foreign languages:** English, French.

11. **Works developed and / or published:**

- "Antithrombotic medication in pregnancy" – Medical Update, dec 2005, dr. N. Suciu, dr. F. Cioban, dr. L. Pechi, dr. M. Vasilescu

- „ Urinary tract infections in pregnancy” – Medical Update, iun 2005, dr. N. Suciu, dr.C. Şai, dr. L. Pechi, dr. F. Cioban

- „Transcervical ( retrograde ) amnioinfusion: Improvement of neonatal outcome and optimizing of miometral contraction” – Obstetrics și ginecologia, oct 2003, dr. N. Suciu, dr. H. Cioflan, dr. G. Lemnete, dr. F. Cioban, dr. L. Pechi

12. **Member of professional associations:**

Romanian Society of Obstetrics & Gynecology

**13. Skill and Qualifications:**

- 4th World Congress in Fetal Medicine , 26 – 29 iun 2005, Istanbul , Turcia
- „ Innovative techniques in surgery incontinence and utero-vaginal prolapse” 15 – 16 apr 2004 București
- „International Congress of Perinatal Medicine” 1 – 4 oct 2003, Cluj-Napoca
- „Ureterosopia” 15 – 16 nov 2002, București
- First National Congress of the ARCE and other interventional techniques with international participation, 17 to 18 October 2002, Bucharest
- Competence Ultrasound 2007

**14. Experience (including management experience) in other programs / projects of national / international:**

<b>Project</b>	<b>Title</b>	<b>The Period:</b>
Nutritional status in pregnant women " national study of the Institute of Mother and Child care funded by UNICEF	Volunteer	November 2004
Project CEEX "This biofilm on the prosthetic materials"	Executor	2005-2008

**15. List of most important publications / patents :**

I declare under our responsibility that the data presented are consistent with reality.

Date:

## **8.2 Annex 2: Collaboration international project**



*Università degli Studi di Firenze*  
*Dipartimento di Pediatria*

## Meyer Children's Hospital

Department of Neonatology

*Director: Gianpaolo Donzelli, MD, PhD*

**Florence, October 10<sup>th</sup> 2009**

**Dr. Nicolae Suci**

Institute for Mother and Child Care-Polizu  
University Hospital,  
78126 Bucharest, Romania

*Prof. Dr. Gabriel Banceanu*

IMCW, Department of Obstetrics-Gynecology,  
*Polizu*

*pc*

**Gian Carlo Di Renzo, MD, PhD**

Dept. of Ob/Gyn and Centre for Perinatal

and Reproductive Medicine

Santa Maria della Misericordia" University Hospital

Perugia





*Università degli Studi di Firenze*  
*Dipartimento di Pediatria*

Dear Prof Banceanu and Dr. Suciu,

After having examined your project on the Maternal Fetal Unit in Bucharest which was also directly illustrated by Professor Giancarlo Di Renzo to Dr. Tommaso Langiano, General Director of the Meyer Children's Hospital, University of Florence, I am pleased to be able to inform you that I am interested in cooperating with you in order to help you attain your goals of identifying and creating excellence in perinatal-neonatal areas for clinical, teaching and research activities.

In particular I could integrate your clinical and scientific activities with high profile facilities of neonatal neurosurgery, cardiosurgery and general neonatal surgery for other malformation problems.

Moreover, my lab could support newborn screening for congenital metabolic diseases via the use of tandem mass spectrometry and perinatal immunology and infectivology laboratory investigations.

We could also carry out teaching and training activities via directly exchange or by using e-learning.

Please consider this letter as a sort of declaration of intent, in the perspective of better defining how my Dept of Neonatal medicine and neonatal surgery could be concretely involved in you project

With best regards

Gianpaolo Donzelli MD, PhD

Professor of Neonatology

University of Florence

Director of Neonatal Medicine Unit

Meyer Children's Hospital

Viale Pieraccini, 24

50139 Firenze (I)

++39 55 5662584 (545)

Fax ++39 4221012