STANDARD PROJECT FICHE

1. Basic Information

1.1 CRIS Number: BG 2005/017-353.02.02

1.2 Title: Further development of a national conformity assessment system and metrology infrastructure

1.3 Sector:

1.4 Location: Bulgaria, Sofia

1.5 Duration:

Phase 1 – 2005 – duration 21 months;

Phase 2 – 2006 – duration 21 months

2. Objectives

2.1 Overall Objective(s):

Facilitating Bulgaria's integration into the EU's Internal Market through enhancement of exportability and competitiveness of priority Bulgarian industrial sectors.

2.2 Project purpose:

The project purpose is to ensure provision of adequate and reliable services to Bulgarian industry and relevant protection and safety of society by means of:

- **Strengthening the administrative and technical capacity** of the institutional infrastructure concerned with the national conformity assessment system, including fundamental and legal metrology institutions, national market surveillance and designating authorities and accreditation system with respect to the implementation of basic strategy documents, New Approach legislation and alignment with the EU practice;
- **Exchange and provision of information in the field of conformity assessment** by means of establishing a state-of-the-art information management system, serving the activities of the institutional units involved, including a national contact point for the economic operators offering services in electronic way.

2.3 Accession Partnership (AP) and NPAA priority

Priorities defined in the Accession Partnership 2003 as regards the ability to assume the obligations of membership

Free movement of goods

- Take necessary horizontal and procedural measures.
  – Strengthen administrative capacity in the field of standardisation and support the development of the conformity assessment bodies and laboratories.
- Ensure that the transposition of all New and Old Approach Directives is completed and that the texts are fully in line with EC legislation.

2.4 Contribution to National Development Plan (and/or Structural Funds Development Plan/SDP)
Not applicable

2.5 Cross Border Impact

Not applicable

3. Description

3.1 Background and justification

Since the beginning of the accession negotiations Bulgaria has made a significant progress towards the harmonization of the European legislation in the field of free movement of goods which has been acknowledged by the last several Regular Reports of the European Commission. The provisional closing of Chapter 1 "Free movement of goods", part of which are "Legal metrology and pre-packaged products" and “New Approach Directives” requires efforts to be focused mainly on transposition and enforcement measures.

The main needs of Bulgarian industry are as follows:

- Free access to the European market;
- Recognition of testing and measurement results;
- Recognition of accredited certificates;
- Services at reasonable prices;
- Confidence in Bulgarian conformity assessment system

In respond to the stated needs in 2002 Bulgaria started negotiations for signing Protocol to the Europe Agreement on Conformity Assessment and Acceptance of industrial products (PECA). It is evidence of the EU recognition of the Bulgaria’s advances made in aligning national legislation and practice with the European one. At the current stage PECA negotiations cover six sectors - LVD, EMC, Machinery, Lifts, Gas Appliances and Toys. After PECA entering into force (by the end of 2005) Bulgaria will participate fully in the Community internal market in the products concerned. As a result the Bulgarian industry will face the competitive pressure of the European single market.

Bulgarian state authorities, business partners and non-governmental organizations have reviewed and discussed their readiness to meet the European single market challenges after joining the EU. As a result a Strategy for enhancement of the quality policy through development of national policies on systems of standardisation, metrology and accreditation, national conformity assessment and market surveillance of industrial products and an Implementation Plan were developed. These strategy documents were adopted by Decision ? 949/07.12.2004 of the Council of Ministers.

The main strategy goals are directed towards:

- Strengthening the national conformity assessment system;
- Recognition of test, calibration, certification and inspection results;
- Effective market surveillance to support consumer protection.

For the implementation of that strategy, the efforts of the authorities are directed towards enforcement of measures through strengthening the established institutional infrastructure and improving economic operators’ awareness. The efforts are, in particular, focused on interrelated activities between fundamental and legal metrology, conformity assessment and accreditation systems and market surveillance.

In the New Approach sectors, the State Agency for Metrology and Technical Surveillance (SAMTS) has been given the overall responsibility for designation of conformity assessment bodies and for implementation of metrology and market surveillance activities. SAMTS basic obligations related to the above-mentioned

fields are stipulated in the Law on Measurements and Law on Technical Requirements for Products (LTRP).

In Bulgaria the public affairs related to ensuring traceability, accuracy and reliability of measurements are regulated by the Law on Measurements. The EU legislation in the field of legal metrology and pre-packages is transposed into Bulgarian legislation through the Law and respective secondary legislation.

In the Republic of Bulgaria the task of establishing traceability of measurement results to the international measurement standards is assigned to Directorate General "National Center of Metrology" (DG "NCM"), the national metrology institution, which is a structural unit within the State Agency for Metrology and Technical Surveillance. In 1999 SAMTS, DG "NCM" signed CIPM Mutual recognition of national measurement standards and of calibration and measurement certificates issued by a national metrology institute (MRA). With respect of the latter special efforts are to be made by DG "NCM" on establishing new calibration and measurement capabilities (CMC). At the current stage 15 of the NCM CMC have been approved while 152 are at different stages of approval.

Taking into consideration the requirements of priority industry sectors as specified in the guidance documents - Middle-term Strategic Planning and Long-term Orientation Plan for development of national measurement standards and infrastructure of calibration laboratories, adopted under Phare 2000 programme, NCM still needs strengthening of its technical expertise and measurement capacity. On the basis of these guidance documents "Long-term program for the development of the national measurement standards of the Republic of Bulgaria for the period 2004 – 2010" was developed and adopted by Decision of the Council of Ministers. Through the technical assistance and supply of equipment envisaged for NCM within the project framework the attainment of the Programme's objectives and satisfaction of the priority industry needs will be strongly supported. Special attention is given to the international recognition of the NCM Calibration Certificates in the fields of thermometry, flow rate, length, optic and force measurements, further development of NCM knowledge management system and enhancement of expertise in new fields such as nano-metrology, quantum effect, cryogen radiometry, X-ray dosimetry, ion-exchanged chromatography and radio-frequency measurements.

SAMTS is also the body, which is responsible for the implementation of the governmental policy in the field of legal metrology. In accordance with the Law on Measurements and in order to ensure accuracy and reliability of measurement results all measuring instruments that are used in the health sector, public safety, environmental protection, state and municipal receivables and commercial payments are subject to metrological control. The task for performing metrological control is assigned to Directorate General "Measures and Measuring Instruments" (DG "MMI"), which is a separate unit within the SAMTS structure.

In the light of the recently adopted by the European Parliament and the Council New Approach Directive 2004/22/EC on Measuring Instruments (MID), which will be transposed into Bulgarian legislation as an Ordinance under LTRP, significant efforts are required as regards undertaking relevant enforcement measures. This issue addresses both the EU Member States and Bulgaria as an applicant country. Preparation of the MID implementation in Bulgaria has already been undertaken through a self-evaluation and analysis of the existing administrative and measurement capacity within the SAMTS structural units, namely Directorate General "Measures and Measuring Instruments" and Directorate General "Metrological Supervision" (DG "MSv").

The forthcoming MID implementation requires specific support as regards the establishment of measuring instruments conformity assessment-related infrastructure. This process will concern the existing structural units within SAMTS (DG “MMI” and DG “MSv”) as well as other potential players in the filed.
With respect of the above mentioned and considering the recommendations made as a result of EU assessment missions to Bulgaria in the field of metrology it is necessary to create preconditions for establishment of a Bulgarian institute for metrology. The establishment of this metrology institute is envisaged in the Draft Law amending the Law on Measurements. It will be based on the existing Directorate General “NCM” and Directorate General “MMI” in such a manner as to avoid conflict of interests between the different activities related to conformity assessment, designation of conformity assessment bodies and market surveillance. On the other hand, a separate independent conformity assessment body for measuring instruments covered by MID will be set up. The project will facilitate establishment of necessary implementation practice in conformity assessment and market surveillance of measuring instruments covered by MID and support economic operators’ awareness. In the project activities will be involved all potential conformity assessment bodies in the field of MID. For strengthening the DG “MMI” technical capacity as a future designated body testing equipment for conformity assessment of particular types of measuring instruments is planed to be supplied. These legislative amendments and structural re-organisation will in no way adversely affect the proper implementation of activities to be undertaken within the present project.

The Law on Technical Requirements for Products (LTRP) as a horizontal framework law provides for carrying out conformity assessment and market surveillance activities required by the respective New Approach Directives, as well as technical inspection of high-risk equipment. The law also assigns the functions relating to designation of conformity assessment bodies (CABs) only to SAMTS through its Directorate "Designation of Conformity Assessment Bodies" (D "DCABs"), except in the field of construction products where they remain responsibility of the Ministry of Regional Development and Public Works. Those two institutions are the designating authorities with regard to the adopted New Approach Directives. By the end of January 2005 twenty-six (26) CABs have been designated under the scope of thirteen (13) NA Directives. The project will support their effective integration in the work of European notified bodies working groups.

Cooperation and joint activities between SAMTS Directorate "DCABs" and EA “BAS” are of significant importance for establishing reliable and effective designation process. In order to align with European latest developments in the New Approach field it is necessary to introduce the approach based on the use of accreditation for designation purposes, for which the respective project activities are proposed.

The LTRP stipulates the rules for performing market surveillance of the products placed on the market and/or put into service, covered by the New Approach Directives as well as in-service inspection of high-risk equipment were precisely laid down. According to the provisions of the law the SAMTS carries out market surveillance through Directorate General "Market Surveillance" (DG "MS") and is responsible for in-service inspection of high-risk equipment through Directorate General "Technical Inspection" (DG "TI"). At present the market surveillance activities, effectively carried in the country, are related mainly to products intended for the end consumers. This project aims at establishment of the required knowledge and experience for performing market surveillance of products intended for

industrial use in terms of development of the respective working procedures and their practical implementation.

The Executive Agency “Bulgarian Accreditation Service” (EA “BAS”) is the national accreditation body. EA “BAS” has adopted a Strategy for accession to EA MLA in the different fields. Since 2001, the Agency is a full member of European cooperation for Accreditation (EA). The full EA “BAS” membership of EA led to signing EA Memorandum of Understanding in June 2001, thus enabling the Agency to apply for a signatory to the EA Multilateral Agreements. In December 2002 BAS submitted an application for a signatory to the EA Multilateral Agreements, and in March 2005 EA MAC passed decision EA “BAS” to sign MLAs in the fields of quality management systems certification bodies and personnel certification bodies. Recent developments indicate that with the expected status of a signatory to EA MLAs, EA “BAS” has occupied a growing share of client interest within its fields of accreditation: testing laboratories and calibration laboratories, quality management systems certification bodies, product certification bodies, personnel certification bodies, inspection bodies and environmental management systems certification bodies.

EA “BAS” capacity strengthening as a follow up from previous preparation to signing EA MLAs, becomes even more important in view of maintaining its competence as a signatory and enhancing the Bulgarian market for accession to EU. All sectors of the Bulgarian economy, and in particular those of strong competitiveness, inter alia

- foodstuffs,
- chemistry and chemical products,
- textiles,
- pharmaceuticals

need accredited certification bodies, in order to operate effectively and meet the challenges of the EU single market. Along with the first two MLAs which are expected to be signed on the forthcoming General Assembly of EA, EA “BAS” will need to meet requirements not only within the more traditional fields such as testing laboratories and calibration laboratories**,** but also in the fields of product certification bodies, inspection bodies and environmental management systems certification bodies. EA “BAS” staff should gain experience with the specific requirements of **Eco-Management and Audit Scheme (EMAS) and Good Laboratory Practice (GLP).**

It is therefore important that effort is made towards international recognition through all MLAs as soon as possible. Cooperation and joint activities between SAMTS Directorate "DCABs" and EA “BAS” are of significant importance for establishing reliable and effective designation process.

In terms of economic impact that would result in:

- enhanced market accession opportunity for the Bulgarian operators
- greater confidence in the quality of services provided by laboratories, certification and inspection bodies;
- continuous development of quality systems of accredited subjects;
- continuous improvement of quality of services and skills of personnel employed by the accredited subjects and of used technical facilities;
- economic benefits for the accredited subjects and their clients.

The Bulgarian economic operators have good knowledge of basic New Approach principles. However, a significant number of these operators are still not fully aware of the responsibilities which they must assume under the new technical legislation as well as the carrying out of respective obligations. Therefore, further support is needed regarding the issue where business should go for answers to more detailed questions. Assistance and special advice is required in order to enable the establishment of a national point as a source of information on enforcement of and interpretations on the legislation which they can address.

The lack of technical assistance in this aspect can be a barrier to the Bulgarian enterprises in order to establish compliance with the regulations. Especially the Small and Medium-sized Enterprises have a high risk to loose business opportunities if they are not able to comply with the requirements. On the other hand, there is no information provider as regards the issues related to metrology, conformity assessment, accreditation and market surveillance at a national level. Provision of appropriate information exchange will bridge this gap and will contribute to raising the awareness of producers and importers and to reducing circulation of non-compliant goods.

An information system as well as a help-desk shall be established to assist the business in receiving information on NA Directives requirements and market surveillance practice. The implementation of this system would result in a real value-added in terms of shortening the delays in making information available to the economic operators.

At present SAMTS needs further support for effective exchange of information among its regional departments on the hand and, on the other hand, between the market surveillance units and different market surveillance authorities within the country, such as customs authorities, Commission on Trade and Consumer Protection and other parties concerned in order to prevent placing non-compliant goods on the market.

The project proposed will contribute to the proper enforcement of *acquis* and implementation of the Strategy for enhancement of the quality policy through development of national policies on systems of standardisation, metrology and accreditation, national conformity assessment and market surveillance of industrial products. The latter will support the process of further strengthening the national conformity assessment system, in particular its administrative and technical aspects thus creating a basis for successful accession of Bulgaria to the EU.

3.2 Sectoral rationale
Not applicable

3.3 **Results**:

The project, consisting of four (4) components, foresees producing the following results in the different fields specified:

Year 1

A. Technical Assistance

Component 1: Fundamental Metrology
Technical Assistance for Directorate General "National Center of Metrology" (DG "NCM")
R.1.1. NCM Knowledge Management System completely developed and effectively implemented.

R.1.2. Five (5) international comparisons performed creating prerequisites for international recognition of the NCM Calibration Certificates in the fields of thermometry, flow rate, length, optic and force measurements.
R.1.3. Six (6) NCM experts trained in specific new fields of measurements: nano-metrology, quantum effect, cryogen radiometry, X-ray dosimetry, ion-exchanged chromatography, radio-frequency measurements.

Component 2: Legal Metrology

Technical Assistance for Directorate General "Measures and Measuring Instruments" (DG "MMI") and Directorate General "Metrological Supervision" (DG "MSv") and economic operators, including conformity assessment bodies (CABs)

R.2.1. Economic operators informed on MID implementation specifics.
R.2.2. 20 DG "MMI" experts and potential CABs personnel successfully trained in the implementation of conformity assessment modules under MID.
R.2.3. DG "MMI" quality system established and application for accreditation as product certification body by BAS submitted.
R2.4. DG "MMI" business plan developed.
R2.5 Enhanced expertise of DG "MMI" experts on utility meters related issues.

Component 3: Designation of conformity assessment bodies, accreditation and market surveillance

Technical Assistance for designation of conformity assessment bodies, accreditation and market surveillance

R.3.1. Established coordination mechanism and coherent approach of notified bodies in implementation of conformity assessment procedures under NA Directives.
R.3.2. Enhanced expertise of Bulgarian designated/notified bodies thus enabling them to provide competitive services to industry.
R.3.3. Improved technical expertise of 40 market surveillance inspectors on the NA Directives already in force as well as newly transposed ones with a special focus on goods intended for industrial use (Machinery, CIVEX, ATEX, PED, Recreational crafts, Lifts, MID etc.).
R.3.4. Interlaboratory comparisons in six (6) fields and three (3) proficiency testing schemes (PTs) organized and conducted.
R.3.5. EA MLA criteria to MLA signatories met in the fields of accreditation of calibration and testing laboratories, product certification bodies, environment management systems certification bodies and inspection bodies.
R.3.6. Launch procedure for signing EA MLA Protocols in the fields of:

- Calibration laboratories;
- Testing laboratories;
- Product certification bodies;
- Inspection bodies;
- Environmental management systems certification bodies.

R.3.7. Specific accreditation programmes for accreditation of candidate conformity assessment bodies under the New Approach Directives developed and implemented.
R.3.8. Accreditation used as a privileged tool for designation/notification and Bulgarian notification practice consistent with EU one.

B. Supply

Component 1: Supply of Equipment for Directorate General "National Center of Metrology"

R.1.4. Metrology laboratories operating in the priority fields defined in the Middle-term Strategic Planning equipped and operational, traceability of measurement

standards established and ten (10) NCM experts trained in equipment use and operation as well as in software application.

C. Supply

Component 3: Supply of Equipment for Executive Agency "Bulgarian Accreditation Service"

R.3.11. State-of-the-art information system and IT equipment for BAS supplied and fully operational.

Component 4: Exchange and provision of information in the field of metrology, conformity assessment and market surveillance

R.4.1. State-of-the-art information system in SAMTS and IT equipment supplied and fully operational serving the needs of SAMTS administrative units as well as the other parties concerned (state authorities; economic operators, CABs etc.);
R.4.2. Application software developed and operational as follows:
- Document flow management software;
- Customer relationship management software;
- Enterprise resources planning.

Year 2

A. Technical Assistance

Component 2: Legal Metrology

Technical Assistance for Directorate General "Measures and Measuring Instruments" (DG "MMI") and Directorate General "Metrological Supervision" (DG "MSv") and economic operators, including conformity assessment bodies (CABs)

R.2.6. 25 DG "MSv" inspectors successfully trained on the EU practice as regards the market surveillance of measuring instruments under the scope of the NA Directive on Measuring Instruments.
R.2.7. Elaborated procedures and relevant documentation covering the activity of market surveillance of measuring instruments covered by MID.
R.2.8. Eight (8) trainers-of-trainees, five (5) from DG "MMI" and three (3) from DG "MSv", trained in Bulgaria and in an EU Member State on practical implementation of MID conformity assessment procedures and market surveillance respectively.

Component 3: Designation of conformity assessment bodies, accreditation and market surveillance

Technical Assistance for designation of conformity assessment bodies, accreditation and market surveillance

R.3.9. Six (6) BAS assessors successfully trained in the specific requirements of EMAS (3 assessors/lead assessors) and GLP (3 assessors/lead assessors) as regards their implementation;
R.3.10. Integration and experience gained of BAS experts as a result of participation of 10 experts in the EA working/experts groups.

B. Supply

Component 2: Supply of Equipment for Directorate General "Measures and Measuring Instruments"

R.2.9. Testing and verification laboratories equipped and operational with respect of MID provisions, traceability of measurement standards established and 10 MMI experts trained in equipment use and operation as well as in software application (*see Annex 4*).

3.4 Activities (including means)

The activities undertaken within the project shall be implemented by means of two service and three supply contracts (for more details, please refer to the Logframe matrix – Annex 1).

Year 1

A. Technical Assistance

Component 1: Fundamental Metrology

Technical Assistance for Directorate General "National Center of Metrology" (DG "NCM")

A.1.1. Completing the development of the NCM Knowledge Management System in terms of adding new tools, including such related to NCM research activities as well as respective training modules;

A.1.2. Organisation and NCM participation in 5 international comparisons in the fields of thermometry, flow rate, length, optic and force measurements in order to establish required entries of Calibration and Measurement Capabilities;

A.1.3. Training of 6 NCM experts in EU metrology and/or associated institutes in the fields of nano-metrology, quantum effect, cryogen radiometry, X-ray dosimetry, ion-exchanged chromatography and radio-frequency measurements, specified in the Long-term Strategic Orientation Plan and Long-term Program for development of national measurement standards.

Component 2: Legal Metrology

Technical Assistance for Directorate General "Measures and Measuring Instruments" (DG "MMI") and Directorate General "Metrological Supervision" (DG "MSv") and economic operators, including conformity assessment bodies (CABs)

?.2.1. Organisation of awareness campaign on the MID implementation for economic operators;

A.2.2. Training of 20 DG "MMI" experts and potential CABs personnel on the implementation of the conformity assessment modules under MID;

A.2.3. Elaboration of the DG "MMI" quality system and preparation for accreditation of DG "MMI" as a product certification body for measuring instruments covered by MID;

A.2.4. Development of DG "MMI" business plan.

A2.5. Participation of DG "MMI" experts in the regular meetings of WELMEC WG 11 "Utility meters".

Component 3: Designation of conformity assessment bodies, accreditation and market surveillance

Technical Assistance for designation of conformity assessment bodies, accreditation and market surveillance

A.3.1. Establishing a coordination mechanism and strengthening of notified bodies working groups with respect to coherent application of NA conformity assessment procedures;

A.3.2. Effective participation of Bulgarian notified bodies in the work of the respective European notified bodies working groups;

A.3.3. Improvement of the technical expertise of 40 market surveillance inspectors on the NA Directives already in force as well as newly transposed ones with a special focus on goods intended for industrial use (Machinery, CIVEX, ATEX, PED, Recreational crafts, Lifts, MID etc.);

- Analysis of existing legislation and enforcement authorities relating to the NA product groups not intended for end-consumers;

- Study-visits in EU member-states operating similar market surveillance system;
- Organisation of regional workshops for dissemination of expertise acquired during the study-visits;
- Development of working procedures for market surveillance of product groups not intended for end-consumers;
- Organisation of joint market surveillance campaigns, in Bulgaria, covering at least three product groups.

A.3.4. Organisation and execution of six (6) interlaboratory comparisons (3 for testing laboratories and 3 for calibration laboratories) and three (3) proficiency testing schemes (PTs) for inspection bodies;

A.3.5. On the job training of 32 BAS assessors/lead assessors by EU accreditation body in order to meet the EA MLA signatory criteria in the following fields:

- Calibration laboratories – 5 expert missions;
- Testing laboratories – 10 expert missions;
- Product certification bodies – 5 expert missions;
- Inspection bodies – 10 expert missions;
- Environmental management systems certification bodies – 2 expert missions.

A.3.6. Re-evaluations/scope extension of BAS by EA evaluation team and entering EA MLAs;

A.3.7.1. Development of specific accreditation programmes for accreditation of candidate conformity assessment bodies under the New Approach Directives;

A.3.7.2. Training of 10 D "DCABs" experts and 20 BAS experts in the implementation of accreditation programmes;

A.3.8. Updating and improvement of D "DCABs" designation procedure with respect of accreditation programmes for CABs accreditation under the NA Directives and practical implementation (including on-the-job training of 3 D "DCABs" experts in a EU member-state accreditation body and notification authority);

B. Supply

<u>Component 1: Supply</u> of Equipment for Directorate General "National Center of Metrology"

A.1.4. Procurement of metrology equipment for NCM standard laboratories operating in priority fields of measurements specified in the Middle-term Strategic Planning, including calibration traceable to internationally recognised measurement standards, putting into operation and training (see Annex 4).

<u>Component 3: Supply</u> of Equipment for Executive Agency "Bulgarian accreditation Service"

A.3.11. Procurement of a state-of-the-art information system, IT and training equipment for EA "BAS" to ensure operation of own and external assessor teams and administration for handling and tracking client contracts (see Annex 4).

<u>Component 4: Exchange and provision of information in the field of metrology, conformity assessment, accreditation and market surveillance</u>

A.4.1. Supply of equipment for establishment of a state-of-the-art information system and IT equipment in SAMTS in order to facilitate the fulfillment of all duties of the specialised administration as well as the requirements of related external parties (state authorities; economic operators, CABs etc.) (see Annex 4);

A.4.2. Development and putting into operation of application software serving SAMTS and national contact point activities:

- Document flow management software
- Customer relationship management software
- Enterprise resources planning.

Year 2

A. Technical Assistance

Component 2: Legal Metrology

Technical Assistance for Directorate General "Measures and Measuring Instruments" (DG "MMI") and Directorate General "Metrological Supervision" (DG "MSv") and economic operators, including conformity assessment bodies (CABs)

A.2.6. Training of 25 DG "MSv" inspectors on the EU practice as regards the market surveillance of measuring instruments under the scope of the NA Directive on Measuring Instruments;
?.2.7. Elaboration of procedures and relevant documentation covering the activity of market surveillance of measuring instruments covered by the MID;
A.2.8. Training of eight (8) trainers-of-trainees, five (5) from DG "MMI" and three (3) from DG "MSv", in Bulgaria and in an EU Member State on practical implementation of MID conformity assessment procedures and market surveillance respectively.

Component 3: Designation of conformity assessment bodies, accreditation and market surveillance

Technical Assistance for designation of conformity assessment bodies, accreditation and market surveillance

A.3.9. Training of six (6) BAS assessors/lead assessors on the requirements of EMAS (3 assessors/lead assessors) and GLP (3 assessors/lead assessors) and the respective accreditation practice;
A.3.10. Participation of 10 BAS experts in the EA working/expert groups activities, as a follow-up to strengthening capacity in the fields of requested EA MLAs.

B. Supply

Component 2: Supply of Equipment for Directorate General "Measures and Measuring Instruments"

A.2.9. Procurement of metrology testing equipment for conformity assessment of measuring instruments under the relevant MID modules including calibration traceable to internationally recognised measurement standards, putting into operation and training (see Annex 4).

3.5 Linked activities:

A. Phare Programme

The present project is a logical follow-up of all previously implemented and currently on-going interrelated Phare projects focused specifically on the field of conformity assessment and metrology. The overall concept is to cover the whole process starting from creating the respective institutional framework and service infrastructure in the area of conformity assessment, proceeding to its strengthening in particular by means of enforced New Approach *acquis* and functioning infrastructure ensuring free movement of industrial goods and finally achieving completely developed national conformity assessment system. Thus the target aimed at was to proceed with a gradual building on the system following a specific sequence of the phases as mentioned and their proper implementation so as to reach

the final objectives, i.e. providing adequate and reliable services to industry, relevant protection and safety of society and enhancing exportability and competitiveness of priority Bulgarian industrial sectors.

Phare 2000

The recently finalised Phare 2000 Project BG0003.02 "Establishing a conformity assessment system" led to a significant progress in:

- Achieving international recognition of measurement results and creating conditions to respond to industry demands;
- Developing a network of certification bodies as a prerequisite for establishment of designated bodies in the New Approach sectors;
- Facilitating the process of international recognition of test and calibration results produced in Bulgaria, as well as of certification of products, quality systems, personnel and inspection reaching EA (European cooperation for Accreditation) level;
- Establishing a functioning system for effective market surveillance in the areas covered by the NA Directives by theoretical and practical (on-the-job) training of DG "MS" personnel in EU Member States market surveillance administrations.

Within the framework of this project in the field of market surveillance DG "MS" personnel obtained specific training by EU experts in development and implementation of computer applications to administer all relevant data, manage actual cases and exchange information with national and international counterparts which need to be integrated into an established information management system.

In the accreditation field the theoretical and practical training, joint assessments, etc. carried out under the project supported the preparation of BAS for meeting the requirements for signing MLA. As a result of the expertise enhanced initial evaluation of BAS has been successfully performed by EA lead assessors. BAS positive evaluation is a basis for its future application for signing EA MLA for calibration and testing laboratories and product certification bodies.

The most important results in the metrology part of Phare 2000 project are the successful completion of the full joint assessment of metrology laboratories by EU and BAS experts and the renovation of related laboratory premises. This is a step forward to the mutual recognition of measurement results and calibration certificates by national metrology institutions, which will also have significant impact on conformity assessment activities. This project laid also the foundations of the system that should be strengthened, including further development of DG "NCM" Knowledge Management System. Middle-term Strategic Planning and Long-term Orientation Plan for development of national measurement standards and the infrastructure of calibration laboratories were elaborated and approved as the two underlying documents on the basis of which NCM will operate in the future, outlining the priority fields of measurements as regards the Bulgarian industry demands.

As a result, the Phare 2000 Project established the basis of the respective institutional framework and service infrastructure in the area of conformity assessment and provided specific basic training of the personnel of certification, accreditation, market surveillance and metrology bodies by means of sharing experience and best practice with EU experts thus contributing to fulfillment of Europe Agreement obligations in the field of "Free movement of goods".

Phare 2001

Twinning light Project BG/2001/IB/FI-02 TLF "Establishment of Designating Authorities (future notifying authorities) and designation procedures under New Approach Directives" supported the CABs designation activities of both beneficiaries - Directorate "Designation of Conformity Assessment Bodies" within SAMTS and the Ministry of Regional Development and Public Works. The designating personnel were trained in evaluation and notification system for notified bodies in the EU Member States and implementation of the Ordinances, transposing NA Directives. The experts from Directorate "DCABs" have been positively assessed as regards their knowledge of NA Directives, the evaluation process itself and competency for carrying out the their obligations pursuant to the LTRP and the ordinances as well as assessment of compliance with the requirements of the BDS ?N 45 000 series of standards and BDS ISO/IEC 17 025.

Phare 2002

The Phare 2002 Project BG0201.12 "Strengthening of the national conformity assessment system" is designed to provide the necessary support for achieving the requirements as regards provision of adequate services to industry by CABs, standardisation and metrology institutes. The support to be received under this project is of crucial importance since it covers the three key players within the conformity assessment system, including selected CABs/testing laboratories (with proven competence, expertise and sustainability enabling them to operate as notified bodies under New Approach sectors) and national metrology institute adequately meeting industry demands, as well as the standardisation body providing effective information services in line with the CEN/CENELEC practice.

The project is targeted at improving the technical level and expertise of the main parties involved in the conformity assessment sector some of which were already provided with the basic minimum training and equipment under Phare 2000 but need upgrading of the existing testing laboratories and provision of in-depth specialised training in NA Directives fields. The most sustainable and promising CABs/testing laboratories operating in the priority NA fields will be adequately equipped and trained, the metrology laboratories upgraded so as to meet the industry demands for required services.

The efficiency of both Phare 2000 and Phare 2002 Projects will result in successful conclusion of PECA negotiations in priority industrial sectors.

***Twinning Light Project* "Strengthening the technical inspection capacity and alignment with EU practice" BG/2002/IB/FI/01/UE**

This first project in the field of technical inspection, currently under implementation, envisages establishing inspection practice corresponding to the good practice in EU Member States, ensuring safe operation of high-risk equipment in the country providing protection of human life, property and environment and creation of a basis for further liberalisation of inspection market. Moreover, with a view to the forthcoming separation of market surveillance-related functions and supporting the proper functioning of the national conformity assessment system inspectors dealing with in-service inspection of high-risk equipment should increase their competence and expertise in certain sectors covered by NA directives under the guidelines and instructions by leading EU inspectors in the respective fields.

Phare 2003

The purpose of project BG2003/004-937.02.01 **"**Strengthening of the administrative and measurement capacity for enforcement of legislation on liquid fuels and measuring medical devices. Strengthening of the national thermophysics measurement capacity." is to ensure effective and reliable liquid fuels quality

control, proper metrological control of measuring instruments in the fields of health care and flow rate as well as temperature measurements traceability and equivalence. Within the project framework technical assistance and supply of equipment for the liquid fuels quality control, medical devices with measuring functions and measuring systems for liquids other than water will be provided. As regards the national thermophysics measurement capacity standard measurement equipment for realisation of the International Temperature Scale - ITS 1990 will be supplied.

B. Other bilateral projects

Bilateral Project BUL0019 under FEU+6 Pre-accession Programme as a part of the Danish EU-integration Programme

Under this project assistance in bilateral comparison between the Bulgarian and the Danish national measurement standards as an EUROMET Project was conducted. It is a part of the activities undertaken to achieve international recognition of the Bulgarian calibration certificates.

PSO-Projects under PSO Pre-accession Programme

A PSO-Project 99/BG/9/1 for "European conformity assessment - strengthening the institutional structure and relational infrastructure in the field of LVD" has been completed. The project is implemented by NMi (The Netherlands National Metrology Institute) / RvA (The Netherlands Accreditation Body) and is finalised with a joint accreditation of one testing laboratory within Executive Agency "Certification and Testing" and four testing laboratories from the private sector all operating in the electrical industry

The financial support provided by the Dutch government under the PSO-Project PPA03BG02 concerning conformity assessment of non-automatic weighing instruments will contribute to strengthening of the relevant Bulgarian infrastructure as regards practical application of procedures under Directive 90/384/EEC. Direct beneficiaries of the project are Directorate General "Measures and Measuring Instruments" and Directorate "Designation of Conformity Assessment Bodies" within SAMTS. The project is open to manufacturers of non-automatic weighing instruments and economic operators. The results attained under both PSO projects present certain value added to the process of establishment of the national conformity assessment system.

The present project will not duplicate any of the above-mentioned projects. It will make maximum use of the experience gained from all previous linked Phare and other donors activities concerning the development of the national conformity assessment system. As a result the national conformity assessment system, including designation of CABs, accreditation, market surveillance and metrology, will be strengthened and properly functioning by means of providing adequate and reliable services to the Bulgarian industry.

3.6 Lessons learned:

During the recent years SAMTS has been actively involved in the enforcement of the New Approach *acquis* as well as establishing the relevant infrastructure with a view to contributing to free movement of industrial goods. It has gained significant experience in the European principles implementation while coordinating and participating in the working groups in charge of drafting the respective Bulgarian legislation. A series of workshops and seminars intended for awareness raising of economic operators, conformity assessment bodies and regulators has been organised and hosted by SAMTS. Within the framework of previous projects a series of training campaigns was organised by SAMTS and its social partners which contributed significantly to raising public awareness as regards metrology,

conformity assessment and market surveillance-related activities by involvement of all interested parties encouraged to share their knowledge and practical experience.

SAMTS has acquired sound experience in programming and implementation of Phare and bilateral projects that strongly contributes to the effective planning of future projects and to setting up feasible and attainable objectives.

As stated in both 2003 Regular Report and especially in 2004 Regular Report on Bulgaria's progress towards accession work has progressed well in aligning sector-specific legislation with the *acquis*. The European Commission (EC) gives a positive overall assessment as regards the proper separation of the regulatory, accreditation, standardisation, certification and market surveillance functions. It is noted that despite of the legislative alignment and established administrative capacity in the field of industrial products, efforts are still required to further improve the overall administrative capacity, in particular as regards market surveillance, metrology and conformity assessment. The EC acknowledges that development of market surveillance in Bulgaria is satisfactory for the area of the *New Approach Directives* but recommends that market surveillance should be further reinforced. The general conclusion emphasizes the fact that in order to be ready for membership, Bulgaria's efforts should put efforts and pay specific attention to developing the necessary administrative capacity to implement the *acquis* on industrial products.

According to the overall assessment and findings of the Peer Review Mission on Market Surveillance and Metrology in Bulgaria performed by TAIEX office in 2003, SAMTS have actively contributed to the dissemination of information about the New Approach legislation so as to raise the awareness of their personnel as well as among market operators with respect of the new regime. Nevertheless, the report concludes that there is an obvious need for continuous spread of information and for training to improve administrative as well as detailed technical knowledge on the application of the New Approach regime.

In order to build up an efficient system for co-ordinating market surveillance activities there is a need for improving communication facilities to set-up an IT system that could be used in between market surveillance actors (primarily for SAMTS and its local inspectorates). This could be achieved by extending the system developed under the twinning project (Phare 2000 Programme), provided it included a searchable database of products and actions.

The peer review missions performed under the recently finalised EU/EFTA "Quality Infrastructure" Project covered the fields of metrology, testing-certification-inspection, accreditation and market surveillance. The evaluation states that Bulgarian metrology has gone through a very positive evolution. Through new legislation, new management and a strategically coordinated use of both PHARE aid and bilateral aid-programmes, a modern and well-coordinated metrology organisation has emerged.

SAMTS has proven very good in reaching its goals but should start looking towards the long-term strategy. This will involve making the transition from establishing a metrology system that is very focused on directives and other EU-related issues towards a system, where Bulgaria as a mature member of the EU will need metrology to support national competitiveness.

Although SAMTS has progressed very well during the last few years, still specific competences are lacking. The latter involves needs for training in certain technical disciplines as well as in some of the aspects of implementing directives. The problem of attracting the right scientific personnel should be resolved through modern concepts such as human resource management and knowledge management

and also the necessary inter-laboratory comparisons for the documentation of the CMCs of NCM have to be addressed. Moreover, NCM still needs to improve and modernise its equipment and the Phare Programme presents an opportunity for funding and that the Bulgarian legal metrology could benefit from active participation in the work of WELMEC.

In the field of accreditation it is recommended to change the policy regarding measurement traceability and to train staff on the requirements and EA policy for interlaboratory comparisons for calibration laboratories. EA BAS must seek to comply with the requirements for accreditation of calibration and test laboratories as soon as practically possible and thereafter to apply to EA for evaluation to become a signatory to the EA MLAs, so that Bulgarian laboratories are given the chance to compete in the same markets as laboratories in the rest of Europe.

The overall conclusion of the Bulgarian market surveillance system is that within the short time of practice, SAMTS has proved that Bulgaria, when continuing the approach and allocating the appropriate resources, will be able to reach the level of EU/EFTA. Substantial efforts must be allocated in order to implement and establish the appropriate market surveillance activities within the next coming years. The implementation of market surveillance should be supplemented with assistance to the Bulgarian enterprises to establish compliance with the requirements. Market surveillance inspectors need to obtain additional specialised expertise especially when the market surveillance activities will be extended and fully implemented. The establishment of a common electronic information system will be used for coordination of market surveillance activities and exchange of information.

4. Institutional Framework

The following is the institutional framework in which the project will have to operate.

Component 1: Fundamental Metrology
Technical Assistance and Supply of Equipment for DG "NCM"

The basic obligations of the Directorate General "National Centre of Metrology" are to establish and develop the national measurement standards, ensure traceability of the national measurement standards to the international measurement standards or to measurement standards of Member States of the Meter Convention, disseminate units of measurements, perform calibration and comparisons. The total number of staff is 75. Since 2000, DG "NCM" has participated actively in the EUROMET activities and since the beginning of 2003 is a full member of EUROMET.

Component 2: Legal Metrology
Technical Assistance for DG "MMI" and DG "MSv"

The beneficiaries of this component are Directorate General "Measures and Measuring Instruments" and Directorate General "Metrological Supervision".
Directorate General "Measures and Measuring Instruments" is responsible for legal metrology activities and performing type examination, initial and subsequent verification of measuring instruments subject to metrological control. The directorate includes one "Type examination of measuring instruments" Department and six Regional Departments situated on the territory of the country. The total number of staff is 330. Three type examination and three calibration laboratories have been accredited under Phare 2000 Programme.

Directorate General "Metrological Supervision" is organised in one "Control and Methodology" Department and 12 Regional Departments over the country. The total number of staff is 125.

The basic obligations of the Directorate General “Metrological Supervision" are to:
perform monitoring on the use of units of measurement;
supervise persons who manufacture, import, repair, or use measuring instruments;
authorise persons and supervise the activities of persons authorised for verification of measuring instruments;
supervise the use of measuring instruments placed on the market;
register and control the persons manufacturing or importing pre-packages or bottles used as measuring containers.

Component 3: Designation of conformity assessment bodies, accreditation and market surveillance

Technical Assistance for D “DCABs”, DG "MS", DG “TI” and BAS

The beneficiaries of this component are Directorate "Designation of Conformity Assessment Bodies", Directorate General "Market Surveillance" and Directorate General "Technical Inspection" (DG “TI”) within the SAMTS structure and the Executive Agency "Bulgarian Accreditation Service".

Directorate "Designation of Conformity Assessment Bodies" acts as a designating authority of conformity assessment bodies in the scope of the ordinances transposing the New Approach Directives (except for the fields of construction products and medical devices). The main directorate's obligations include assessment of the technical competence and capability of bodies applying for designation under the respective Directives. The Directorate contributes to the establishment of a national conformity assessment system by providing assistance and co-ordinating designated bodies' participation in international projects and programmes. The total number of staff is 10.

The basic obligations of the Directorate General “Market Surveillance” are to monitor the products placed on the market and/or put into service for which essential requirements are laid down in the respective ordinances under the Law on Technical Requirements for Products, to carry out checks of the products placed on the market and/or put into service with regard to existence of the conformity marking and/or instructions for use in Bulgarian language as well as checks of the products' declaration of conformity. The Directorate General "Market Surveillance" is organised in one "Control and Methodology" Department and 9 Regional Departments over the country. The total number of staff is 104.

Directorate General "Technical Inspection" acts as the inspection body for high-risk equipment with main responsibilities related to the following activities:

- Technical inspection (technical examinations, tests) of :
  - steam and water boilers, boilers operating with organic heat-transfer media, pressure vessels, steam and hot water pipelines, gas installations, pipelines and installations for natural gas and liquefied hydrocarbon gases, acetylene installations;
  - lifts, cranes, cableway installations and drag lifts.
- Licensing persons for carrying out technical inspection of high-risk equipment (HRE);
- Accident analysis;
- Keeping of HRE register as well as a register of the persons licensed for carrying out technical inspection of HRE.

The activities of DG “TI” cover the whole territory of the country. For this purpose, in all regions it has its own administrative units with a different number of personnel, depending on the number of the equipment installed. In a structural aspect DG "TI" is organised in one Central Department "State Technical

Inspection", located in Sofia, which is assigned with the task to perform mainly methodological and coordination functions (give guidelines and directions), drafting of normative documents, control, etc. and 12 Regional Departments involved in carrying out the real technical inspection activities. The total number of staff is 142.

The Executive Agency "Bulgarian Accreditation Service" is the national accreditation body in the Republic of Bulgaria, operating the following accreditation schemes:

- accreditation of test and/or calibration laboratories;
- accreditation of product certification bodies;
- accreditation of quality systems, environmental management systems and personnel certification bodies;
- accreditation of inspection bodies;
- accreditation of verifiers.

The total number of BAS staff is 25.

Component 4: Exchange and provision of information in the field of metrology, conformity assessment, accreditation and market surveillance

The beneficiaries of this component are four of the SAMTS directorates and namely: Directorate General "National Center of Metrology, Directorate General "Measures and Measuring Instruments", Directorate General "Market Surveillance", Directorate General "Technical Inspection" and Directorate "Designation of Conformity Assessment Bodies". The result of the project will not lead to any change in the institutional framework as described above.

With a view of monitoring the project implementation a Steering Committee shall be established after project's commencement involving all the beneficiaries or institutions. It will be composed of management representatives of the respective beneficiaries in charge of the different components:

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The Steering Committee will also include a representative of the Central Finance and Contracts Unit (CFCU) at the Ministry of Finance as well as of the EC Delegation to Bulgaria. The Committee will meet once per three months and it will be responsible for taking project implementation-related decisions. The Secretariat will be held by the State Agency for Metrology and Technical Surveillance.

5. Detailed Budget

	Phare/Pre-Accession Instrument support	**Co-financing**			**Total Cost**
€M		**National Public Funds (*)**	**Other Sources** *(**)*	**Total Co-financing of Project**	
Year 2005 - Investment support jointly co funded					
Component 1	2 625 000	875 000		875 000	3 500 000
Component 3	150 000	50 000		50 000	200 000
Component 4	750 000	250 000		250 000	1 000 000
Investment support – sub-total	**3 525 000**	**1 175 000**		**1 175 000**	**4 700 000**
% of total public funds	***max 75 %***	***min 25 %***			

In case of <u>parallel</u> co-funding (per exception to the normal rule, see special condition as indicated below: ***Not applicable***

Year 2005 Institution Building support					
Component 1	300 000				300 000
Component 2	350 000				350 000
Component 3	1 295 000				1 295 000
IB support	**1 945 000**				**1 945 000**

Total project 2005	**5 470 000**	**1 175 000**			**6 645 000**

*indicative **Year 2006** Investment support*	*1 125 000*	*375 000*			*1 500 000*
*indicative **Year 2006** IB support*	*635 000*				*635 000*
Total (indicative) project 2006	***1 760 000***				***2 135 000***

(*) contributions form National, Regional, Local, Municipal authorities, FIs loans to public entities, funds from public enterprises
(**) private funds, FIs loans to private entities

NOTES:

- Technical specifications for equipment to be provided under Components 1, 3 and 4 shall be developed with the technical assistance of independent external experts and shall be financed under 2005 Project Preparation Facilities (approximately to the amount of 100 000 Euro). As regards the budget of standard measurement and IT equipment to be supplied (over 1 000 000 Euro) for SAMTS two independent external experts (one expert per field) during the evaluation of offers received are required (approximately to the amount of 15 000 Euro).
- Technical specifications for equipment to be provided under Component 2 shall be developed with the technical assistance of independent external experts and shall be financed under 2006 Project Preparation Facilities (approximately to the amount of 25 000 Euro). As regards the budget of testing equipment to be supplied (over 1 000 000 Euro) for SAMTS one independent external expert during the evaluation of offers received is required (approximately to the amount of 10 000 Euro).
- The budget required for preparation of the above-mentioned Technical specification documents and for evaluation of offers received, where needed, shall be considered as indicative and it is not included in the total project budget.

6. Implementation Arrangements

6.1 Implementing Agency

The implementing agency is the Central Finance and Contracts Unit (CFCU) which tasks and responsibilities are described in Article 3 of the CFCU Bulgarian Memorandum of Understanding signed between the Government of the Republic of Bulgaria and the European Commission. These responsibilities concern mainly tendering, contracting, administration, accounting and payments.

The project is implemented in close co-operation with the beneficiaries the State Agency for Metrology and Technical Surveillance and the Executive Agency "Bulgarian Accreditation Service" the delegated tasks of which are preparation of project fiches, ToRs, TS, assistance in the coordination of sub-project activities and project implementation in general.

Contact details of the CFCU:

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6.2 Twinning

Not applicable

6.3 Non-standard aspects

According to the rules of the Practical Guide (PRAG) some items of equipment to be supplied under Component 1, in particular in the field of length, electricity, time and frequency and chemistry measurements will require Derogation from the rules of origin.

6.4 Contracts

The project is expected to be contracted under two (2) service contracts and two tender procedures for supply, with up to three (3) contracts.

The service contract 1 for Year 1 with an estimated value of € 1 945 000 will include the following components:

- Component 1: TA for DG "NCM";
- Component 2: TA for DG "MMI" and CABs;
- Component 3: TA for designation of conformity assessment bodies, accreditation and market surveillance

The two supply contracts for Year 1 with a total estimated value of € 4 710 000 will be as follows:
Contract 2: Component 1: Equipment for DG "NCM";
Contract 3: Component 3: State-of-the-art information system and IT equipment for BAS and Component 4: State-of-the-art information system and IT Equipment for SAMTS.

The service contract for Year 2 with an estimated value of € 635 000 will include the following components:

- Component 2: TA for DG "MSv";
- Component 3: TA for designation of conformity assessment bodies, accreditation and market surveillance

The supply contract for Year 2 with an estimated value of € 1 500 000 will include the Component 2: Equipment for DG "MMI".

7. Implementation Schedule

7.1 Start of tendering/call for proposals

The TORs and project specifications will be ready by December 2005.

7.2 Start of project activity

Expected date of commencement of first contract/grant scheme – July 2006.

7.3 Project completion

Expected date of last payment under last contract/grant – September 2008.

8. Equal Opportunity

The management of the beneficiary institutions will ensure that men and women are equally represented in all training measures. For and during all training events, lists of participants will be established and kept with the project documentation thus giving a proof of the existing gender distribution. The issue of women's participation will have to be addressed in the progress reports.

9. Environment

The project and in particular its investment component shall not have any discernible or harmful effects on the environment. Environmental conditions within the laboratory premises will be in compliance with the requirements of local environmental regulations.

10. Rates of return

Investment support for the activities carried out, as prescribed by laws, are non-profit oriented. Preliminary forecast concerning the investment components envisaged under the current project is given in Annex 5 Preliminary forecast.

11. Investment criteria

11.1 Catalytic effect:

In the last few years, some type examination laboratories at SAMTS were renovated and new measurement standards were purchased by means of the state budget and various European programmes (weighing instruments, electric energy meters, water meters). However, considerable financial means are still necessary to establish up-to-date standard and testing laboratories.

As the financial resources necessary for the implementation of the above activities could not be fully financed by the national budget due to its limited capabilities it is obvious that the strong EU support is essential. The latter will contribute to the strengthening of the institutional capacity of the Bulgarian beneficiaries and will assist them to reach the level of the relevant EU institutions at the time of accession of Bulgaria to the EU.

11.2 Co-financing:

In addition to the EU funds the investment components of the project will receive co-financing from the State budget through Directorate "National Fund" at the Ministry of Finance to the total value of € 1 175 000 - 25% of the total investment budget are envisaged for joint co-financing of equipment supply.

11.3 Additionality:

Not applicable

11.4 Project readiness and size:

As a complement to the previous Phare programme BG 9602, the ongoing Phare 2000 Project BG 0003.02, Phare 2002 Project BG 0201.12, Phare 2003 BG 2003/004-937.02.01, the investments under the current project are based on deep needs analyses of the fundamental and legal metrology, conformity assessment and accreditation systems as well as market surveillance (Annex 4) with regard to the achievement of the project's objectives.
A preliminary needs assessment as regards the equipment to be supplied in the first and second programming year (2005 and 2006) has been made.
The list of the necessary metrology equipment to be supplied in the first programming year (2005) is drafted on the basis of the Middle-term Strategic Planning developed under Phare 2000 Sub-project BG0003.02.02.
Because of the very specific nature of the equipment to be purchased, it is necessary to receive an expert advice on detailed elaboration of the technical specifications under all Components prior to project implementation.

11.5 Sustainability:

The equipment to be purchased under Phare 2005-2006 Programme is intended for a service life of at least 10 years. All equipment will be required to comply with the applicable EU norms and standards and will be in line with EU sector policy *acquis*. It will not cause any adverse effects on the environment. Maintenance of the equipment, in particular, the cost relating to periodical calibration, spare parts and supplies, will be borne by the SAMTS budget.

11.6 Compliance with state aids provisions

The beneficiaries of this project are state organisations acting in the fields of fundamental and legal metrology, conformity assessment and accreditation systems as well as market surveillance all having state executive functions.

12. Conditionality and sequencing

Prior to implementation of the project, the following conditions will have to be met:

- Before contracting of the supplies, adequate environmental conditions for carrying out measurements with required reliability at the existing laboratories are assured;

- Continuous availability of expertise and funding required for equipment use and maintenance.

Most important milestones of the Components are as follows:

Component 1: Fundamental Metrology

Year 1
M.1. Equipment for metrology laboratories supplied, installed and put into operation, and staff trained on its use;
M.2. NCM participates in 5 international comparisons thus establishing respective entries of NCM CMC;
M.3. State-of-the-art information system supplied and operational at SAMTS serving the DG "NCM" needs;
M.4. Knowledge Management System effectively operating;
M.5. NCM experts qualified in new fields of measurements as specified in the Long-term Orientation Plan and Long-term programme for development of national measurement standards.

Component 2: Legal Metrology

Year 1
M.1. Awareness campaign on the MID implementation organised for economic operators;
M.2. DG “MMI” experts and potential CABs personnel successfully trained on the implementation of conformity assessment modules under MID;
M.3. DG “MMI” quality system established and application for accreditation by BAS submitted;
M.4. DG "MMI" business plan developed.

Year 2
M.5. Elaborated procedures and relevant documentation covering the activity of market surveillance of measuring instruments covered by the MID;
M.6. DG "MMI" and DG "MSv" trainers-of-trainees successfully trained in Bulgaria and in an EU member state on the respective MID provisions;

M.7. Testing and verification laboratories equipped and operational, traceability of measurement standards established and staff trained on equipment use and operation as well as on software application;
M.8. State-of-the-art information system supplied and operational at SAMTS serving the DG "MMI" and DG "MSv" needs.

Component 3: Conformity Assessment System

Year 1
M.1. Effective operation of the Bulgarian designated bodies at national and EU level;
M.2. Coherent approach as regards application of CA procedures;
M3. Provision of competitive services to industry by designated/notified bodies;
M4. State-of-the-art information system supplied and operational at SAMTS serving the Directorate "Designation of Conformity Assessment Bodies" needs;
M5. DG “MS” inspectors with improved technical expertise on the NA Directives already in force as well as newly transposed ones with a special focus on goods intended for industrial use;
M6. Interlaboratory comparisons in six (6) fields and three (3) proficiency testing schemes (PTs) conducted;
M7. EA MLA criteria to MLA signatories met;
M8. Specific accreditation programmes for accreditation of candidate CABs under the NA Directives implemented;
M.9. State-of-the-art information system, IT and training equipment for EA "BAS" supplied and fully operational;

Year 2
M11. Six (6) BAS assessors successfully trained on the specific requirements of EMAS and GLP as regards their practical implementation;
M12. Integration and experience gained of BAS experts as a result of their participation in the EA working/experts groups.

Component 4: Exchange and provision of information in the field of metrology, conformity assessment, accreditation and market surveillance

Year 1
? .1. State-of-the-art information system and IT equipment within SAMTS supplied;
M.2. National contact point operational.

ANNEXES TO PROJECT FICHE

1. Logframe in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule, by quarter, for full duration of project (including disbursement period)
4. Pre-feasibility study
5. Preliminary forecast
6. Reference list of relevant laws and regulations
7. Reference list of relevant strategic plans and studies
8. List of acronyms and abbreviations

ANNEX 1: Logframe planning matrix

LOGFRAME PLANNING MATRIX FOR Project: Further development of a national conformity assessment system and metrology infrastructure	Programme name and number	
	Contracting period (year 1) expires 30.11.2007	Disbursement period (Year 1) expires 30.11.2008
	Total budget year 1:	Phare budget year 1:
	6 645 000	5 470 000

Overall objective	**Objectively verifiable indicators**	**Sources of Verification**
Facilitating Bulgaria's integration into the EU's Internal Market through enhancement of exportability and competitiveness of priority Bulgarian industrial sectors.	• 8 % increase of industrial products export to the EU by the end of 2009 • EA MLA signed in the fields of calibration laboratories, testing laboratories, quality systems certification bodies, product certification bodies, personnel certification bodies, inspection bodies and environmental management systems by 2008	• Bulgarian trade statistics • EUROSTAT • Branch chambers studies • EA web site

Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
The project purpose is to ensure provision of adequate and reliable services to Bulgarian industry and relevant protection and safety of society by means of: • **Strengthening the administrative and technical capacity** of the institutional infrastructure with the national conformity assessment system, including fundamental and legal metrology institutions, national market surveillance and designating authorities and accreditation system with respect to the implementation of basic strategy documents, New Approach legislation and alignment with the EU practice;	• New NCM CMC entries submitted for review by EUROMET Technical Committees • At least one CAB designated in the scope of MID • MID market surveillance added to the operational market surveillance system • Extended scope of designations granted • EA MLA signatory criteria met	• EUROMET Web-site • SAMTS – DG "NCM" • EC Regular Report • Periodical MID market surveillance reports • Registry of the issued and withdrawn conformity assessment authorisations published in the official bulletin of SAMTS • Minutes of the EA General Assembly • EA web site	• Economic and business development does not undergo significant changes that can jeopardise the projections for project implementation; • Investment climate continues to improve in the industry sectors concerned.
• **Exchange and provision of information in the field of conformity assessment** by means of establishing a state-of-the-art information management system, serving the activities of the institutional units involved, including a national contact point for the economic operators offering services in electronic way.	•SAMTS and BAS activities traceable through the respective established IT systems •Institutional information systems established •Functioning national contact point able to	• Project reports at SAMTS and BAS • SAMTS web site • BAS web site	

	satisfy the information needs of economic operators • Increased number of service requests by 20 %		
Results	**Objectively verifiable indicators**	**Sources of Verification**	**Assumptions**
Year 1 ***A. Technical Assistance*** **<u>Component 1: Fundamental Metrology</u>** **<u>Technical Assistance</u> for DG "NCM"** R.1.1. NCM Knowledge Management System completely developed and effectively implemented;	Knowledge Management System (including established system for assisting the process of taking expert decisions) implemented and made operational by the end of 2006	• Training records at SAMTS • Training manuals • Project reports at SAMTS and CFCU	• Increased industry and trade demand for CA services
R.1.2. Five (5) international comparisons performed creating prerequisites for international recognition of the NCM Calibration Certificates in the fields of thermometry, flow rate, length, optic and force measurements.	• EUROMET registration of the international comparisons • Reports on the results of the conducted international comparisons prepared by November 2008	• EUROMET web-site • SAMTS, DG "NCM" - Reports on the results	
R.1.3. Six (6) NCM experts trained in specific new fields of measurements: nano-metrology, quantum effect, cryogen radiometry, X-ray dosimetry, ion-exchanged chromatography, radio-frequency measurements	• 6 NCM experts successfully trained in the respective new fields of measurements • At least satisfactory rating of the staff trained	• Trainees reports - SAMTS	

Component 2: Legal Metrology **Technical Assistance for DG "MMI", DG "MSv" and CABs** R.2.1. Economic operators informed on the MID implementation specifics	At least one information event for economic operators per year carried out at a national level (including dissemination of brochures, leaflets and other information materials)	• Records on events conducted • Project reports at SAMTS • Economic operators		
R.2.2. 20 DG "MMI" experts and potential CABs personnel successfully trained in the implementation of conformity assessment modules under MID.	• At least satisfactory rating of the staff trained about the results of training • Personnel trained able to apply properly the respective conformity assessment procedures	• Training records at SAMTS Supporting training materials at SAMTS • Project reports at SAMTS and CFCU		
R.2.3. DG "MMI" quality system established and application for accreditation as product certification body by BAS submitted.	• Quality system documentation prepared by April 2008 • Application for accreditation submitted by June 2008	• DG "MMI" at SAMTS • BAS		
R2.4. DG "MMI" business plan developed.	• Business plan documentation developed by April 2008	• SAMTS		
R2.5 Enhanced expertise of DG "MMI" experts on utility meters related issues	• DG MMI experts acquainted with latest developments	• Experts reports at SAMTS		

	in the field of utility meteres			
Component 3: Designation of conformity assessment bodies, accreditation and market surveillance **Technical Assistance for designation of conformity assessment bodies, accreditation and market surveillance** R.3.1. Established coordination mechanism and coherent approach of notified bodies in implementation of conformity assessment procedures under NA Directives.	• At least 5 decisions/positions of designated bodies working groups adopted	• SAMTS		
R.3.2. Enhanced expertise of Bulgarian designated/notified bodies corresponding to the level of EU notified bodies thus enabling them to provide competitive services to industry.	• Increased client satisfaction from CA services provided to national and foreign clients • Positive results of surveillance procedure	• CABs records at respective CABs/testing laboratories • SAMTS audit reports		
R.3.3. Improved technical expertise of 40 market surveillance inspectors on the NA Directives already in force as well as newly transposed ones with a special focus on goods not intended for end-consumers (Machinery, CIVEX, ATEX, PED, Recreational crafts, Lifts, MID etc.): •	• Market surveillance staff trained (20 inspectors from DG "MS" and 20 inspectors from DG "TI") and able autonomously to implement market surveillance procedures • At least satisfactory rating of the staff trained about the results of training	• Training certificates at SAMTS Human resources Department • Training records and rating sheets		

R.3.4. Interlaboratory comparisons in six (6) fields and three (3) proficiency testing schemes (PTs) organized and conducted.	• Certificates issued for each of the laboratories participating in the comparisons • 9 Reports	• BAS documentation • Comparisons participating organisations		
R.3.5. EA MLA criteria to MLA signatories met in the fields of accreditation of calibration and testing laboratories, product certification bodies, environment management systems certification bodies and inspection bodies.	• Reports of EA team on EA "BAS" assessors by the end of 2007	• BAS		
R.3.6. Launch procedure for signing EA MLA Protocols in the fields of: • Calibration laboratories; • Testing laboratories; • Product certification bodies; • Inspection bodies; • Environmental management systems certification bodies.	• Evaluation by EA completed by March 2007 • MLAs signed by end of 2008	• BAS • EA Secretariat		
R.3.7. Specific accreditation programmes for accreditation of candidate conformity assessment bodies according to respective harmonized standards under the New Approach Directives developed and implemented.	• Specific accreditation programmes established by the beginning of 2008 • 45 BAS assessors successfully trained and able to implement the procedures • 10 D "DCABs" experts successfully trained and able to implement the procedures	• BAS Quality Manual • BAS web site • SAMTS		

R.3.8. Accreditation used as a privileged tool for designation / notification and Bulgarian notification practice consistent with EU one.	• Relevant procedures updated and improved by the end of 2007 • At least 50% of CABs designated on the basis of accreditation	• Project reports at SAMTS and CFCU • Registry of the designations granted and withdrawn published in the official bulletin of SAMTS • Experts reports		
	•	•		
B. Supply **Component 1: Supply of Equipment for DG "NCM"** R.1.4. Metrology laboratories operating in the priority fields defined in the Middle-term Strategic Planning equipped and operational, traceability of measurement standards established and ten (10) NCM experts trained in equipment use and operation as well as in software application.	• Equipment supplied and operational by the end of May 2006 at the respective DG "NCM" laboratories • Staff successfully trained in the equipment operation and software application	• Acceptance protocols at SAMTS and CFCU • Training records • Training manuals		
C. Supply **Component 3: Supply of Equipment for Executive Agency "Bulgarian Accreditation Service"** R.3.11 State-of-the-art information system, IT and training equipment for EA "BAS" supplied and fully operational.	• IT and training equipment supplied and operational by the end of May 2007	• Acceptance reports at BAS and CFCU		
Component 4: Exchange and provision of information in the field of metrology, conformity assessment and market surveillance R.4.1. State-of-the-art information system in SAMTS and IT equipment supplied and fully operational serving the needs of SAMTS administrative units as well as the other parties concerned (state authorities; economic operators, CABs etc.).	• IT equipment supplied and operational by the end of May 2008 • Acceptance reports	• SAMTS and CFCU		

R.4.2. Application software developed and operational as follows: - Document flow management software - Customer relationship management software - Enterprise resources planning.	Acceptance report User software and system documentation Users manual submitted by the end of 2008	SAMTS and CFCU		
Year 2 ***A. Technical Assistance*** **Component 2:** R.2.5. 25 DG "MSv" inspectors successfully trained in the EU practice as regards the market surveillance of measuring instruments under the scope of the NA Directive on Measuring Instruments.	At least satisfactory rating of the staff trained about the results of training	Training records Project reports at SAMTS and CFCU		
R.2.6. Elaborated procedures and relevant documentation covering the activity of market surveillance of measuring instruments covered by MID.	• Working procedures approved by mid of 2008	• Documentation at SAMTS (DG "MSv") • Project reports at SAMTS and CFCU		
R.2.7. Eight (8) trainers-of-trainees, five (5) from DG "MMI" and three (3) from DG "MSv", trained in Bulgaria and in an EU Member State on practical implementation of MID conformity assessment procedures and market surveillance respectively.	• Eight (8) inspectors, five (5) from DG "MMI" and three (3) from DG "MSv" able to implement MID conformity assessment and market surveillance procedures without external assistance • Training programme and documentation developed by the end of project	• Project reports at SAMTS		
Component 3 R.3.9. Six (6) BAS assessors successfully trained in the specific requirements of EMAS (3 assessors/lead	• 3 training certificates on EMAS	• Project reports at BAS and CFCU		

assessors) and GLP (3 assessors/lead assessors) as regards their implementation.	• 3 training certificates on GLP • Training records and manuals in place by the end of 2008		
R.3.10. Integration and experience gained as a result of participation of 10 EA "BAS" experts in the EA working/experts groups.	Experts reports on shared experience, and recommendations made, within 15 days from EA group meeting	• BAS – QM	
B. Supply **Component 2: Supply of Equipment for DG "MMI"** R.2.8. Testing and verification laboratories equipped and operational with respect of MID provisions, traceability of measurement standards established and 10 MMI experts trained in equipment use and operation as well as in software application (*see Annex 4*).	• Equipment supplied and operational by the end of May 2008 at the respective DG "MMI" laboratories • 20 DG "MMI" experts trained and able autonomously to operate with the equipment and software application	• Acceptance protocols at SAMTS and CFCU • Training records • Training manual	
Activities	**Means**		**Assumptions**
Year 1 ***A. Technical Assistance*** **Component 1: Fundamental Metrology** **Technical Assistance for DG "NCM"** A.1.1. Completing the development of the NCM Knowledge Management System in terms of adding new tools, including such related to NCM research activities as well as respective training modules.	Technical assistance contract		• Clear trend set and demonstrated needs of providing adequate conformity assessment and accreditation services arising from strengthened and expanded enforcement mechanism. • Effective cooperation

			between the designating and accreditation authorities established.
A.1.2. Organisation and NCM participation in 5 international comparisons in the fields of thermometry, flow rate, length, optic and force measurements in order to establish required entries of Calibration and Measurement Capabilities.	Technical assistance contract		
A.1.3. Training of 6 NCM experts in EU metrology and/or associated institutes in the fields of nano-metrology, quantum effect, cryogen radiometry, X-ray dosimetry, ion-exchanged chromatography and radio-frequency measurements, specified in the Long-term Strategic Orientation Plan and Long-term Program for development of national measurement standards	Technical assistance contract		
Component 2: Legal Metrology **Technical Assistance for DG "MMI", DG "MSv" and CABs** ?.2.1. Organisation of awareness campaign on the MID implementation for economic operators.	Technical assistance contract		
A.2.2. Training of 20 DG "MMI" experts and potential CABs personnel on the implementation of the conformity assessment modules under MID.	Technical assistance contract		
A.2.3. Elaboration of the DG "MMI" quality system and preparation for accreditation of DG "MMI" as a product certification body for measuring instruments covered by MID.	Technical assistance contract		
A.2.4. Development of DG "MMI" business plan.	Technical assistance contract		
A2.5. Participation of DG "MMI" experts in the regular meetings of WELMEC WG 11 "Utility meters"	Technical assistance contract		
Component 3: Designation of conformity	Technical assistance		

assessment bodies, accreditation and market surveillance **Technical Assistance for** designation of conformity assessment bodies, accreditation and market surveillance A.3.1. Establishing a coordination mechanism and strengthening of notified bodies working groups with respect to coherent application of NA conformity assessment procedures.	contract	
A.3.2. Effective participation of Bulgarian notified bodies in the work of the respective European notified bodies working groups.	Technical assistance contract	
A.3.3. Improvement of the technical expertise of 40 market surveillance inspectors on the NA Directives already in force as well as newly transposed ones with a special focus on goods not intended for end-consumers(Machinery, CIVEX, ATEX, PED, Recreational crafts, Lifts, MID etc.).	Technical assistance contract	
A.3.4. Organisation and execution of six (6) interlaboratory comparisons (3 for testing laboratories and 3 for calibration laboratories) and three (3) proficiency testing schemes (PTs) for inspection bodies.	Technical assistance contract	
A.3.5. On the job training of 32 BAS assessors/lead assessors by EU accreditation body in order to meet the EA MLA signatory criteria in the following fields: • Calibration laboratories – 5 expert missions; • Testing laboratories – 10 expert missions; • Product certification bodies – 5 expert missions; • Inspection bodies – 10 expert missions; • Environmental management systems certification bodies – 2 expert missions.	Technical assistance contract	
A.3.6. Re-evaluations/scope extension of BAS by EA	Technical assistance	

evaluation team and entering EA MLAs	contract	
A.3.7.1. Development of specific accreditation programmes for accreditation of candidate conformity assessment bodies according to respective harmonized standards under the New Approach Directives.	Technical assistance contract	
A.3.7.2. Training of 10 D ”DCABs” experts and 20 BAS experts in the implementation of accreditation programmes.	Technical assistance contract	
A.3.8. Updating and improvement of D “DCABs” designation procedure with respect of accreditation programmes for CABs accreditation under the NA Directives and practical implementation (including on-the-job training of 3 D “DCABs” experts in a EU member-state accreditation body and notification authority).	Technical assistance contract	
B. Supply **Component 1: Supply of Equipment for DG "NCM"** A.1.4. Procurement of metrology equipment for NCM standard laboratories operating in priority fields of measurements specified in the Middle-term Strategic Planning, including calibration traceable to internationally recognised measurement standards, putting into operation and training.	Purchase of equipment - training	
Component 3: Supply of Equipment for BAS A.3.11. Procurement of a state-of-the-art information system, IT and training equipment for EA "BAS" to ensure operation of own and external assessor teams and administration for handling and tracking client contracts.	- Purchase of equipment	
Component 4: Exchange and provision of information in the field of metrology, conformity	- Purchase of equipment	

assessment, accreditation and market surveillance A.4.1. Supply of equipment for establishment of a state-of-the-art information system and IT equipment in SAMTS in order to facilitate the fulfillment of all duties of the specialised administration as well as the requirements of related external parties (state authorities; economic operators, CABs etc.).		
A.4.2. Development and putting into operation of application software serving SAMTS and national contact point activities: - Document flow management software - Customer relationship management software - Enterprise resources planning.	Technical assistance contract	
Year 2 ***A. Technical Assistance*** **Component 2: Legal Metrology** **Technical Assistance for DG "MMI", DG "MSv" and CABs** A.2.6. Training of 25 DG "MSv" inspectors on the EU practice as regards the market surveillance of measuring instruments under the scope of the NA Directive on Measuring Instruments.	Technical assistance contract	
?.2.7. Elaboration of procedures and relevant documentation covering the activity of market surveillance of measuring instruments covered by the MID.	Technical assistance contract	
A.2.8. Training of eight (8) trainers-of-trainees, five (5) from DG "MMI" and three (3) from DG "MSv", in Bulgaria and in an EU Member State on practical implementation of MID conformity assessment procedures and market surveillance respectively.	Technical assistance contract	
Component 3: Designation of conformity assessment bodies, accreditation and market surveillance **Technical Assistance for designation of conformity**	Technical assistance contract	

assessment bodies, accreditation and market surveillance A.3.9. Training of six (6) BAS assessors/lead assessors on the requirements of EMAS (3 assessors/lead assessors) and GLP (3 assessors/lead assessors) and the respective accreditation practice.			
A.3.10. Participation of 10 BAS experts in the EA working/expert groups activities, as a follow-up to strengthening capacity in the fields of requested EA MLAs.	Technical assistance contract		
B. Supply **Component 2: Supply of Equipment for DG "MMI"** A.2.9. Procurement of metrology testing equipment for conformity assessment of measuring instruments under the relevant MID modules including calibration traceable to internationally recognised measurement standards, putting into operation and training.	Purchase of equipment		

Preconditions
Before contracting of the supplies, adequate environmental conditions for carrying out measurements with required reliability at the existing laboratories are assured.

ANNEX 2: Detailed implementation chart

Component	2006				2007				2008			
Year 1	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**
Contract 1 *(Service contract)*: Component 1: TA for DG "NCM"; Component 2: TA for DG "MMI" and CABs; Component 3: TA for designation of conformity assessment bodies, accreditation and market surveillance.	**T**	**T**	**C**	**I**	**I**	**I**	**I**	**I**	**I**			
Contract 2 *(Supply contract)*: Component 1: Equipment for DG "NCM"		**T**	**T**	**C**	**I**	**I**						
Contract 3 *(Supply contract)*: Component 3: State-of-the-art information system and IT equipment for BAS; Component 4: State-of-the-art information system and IT Equipment for SAMTS.		**T**	**T**	**C**	**I**	**I**						
Year 2	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**
Contract 4 *(Service contract)*: Component 2: TA for DG "MSv"; Component 3: TA for designation of conformity assessment bodies, accreditation and market surveillance.		**T**	**T**	**C**	**I**	**I**	**I**	**I**	**I**	**I**	**I**	
Contract 5 *(Supply contract)*: Component 2: Equipment for DG "MMI".					**T**	**T**	**C**	**I**	**I**	**I**		

C - Contracting
T – Tendering
I – Implementation

Detailed chart for implementation of project activities

	2006		2007				2008				2009	
Year 1	**Qtr 3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**
Component 1												
A1.1.												
A.1.2.												
A.1.3.												
A.1.4.												
Component 2												
A.2.1.												
A.2.2.												
A.2.3.												
A.2.4.												
A.2.5.												
Component 3												
A.3.1.												
A.3.2.												
A.3.3.												
A.3.4.												

	2006		2007				2008				2009	
Year 1	**Qtr 3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**
A.3.5.												
A.3.6.												
A.3.7.1.												
A.3.7.2.												
A.3.8.												
A.3.11.												
Component 4												
A.4.1.												
A.4.2.												

	2006				2007				2008			
Year 2	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**
Component 2												
A.2.6.												
A.2.7.												
A.2.8.												
A.2.9.												
Component 3												
A.3.9.												
A.3.10.												

Note: The period of activity implementation is marked in gray color.

ANNEX 3: Contracting and disbursement schedule, by quarter, for full duration of project (including disbursement period)

Project title	**Further development of a national conformity assessment system and metrology infrastructure**											
	2006				**2007**				**2008**			
Year 1	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**
Contract 1 (Service contract)												
Contracting			€ 1,945 M	€ 1,945 M	€ 1,945 M	€ 1,945 M	€ 1,945 M	€ 1,945 M	€ 1,945 M			
Disbursement			€ 1,167 M		€ 1,459 M		€ 1,750 M		€ 1,945 M			
Contract 2 (Supply contract)												
Contracting				€ 3,5 M	€ 3,5 M	€ 3,5 M	€ 3,5 M	€ 3,5 M	€ 3,5 M	€ 3,5 M	€ 3,5 M	
Disbursement				€ 2,1 M			€ 3,15 M				€ 3,5 M	
Contract 3 (Supply contract)												
Contracting				€ 1,21 M	€ 1,21 M	€ 1,21 M	€ 1,21 M	€ 1,21 M	€ 1,21 M	€ 1,21 M	€ 1,21 M	
Disbursement				€ 0,726 M			€ 1,089 M				€ 1,21 M	

Project title	**Further development of a national conformity assessment system and metrology infrastructure**											
	2007				**2007**				**2008**			
Year 2	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**	**Qtr1**	**Qtr2**	**Qtr3**	**Qtr4**
Contract 4 (Service contract)												
Contracting					€ 0,635 M	€ 0,635 M	€ 0,635 M	€ 0,635 M	€ 0,635 M	€ 0,635 M	€ 0,635 M	
Disbursement					€ 0,381 M		€ 0,476 M		€ 0,572 M		€ 0,635 M	
Contract 5 (Supply contract)												
Contracting								€ 1,5 M	€ 1,5 M	€ 1,5 M	€ 1,5 M	€ 1,5 M
Disbursement								€ 0,9 M		€ 1,35 M		€ 1,5 M

ANNEX 4: Pre-feasibility study

At present, the State Agency for Metrology and Technical Surveillance (SAMTS) is the responsible authority for:

- fundamental and legal metrology;
- market surveillance in the scope of New Approach;
- designation of conformity assessment bodies;
- technical inspection of high-risk equipment;
- quality control of liquid fuels.

According to the Rules of Procedure of the State Agency for Metrology and Technical Surveillance it is organised into six (6) directorates general and four (4) directorates. Within the structure of the agency one new Directorate General "Metrological Supervision" and one new Directorate "Designation of Conformity Assessment Bodies" have been established.

Direct beneficiaries under this project are the following structural units within SAMTS:

1. Fundamental metrology

Directorate General "National Center of Metrology" is responsible for establishing, maintaining and improving the national measurement standards as well as ensuring their traceability to the international ones or to measurement standards of the Member States of the Meter Convention, and disseminating the units of measurement through calibration.

As a result of SAMTS active participation in EUROMET activities and projects through its DG "NCM", the EUROMET criteria for full membership were met and in May 2003 the Agency was accepted as a full member of EUROMET. The Quality Management System of DG "NCM" was successfully presented at the Quality System Forum in March 2003 and approved by the EUROMET members.

According to the general guidelines and recommendations as laid down in the Middle-term Strategic Planning (developed under Phare 2000) DG "NCM" still needs to strengthen its administrative capacity and measurement capabilities in order to meet the demands of the Bulgarian industry as regards traceability of measurements performed. For this purpose sets of standard measuring equipment are to be supplied and the personnel responsible for carrying out the respective types of measurements is to be trained.

In 200 a draft of a Long-term program for development of the national measurement standards of the Republic of Bulgaria (LTP) covering the period from 2004 to 2010 has been developed. The programme comprises of twelve 12 sub-programmes, 10 of which contain proposals for development of measurement standards in various measurement fields, sub-program "National Metrology Complex", sub-program "Human resources and dissemination of knowledge" and a financial framework for its implementation.

The draft of this program has been developed on the basis of analysis focusing on study and forecast of the needs related to ensuring traceability of measurements in the country, a Report on the national measurement standards status prepared in 2001, Middle-term Strategic Planning and Long-term Orientation Plan (as mentioned above), policies and programmes of the international metrology organisations of which the Republic of Bulgaria is a member and recommendations given by European experts regarding the assessment of the candidate countries' quality infrastructures.

The programme has been subject to internal discussions, presentation and open debates with experts from government and non-government organisations, Bulgarian Academy of Sciences, higher education institutions etc. The different sub-programmes in various measurement fields have been discussed and considered at the meetings of specialised expert councils. The LTP draft has been adopted at the 8th regular meeting of the National Council of Metrology and has been subsequently

coordinated with the ministries and agencies. Officially, the Long-term program for development of the national measurement standards of the Republic of Bulgaria covering the period from 2004 to 2010 was adopted by Decision of the Council of Ministers of 6 January 2005.

Technical assistance under this project is necessary for the LTP implementation in the part concerning:

- **Qualification of DG "NCM" personnel in new fields –** nano-metrology, quantum effects, cryogen radiometry, X-ray dosimetry, ion-exchanged chromatography, radio-frequency measurements.

The Long-term program for development of the national measurement standards of the Republic of Bulgaria envisages developing of potential for setting up or providing support to joint "centres" for future scientific or research activities, i.e. identification (jointly with the customers and partners) of 5 or 6 fields of national and international significance, namely electrochemistry, massspectrometry, radionuclides activity, length, spectrophotometry and vibration, which should serve as a basis for integration into various research projects. The role of these "centres" will be to develop and coordinate the use of technical facilities and expertise in the country aimed at achieving rapid development of new methods and technologies in areas, which are important for industry and society, and implementing government policies and strategies related to quality, science, innovation and industrial growth.

With regard to the above mentioned one (1) NCM expert per each of the fields is to be trained in order to become acquainted with the respective development trends and practice. The experts trained will draft a plan for development of the respective fields of measurement at national level based on the LTP. It is considered reasonable the training to be performed for a six-month period (one man-month per expert) in EU metrology institutions or associated laboratories. The training will be a step towards development and management of scientific and research activities thus creating preconditions for capacity-building in scientific metrology with a view to transferring the world achievements in this field to the respective users – science, industry, society.

- **Knowledge management system (KMS)**

The insufficient experience in management and implementation of scientific and research activities and the existing decision-taking system for management of personnel and activity are among the current problems facing the implementation of the objective set out in LTP for step-by-step transformation of DG "NCM" into an institute for scientific and research activities in the field of metrology. Establishment of conditions for application of the good practices and methods for measurement, being assisted by the knowledge management system, is of primary significance for the work of the new metrological institute. Knowledge management system has been developed on the basis of analysis and needs assessment and drafted KMS structure under the PHARE 2000 program. It is introduced on a step-by-step basis in compliance with previously developed action plan and development model. Completion of the KMS development will be ensured by means of expanding the knowledge management system in the field of improvement of technical and professional knowledge, application of key processes for management of human resources and competencies, introduction of external and European practices and knowledge in establishment, improvement and examination of measurement standards, improvement of external and internal communications.

- **Organization and participation in international comparisons**

The participation of DG "NCM" in international comparisons is required for the implementation of the signed CIPM MRA agreement for recognition of CMC. Bulgaria has developed ? ? ? in compliance with the industry needs and the available measurement standards and equipment. The current situation analysis shows that a significant part of the measurement standards do not correspond to the state-of-the-art measurement equipment. The technology level of the predominant part of measurement standards is equal to the one existing in the 80s of the 20th century. Also there

is an obvious trend towards worsening the status of measurement standards in use. This project targets at achieveing a sufficient degree of equivalence of the national measurement standards and recognition of additional and improved measurement and calibration capabilities of DG "NCM" which, with regard to scope and uncertainty, comply with the Bulgarian industry. This in turn will result in successful alignment of Bulgarian measurement system with the European one. The Phare projects implemented so far have contributed to the creation of conditions for ensuring traceability of measurements with respect to the most crucial needs.

Up to the present the approval of the NCM CMC are at different stage of the EUROMET approval procedure and the CMC status is as follows:

CMC - DG "NCM" status December 2004

Measurement field	NCM approved CMCs	Submitted to EUROMET TC review	EUROMET Reviewed	Inter-RMO review	Inter-RMO reviewed – Final CMCs+ reports	Fully reliable CMCs, BIPM database
Photometry and Radiometry						8 entries
Electrochemistry		6				8 entries
Mass					8 entries	
Pressure					15 entries	
Force	5 entries					
Electricity and magnetism			70 entries			
Time and frequency				16 entries		
Length			9 entries			
Acoustics			12 entries			
Vibration			18 entries			
Photon dosimetry		7 entries				
Flow	2 entries					
Volume		6 entries				
Thermometry	8 entries					
Hardness	6 entries					

In order to approve CMC under PHARE 2002 program organization and carrying out of seven international comparisons in the fields of capacity measurement, inductance, DC voltage, AC voltage, sound pressure measurement in air, vibration acceleration, spectral measurement for UV/VIS has been provided for.

The comparisons proposed in the fields of thermometry, flow rate, length, optic and force measurements will add new ? ? ? entries in thermometry, flow rate, optic and force measurements and will decrease length measurement uncertainty.

Supply of equipment: The equipment envisaged to be supplied under the project is specified on the basis of the list annexed to MTSP and the LTP, analysis of the current status of national measurement standards and industry needs within the country for ensuring measurement traceability.

28 experts from the DG "NCM" personnel will be trained (from 3 up to 15 days depending on the specific equipment and systems) after the equipment delivery.

Delivery of equipment for the fields of optic, electric, acoustic, ionizing radiation, hardness and force, as well as training for operation with the delivered equipment is provided for under Phare 2002 Project BG0201.12 "Strengthening of the national conformity assessment system".

Delivery of equipment for the national laboratory for temperature measurements and training for operation with the equipment supplied is provided for under Phare 2003 project.

List of equipment for DG "NCM"

Length and dimensional metrology

Equipment	**Cost (k€)**
1-D multifunction measuring machine	120
Secondary standards: Gauge blocks, plugs, rings,	70
He/Ne lasers with associated equipment	170
Roughness and roundness measuring equipment	120
Standard of roughness	5
Rotating table (angles)	15
Laser interferometer for dito	50

Electricity

Equipment	**Cost (k€)**
Zener diode (7)	20
Low thermal Scanner + DC null detector +software	15
Kelvin Varley divider	40
Temperature controlled enclosure (air)	10
Low current calibrator	10
EMC shielded room	13
Multi-junctions thermal converters with shunts	95
Accurate multi calibrator (up to 11 A)	60
Calibrator with current amplifier (20A)	20
Low voltage AC/DC transfer standard/voltmeter	40
Micropotentiometer	20
Nano-voltmeter (2)	6
EMC shielded room	13
Automated resistance bridge with scanner and low value extender	75
10 kO resistances (3)	6
Box of10x1 kO	4
Resistances (1 O – 100 T O) 16 pieces (X2)	28
Automated high value resistance bridge (100 O to 1G O) with accessories	65
Temperature controlled oil bath	25
Capacitance meter	40
Set of fixed capacitors and inductances (in temperature controlled enclosure 2x10pF and 2x100pF, 3x10 mH)	30
Automated high precision RLC meter	30
EMC shielded room	13
Automatic calibration bench for energy and	170

power with software With accuracy 0,005 %	
Multi-range and multi-quantities calibrator	20
Portable standard for energy (three phases measurements)	40
Three phases phantom load	15
Measurement calibration software SSM 3000 for the reference standard model COM 303-3, ZERA GmbH	3

Time - Frequency

Equipment	**Cost (k€)**
Caesium clock (first one)	70
GPS receiver (first one)	40
Time interval counter	3
Software for time scale calculation	10
Computers	3
Caesium clock (second one)	70
GPS receiver (second one)	40
Phase comparator	4

Mass and related quantities

Equipment	**Cost (k€)**
Complementary mass standards 1mg-20 kg	28
Mass comparator 64 kg with software	260
Calibration system with Turbomolecular pump	40
Pressure balance for positive, negative and absolute pressure 7 MPa	75
Absolute balance (350 kPa)	50
Differential pressure balances (350kPa, 10MPa)	100
2 micro-manometers (4 kPa and 40 kPa)	40
Digital manometer (25 MPa)	25
Deadweight force standard and masses: 5 kN	200
Digital precision measuring amplifier/force transducers	50
Densimeter (density of liquids): comparator balance and associated equipment	30
Viscosimeter /viscosity (calibration bench /equipments)	20
Reference accelerometer	3

Photometry-radiometry

Equipment	**Cost (k€)**
Certified reference standards for spectrophotometer	3
Optical colorimeter	45
Measuring lamps	5

Ionising radiation

Equipment	**Cost (k€)**
Radon measurement bench (reference	45

radioactive source Ra-226 and flow through sources of Rn-222, detectors, etc.)	
Secondary transfer standard (neutron)	15
Reference $4\pi\gamma$ well - type high pressure ionizing chamber, reference radioactive sources - ^{99m}Tc, ^{131}I, ^{67}Ga, ^{204}Tl	14

Metrology in chemistry

Equipment	**Cost (k€)**
Automated titrator and software	10
Standard references material for electrical conductivity	1
Cryostat for electrochemistry	7
Primary cells for electrical conductivity and electrochemical cells	60
Photometer (O_3)	30
Spectro-photometer (NO_x, SO_x)	15
GC/MS + software	100
SOFTWARE	500

Total amount (equipment + software): € 3 500 000

2. Legal metrology

Directorate General "Measures and Measuring Instruments" is responsible for legal metrology activities and performing type examination, initial and subsequent verification of measuring instruments subject to metrological control. Since 2003 an authorization procedure has been initiated for laboratories as regards carrying out initial and subsequent verifications of electricity meters, measuring transformers and heat meters. In case of conflicts DG "MMI" carries out metrological expertise of measuring instruments.

In order to be capable to perform duly its basic obligations by covering the entire scope of examination and verification activities DG "MMI" must possess sets of testing standard equipment insufficient for the time being. This issue is of great importance for DG "MMI" activities because they, directly or indirectly, address the issues related to public health, public safety, public order, protection of the environment, levying of taxes and duties, protection of the consumers and fair trading.

DG "MMI" testing and verification laboratories, located in Sofia and 16 regional departments, were equipped mainly during 70s and 80s. The laboratory equipment is not state-of-the art and has no capabilities to cover the full range of measurements relating to the testing or verification of measuring instruments. For example, nowadays verification of taximeters is carried out on a route distance. Laboratory equipment used for verification and metrological expertise of electricity meters does not have satisfactory uncertainties as regards testing of high accuracy static electricity meters. Lack of laboratory equipment does not allow carrying out of such tests as vibration, durability, temperature and humidity control that are of great importance for reliable measurement performance. Therefore the supply of such monitoring equipment is required in order to assure proper environmental conditions within all laboratory premises of DG "MMI".

With respect of the forthcoming adoption of MID, which will be transposed into Bulgarian legislation under the Law on Technical Requirements for Products, and its subsequent implementation, significant efforts are required as regards undertaking relevant measures. This issue addresses not only the EU Member States but all applicant countries as well. Preparation of the MID implementation in Bulgaria has already been undertaken through a self-evaluation and

analysis of the existing administrative and measurement capacity within the SAMTS structural units, namely Directorate General "Measures and Measuring Instruments" (DG "MMI") and Directorate General "Metrological Supervision" (DG "MSv").

The Directive on Measuring Instruments applies to the devices and systems with a measuring function defined in the instrument-specific annexes concerning water meters, gas meters and volume conversion devices, active electrical energy meters, heat meters, measuring systems for continuous and dynamic measurement of quantities of liquids other then water, automatic weighing instruments, taximeters, material measures, dimensional measuring instruments and exhaust gas analyzers.

According to the current legislation these measuring instruments are subject to legal metrological control laid down in the Ordinance on Measuring Instruments under the Law on Measurements.

The forthcoming transposition in 2006 of the Directive on measuring instruments into the Bulgarian legislation will require the existence of already created and working conformity assessment bodies for measuring instruments falling within the scope of the Directive.

The experience gained from the implementation of the legislation, transposing the New Approach directives shows the need of well-established and functioning relevant conformity assessment bodies by the moment of coming into force of this legislation.

In this respect it is necessary the legislative basis to be prepared, on the basis of which the conformity assessment body for measuring instruments will be established and developed.

The Draft Law on amendment and supplement to the Law on measurements envisages the establishment of a Bulgarian Metrology Institute (BMI), which will be based on the existing Directorate General “NCM” and Directorate General “Measures and Measuring Instruments”, in such a manner as to avoid conflict of interests between the different activities related to conformity assessment, designation of conformity assessment bodies and market surveillance.
This fact will enable the separation of an independent conformity assessment body, initially in the field of conformity assessment of non-automatic weighing instruments and subsequently in the field of assessment of water meters, gas meters and volume conversion devices, active electrical energy meters, heat meters, measuring systems for continuous and dynamic measurement of quantities of liquids other than water, taximeters, all covered by MID, by using the administrative and technical capacity of DG “MMI”.

In this connection supply of a new bench for gas flow rate measurements will ensure performing tests and verifications of big diameters gas flow meters. Electricity meters and taximeters benches will allow regional departments to provide short-distance “product verifications” and metrological expertise of respective measuring instruments.

Taking into consideration the above-mentioned forthcoming implementation of MID certain supplementary measures need to be undertaken for carrying out all conformity assessment related-activities as laid down in the directive. The latter requires strengthening the technical expertise on measuring instruments conformity assessment procedures as well as improvement of the existing testing equipment for covering respective conformity assessment procedures. As regards the later SAMTS uses all opportunities offered by different programs for supply of equipment needed, as the available financial resources are strongly insufficient. Up to now supply of required equipment for DG “MMI” is planned under PHARE 2003, in particular in the field of measuring systems for liquids other than water and measuring instruments used in health care.

Sustainable development of the Bulgarian manufacturers of measuring instruments will also rely on capabilities of Bulgarian CABs to assure qualified, reliable and short-distance services at reasonable prices.

In the light of the above mentioned reasons the following measuring equipment should be provided:

Flow Rate measurements

Equipment	Parameters	Pieces	Cost (k€)
Standard bench for gas flow meters testing	Flow from 50 to 1500 m^3/h. Uncertainty u= ± 0,2 % The standard bench shall include the following: • Flow rate meters – at least 4 pieces; • Controllers for pressure, temperature and humidity measurement; • Setting and control devices (valves and throttles); • Setting devices with end positioning; • Fans (vacuum pumps); • Collectors; • Fittings.	**1**	**400**

Velocity, acceleration, vibration and impact measurements

Equipment	Parameters	Pieces	Cost (k€)
Benches for verification of taximeters	Roller set with electric drive: Max. measuring speed at 2000 kg axle load: 60 km/h Max. measuring speed at 1400 kg axle load: 120 km/h	**6**	**240**

Environment

Equipment	Parameters	Pieces	Cost (k€)
Environmental test chamber	Temperature range from -70 °C to 200 °C; Volume of the chamber > 4 m^3	**1**	**100**

Vibration

Equipment	Parameters		Pieces	Cost (k€)
Bench for vibrations testing	*Random vibration*		**1**	**100**
	Total frequency range	10-150 Hz		
	Total RMS level	1,6 $m.s^{-2}$ up to 16 $m.s^{-2}$		
	ASD level 10-20 Hz	0,048 $m^2.s^{-3}$ up to 4,8 $m^2.s^{-3}$		
	ASD level 20-150 Hz	- 3 dB/octave		
	Number of axes	3		
	Sinusoidal vibration			
	Frequency range	10-150 Hz		
	Max. acceleration level	2 $m.s^{-2}$ up to 10 $m.s^{-2}$		
	Number of sweep cycles per axis	20		

Electricity

Equipment	Parameters	Pieces	Cost (k€)
Automated measuring station (10-positional) for verification of electricity meters	Three-phase station for active and reactive power - Class 0,05 : 1. Standard three-phase electricity meter: • Power supply: 230 V +10 % • Power consumption: < 50 VA • Voltage range: up to 320 V • Current range: from 20 mA to 120A 2. Three-phase electronic current and voltage supply source : • Power supply: 230 V +10 % • Output power: < 300 VA • Voltage range : up to 320 V • Current range: from 0 mA ?? 120 A	**6**	**660**

Total amount: € 1 500 000

Directorate General "Metrological Supervision" is responsible for performing metrological supervision on persons who have responsibilities under the Law on Measurements, in particular, persons, who: use units of measurement, manufacture or import measuring instruments; use measuring instruments; repair measuring instruments; are authorized to carry out verification of measuring instruments; manufacture or import pre-packages or bottles used as measuring containers; offer pre-packages or bottles for sale.

The directorate's inspectors have a high professional qualification level but they still need to obtain further expertise on some specific aspects of their obligations concerning the implementation of legislation transposing the *acquis* related to legal metrology and pre-packages. Some practical aspects as regards the implementation of the secondary legislation on pre-packages have been addressed under a bilateral Project BUL0019 to FEU+6 Danish Pre-accession Programme, namely providing training for twenty (20) directorate's inspectors.

As regards the forthcoming MID implementation DG "MSv" will assume new responsibilities relating to market surveillance of the measuring instruments within the scope of the directive. With respect of the latter DG "MSv" inspectors need to be trained on market surveillance-related specifics.

The directorate strongly needs appropriate IT and communication facilities.
DG "MMI" and DG "MSv" experts have been taking part in the work of WELMEC Working Groups on Metrological Supervision (WG5), Pre-packages (WG6), Software (WG7) and Measuring Instruments Directive (WG8).

3. Designation of conformity assessment bodies, accreditation and market surveillance

Directorate "Designation of Conformity Assessment Bodies" is responsible for assessment of technical competency and capability of bodies, applying for designation, to perform the procedures for conformity assessment of products with the essential requirements of twenty one ordinances transposing the respective New Approach Directives. The Directorate's activities are based on the already adopted designation procedure. Taking into consideration the fact that each NA Directive sets out some particularities as regards CABs designation, the structure of this procedure should be properly adjusted to them. The latter will require adequate training of the Directorate's personnel on their implementation.

The Directorate contributes to the establishment of a national conformity assessment system assisting and co-ordinating designated bodies' participation in various international projects and programmes.

The practical implementation of ordinances entails a number of difficulties for both the conformity assessment bodies and designating authorities, which are also responsible for performing surveillance regarding whether the requirements for granting designations have been met. This is due mainly to the fact that these activities are performed for the first time in the country as well as that certification activities have not been widely carried out within the country.

With regard to the above-mentioned the necessity exists of maintaining the qualification of directorate's personnel, and also need of broadening the experience within the scope of the rest of the ordinances, the latter being complex in nature and specific as regards the products to be assessed.

A number of activities related to ongoing development of new documents, as well as positions elaborated by the European Commission as regards setting out new requirements for notified bodies and conformity assessment activities have been undertaken within the European Union. The development of these documents is required due to the following facts:

- NA Directives set out only general requirements relating to conformity assessment bodies but do not contain any kind of guidelines with respect to the way of carrying out evaluation regarding whether these requirements have been met.
- No criteria for the work of the notifying authorities or of the notified bodies have been established. The requirements relating to notified bodies should be further precisely defined.
- A supplement to the directives is envisaged which shall make a provision that notified bodies are required to exchange experience among themselves.
- Also a discussion is to be carried out as regards undertaking of activities against notified bodies, where these bodies do not fulfill their obligations in compliance with requirements or where they fail to perform conformity assessment activities.
- Guidelines for the use of accreditation for the purposes of notification are to be established. With regard to this it is expected to ensure independence of accreditation activities from commercial conditions and competitiveness among various accreditation bodies. The respective legal measures will be laid down in a legislative document on notification.
- The European Commission considers that a provision should be made in the directives for exchange of information on non-compliant products subject to conformity assessment as well as a requirement for assistance in the activities of notified bodies working groups and exchange of experience among them.

In performing its activities Directorate "Designation of Conformity Assessment Bodies" is guided by and follows the European practice as regards assessment and designation of conformity assessment bodies but despite that further knowledge and implementation of new rules and requirements is needed.

It should be taken into consideration that the directorate's experts have limited access to the relevant EC working groups (NB-Coordination groups, Directives Expert groups, etc.) and are not familiar with the their organisational mechanisms and activities.

Up to the present moment the directorate's experts have been consulted and trained mainly on five ordinances transposing the following directives: LVD, EMC, Toys, Gas Appliances and Machinery (within the framework of the Twinning Light project BG/2001/IB/IF-02 "Establishment of designating authorities (future notifying authorities) and designation procedures under New Approach Directives".

Taking into consideration the facts mentioned above, the directorate's staff should obtain advisory support and be trained on implementation-related issues as regards the NA directives, in particular pressure equipment directive (PED), personal protective equipment directive (PPE), recreational crafts directive, hot water boilers and noise emission directives which will enable the requirements for notifying bodies and overall harmonisation with the European practice to be fully satisfied.

Economic operators need to be fully aware of the new technical regulations and access to crucial business information relevant to their activities. An information contact point should be established in order to serve adequately and satisfy their needs in this respect. With view of this, respective IT and communication equipment should be provided, since at the present moment the latter is not at a satisfactory level. Availability of adequate equipment will provide opportunity for reliable information of higher quality - registers of the granted or withdrawn conformity assessment designations; updated lists of the published harmonised standards under the respective directives; documents established and kept during the process of evaluation of candidates applying for designation.

Directorate General "Market Surveillance" which is responsible for surveillance of products placed on the market and/or put into service subject to essential requirements as defined by ordinances to the Law on Technical Requirements for Products transposing particular New Approach Directives. Market surveillance inspectors monitor that products placed on the market comply with the provisions of the applicable ordinances transposing the NA Directives. The directorate takes actions to restrict or prohibit the placing of products on the market or to withdraw products from the market.

Under the Twinning project within the frames of Phare 2000 project the market surveillance inspectors have been trained in the principles of the NA Directives and are able to apply practices of the market surveillance of products covered by the NA Directives. The training activities covered seminars on the NA Directives; preparation of annual plans for inspections; practical training in performing on-site visits and products sampling for testing purposes. During the study visits in Denmark and Spain the inspectors were introduced with the market surveillance practice and the operation of the established information system in these EU member states. Also some steps have been taken in order to improve the situation as regards availability of communication facilities - some pieces of IT equipment have been supplied and database established. Despite the improvements made, the directorate still needs adequate IT and communication facilities.

All the above-mentioned could serve as a basis for putting into operation of computer applications developed by means of which all relevant data will be administered, actual cases managed and information with national and international counterparts exchanged. For this purpose an integrated information management system needs to be established and implemented in the country.

According to the main findings and recommendations of the Peer-review Evaluation Mission Report on Market Surveillance, the practical experience and technical competence seems at the present activities to be satisfactory. It is considered that when the market surveillance activities will be expanded and fully implemented, in addition specialised expertise of DG "MS" inspectors will be required.

Another recommendation addresses the issue of establishment of a common electronic information system, which can be used for co-ordination of market surveillance activities and exchange of information. Such information system is not yet available, but has to be implemented with possible access from all locations and inspectors.

Directorate General "Technical Inspection" is the unit within the SAMTS structure responsible for surveillance of high-risk equipment in the country.

Technical inspection in the Republic of Bulgaria dates back from 1917 when the Law on control of steam boilers and tanks was adopted. Till nowadays it exists on the basis of this law, which has been amended several times during the course of time, but its basic principles have remained unchanged. Initially the scope of technical inspection was limited only to steam and hot water boilers and tanks for compressed air. The present legal framework under which the technical inspection is carried out comprises of the Law on Technical Requirements for Products, namely Chapter Five “Technical inspection of high-risk equipment”, and the respective secondary legislation, e.g. the ordinances on safe operation and technical inspection of high-risk equipment

(HRE). In recent years according to LTRP new types of high-risk equipment have been subject to technical inspection.

Because of the fact that technical inspection activities concern directly the interests of the Bulgarian producers and foreign investors, it is necessary the technical inspection to be carried out fully in conformity with the good practice in EU Member States. This objective is supported by currently on-going twinning light project which is the first project of this kind focused especially on alignment of Bulgarian legislation and technical inspection practice with the European one. So far, technical inspection personnel has not received any kind of technical assistance. In order to perform its activities at the level required it is recommendable that surveillance personnel obtain targeted practical training in the groups of products covered by certain NA directives which fall within the scope of technical inspection.

In performing its activities DG "TI" works jointly and in close cooperation with a number of bodies and institutions in the country. The available IT and communication equipment does not adequately meet the directorate's needs. DG "TI" must be supplied with the required IT equipment and communication facilities so as to become a part of the common information management system, serving the activities of market surveillance authorities by offering services to the relevant parties in the field of conformity assessment.

Moreover, in the beginning of 2004 DG TI was accepted as a provisional member of CEOC which on the one hand will ensure successful exchange of information and experience on technical inspection and certification activities with the other members but on the other hand requires strong preparation with respect of facilitating the process of meeting the requirements for full membership. This presupposes that this inspection body must obtain specific assistance (advisory support, equipment, etc.) so as to enable it to fully meet all membership criteria. It should be taken into consideration that among others there should exist an established and operational information exchange system corresponding to the level of EU technical inspection bodies.

4. Exchange and provision of information in the field of metrology, conformity assessment, accreditation and market surveillance

4.1. INTRODUCTION

The State Agency for Metrology and Technical Surveillance (SAMTS) has the following activity fields:

- Fundamental Metrology (National Measurement Standards);
- Legal Metrology (Metrological Control);
- Market Surveillance;
- Technical Surveillance of High-Risk Equipment;
- Designation of Conformity Assessment Bodies;
- Liquid Fuels Quality Control;
- European Integration and International Cooperation.

To cover these fields SAMTS has the following organizational structure:

- Administrative-Legal and Informational Services Directorate;
- Financial-Economic Activity and Property Management Directorate
- National Center of Metrology (Directorate General);
- Measures and Measuring Instruments (Directorate General);
- Metrological Supervision (Directorate General);
- Market Surveillance (Directorate General);
- Technical Inspection (Directorate General);
- Designation of Conformity Assessment Bodies Directorate ;
- Quality Control of Liquid Fuels (Directorate General);
- International Cooperation and European Integration Directorate.

The staff of SAMTS is located in:

- Central Office of Agency with 120 employees, Central Office of Metrology(NCM) with 190 employees and one Office with 55 employees, all in Sofia;
- 15 Regional Offices with 25-70 employees in Blagoevgrad, Burgas, Varna, Veliko Tarnovo, Vidin, Vratsa, Gabrovo, Lovetch, Pleven, Plovdiv, Rouse, Sliven, Stara Zagora, Haskovo and Shumen;
- 12 Local Offices with 2-5 employees in regional towns Pernik, Kjustendil, Yambol, Dobritch, Montana, Pazardjik, Smolian, Razgrad, Silistra, Targovishte and Kardjali;
- 9 Local Offices with 1 employee in Petritch, Dupnitsa, Gotse Delchev, Lom, Oriahovo, Karlovo, Kazanlak, Svishtov and Harmanli.

4.2. EXISTING COMPUTER AND INFORMATION RESOURCES

At the end of 2004 SAMTS uses the following IT resources:

- One Local Area Network (LAN) at the Central Office of Agency in Sofia, connected to the Optical Network of Government Administration (ONGA), including: 1) One Internet Access/Firewall Server, 2) One LAN subsystem with Windows NT Server and 10 workstations (W/S), 3) One LAN subsystem with Windows NT Server and 5 W/S and 4) 5 individual W/S;
- One LAN at the Central Office of Metrology in Sofia, connected to ONGA, including: Windows 2003 Server, Sybase ASE 12.5 RDBMS with 5 client licenses, Internet Access/Firewall Server and 40 W/S;
- One LAN at the 3-th Office in Sofia 40, including Windows NT Server and 10 W/S;
- 15 LANs with Windows NT Servers and 5 W/S at all Regional Offices (In each Regional Office there are Regional Units of 6 Directorates of SAMTS);
- 90 stand alone W/S, located in Sofia and in the 26 Regions.

SAMTS faces the following IT problems:

- All computer equipment, excluding Windows 2k Server, is 4-5 years old;
- All network software allows only “File Transfer” operations;
- Internet is available for small number (40 of 955) of specialists;

Application Software - MS Office;

- There are no Applications for specific activities of the Directorates.

4.3. NEEDS

SAMTS targets to:

- Additional development of the current existing system including improvement of the technical level, communications and functionality.
- Integrate all existing subsystems in a centralized system that allows better connectivity and management of resources.
- Improve customer services by on-line processing of requests and by offering full range of services via Internet and Intranet.

In order to improve the performance and the quality of the Information Services for SAMTS personnel and clients, the Agency and the Metrology Institute needs:

- Building of Main Data Centers, one for Agency and one for Metrology, with powerful Servers for Database Management, System Monitoring, Specific Applications and WEB-Applications;
- Installation and Implementation of High-Performance Relational Database Management Systems;
- Implementation of Enterprise Portals;

- Development of Applications for Specific Activities (Document Flow Management, Customer Relationships Management, Enterprise Resources Planning , etc.) and Integration in Portals;
- Upgrading of the existing LANs with:
  - 32 small File servers (16 for Agency and 16 for Metrology);
  - 230 new W/S (90 in Sofia Offices, 140 in the Regional Departments in Plovdiv, Varna, Burgas, Rouse, Blagoevgrad, Lovetch, Pleven, Stara Zagora, Haskovo, Vidin, Veliko Tarnovo, Vratsa, Gabrovo, Sliven and Shumen)
  - 36 high-productivity Network Printers;
- Supply of additional 25 W/S with modems and personal printers (16 for the Local Offices with 2-5 employees and 9 for the Local Offices with 1 employee).

Communications between Regional Offices and Offices in Sofia (Main Data Centers) will be via ONGA or ADSL services. Communications between local offices and the Central Office will be via Asynchronous lines.

Thus two Enterprise Information Systems, working with Centralized Databases, will be established at SAMTS. It will serve the Agency and the Metrology activities as well, as adequately respond to the economic operators demands, providing information electronically via the national contact point.

This Systems and Portals solutions should provide connection to both Agency and Metrology processes for 400 internal users, citizens, businesses, or partners so they can serve themselves. Also Portal solution will enable secure access across multiple platforms and devices, including support for Government to Business services.

Hardware and Base Software:

Database and Application Server – 2 pieces

feature	value
Processor	64-bits, Multiprocessor, RISC
Memory	Up to 16GB
Disc Storage	Internal: 100GB External: 400GB
Operating System	64- bits, Multi-user, Multi-task
Other	UPS 20kVA

Relational Database Management System

feature	value
Type	Sybase ASE 12.5
Upgrade	Add Two Server Installations
Expand	Add 200 Client Licenses

WEB Server - 2 pieces

feature	value
Processor	64-bits, Multiprocessor, RISC
Memory	Up to 16GB
Disc Storage	Internal: 100GB External: 400GB
Operating System	64- bits, Multi-user, Multi-task

Enterprise Portal Server - 2 pieces

feature	value
Processor	64-bits, Multiprocessor
Memory	Up to 4GB
Disc Storage	Internal: 100GB External: 200GB
Operating System	32/64- bits, Multi-user

External Storage Subsystem - 2 pieces

feature	value
Disc space	Min. 1TB (RAID)
Operating System	ALL
Other	Host Independent

Small Server – 32 pieces

feature	value
Processor	32/64-bits, Multiprocessor
Memory	Up to 4GB
Disc Storage	Internal: 100GB
Operating System	32/64- bits, Multi-user
Other	UPS 1500kVA

Personal Workstation – 230 pieces

feature	value
Processor	32/64-bits, Single
Memory	Up to 256MB
Disc Storage	Internal: 40GB
Operating System	32/64- bits

Personal Workstation – 25 pieces

feature	value
Processor	32/64-bits, Single
Memory	Up to 256MB
Disc Storage	Internal: 40GB
Operating System	32/64- bits

Network Printers – 36 pieces

feature	value
RAM	16 MB
Other	24 pages/min, monochrome

Total Budget: 1 010 000 Euro

Executive Agency "Bulgarian Accreditation Service"

The Agency is a full member of European cooperation for Accreditation (EA) since 2001, and signed successfully two MLAs in March 2005 in the fields of quality systems certification bodies and personnel certification bodies. Recent developments indicate that with the expected status of a signatory to EA MLAs, EA "BAS" has occupied a growing share of client interest in its fields of accreditation. Strengthening the capacity of EA "BAS" becomes of greater importance, together with maintaining its competence as a signatory.

The signing EA MLAs in all fields of accreditation of EA "BAS" will affect positively the Bulgarian market for accession to the EU single market, and will serve to boost all sectors of the Bulgarian economy, inter alia

- foodstuffs,
- chemistry and chemical products,
- textiles,
- pharmaceuticals

in their effort towards competitiveness.

By average statistics, over 100 client contracts are concluded each year by the Agency, bringing the total of processed contracts to 400 at the end of 2004. Each client contract requires organizational and administrative service for the duration of accreditation, i.e. a period of 4 years, and at every step of the accreditation follow-up process. Separately, the Agency handles client enquiries on a day-to-day basis and interaction with other governmental organizations, economic operators and international partners, which call for modern hardware and software backup.

Currently EA "BAS" employs full-time staff of 25 persons, among which 1 executive director, 2 legal advisors, 3 accountants, 2 technical assistants, 1 head of human resource department and 16 lead assessors, each combining functions of administration and assessment in one or more of EA "BAS" fields of accreditation. To ensure its activities, the Agency also operates 9 external lead assessors and other assessor staff, entered on the official register of EA "BAS". Despite its limited human resource capacity, the Agency has succeeded to prove professionalism and viability. On the other hand, the statute of a governmental body in subordination to the Ministry of economy has disadvantaged EA "BAS" from using its proceeds for renovation of equipment and adequate modernization of information and software facilities. The equipment now in use at the Agency is obsolete and inept to procure IT information backup and work environment to EA "BAS" staff.

From a total number of 23 personal computers now available at EA "BAS", 14 have outdated technical parameters (Pentium II, below 100 MB RAM), 5 portable PCs have been purchased during the past three years (P IV, 256 MB RAM), and 4 work stations also supplied in 2002 (P Celeron/ AMD Athlon, 256 MB RAM). During 2004, a server has been installed to host critical business information and provide one-point gateway access to Internet.

The dominant part, if not all of the now existing IT equipment at EA "BAS" is outdated. The PCs do not meet the requirements for up-to-date communication, work on the Internet and information security. The personal computers at EA "BAS" cannot operate modern software products, anti-virus software, operational systems and text processing programs of recent generation.

The responsibilities of assessors, both BAS staff and external, involve working on a tight schedule and often away from BAS offices and in various locations outside Sofia city. Visiting clients, assessors perform functions of assessment and administrative work that require portable PCs instead of the work stations now in use. The estimated need for IT equipment covers 30 portable personal computers to include EA "BAS" full time and external lead assessor staff, from which up to 5 PCs

could be purchased from own income. Some 5 work stations will be needed for day-to-day processing of information at EA “BAS” headquarters.

The features of the required management information system (MIS) combining a help-desk should incorporate integrated software facilities for preparation of reports in relation to accreditation procedures including at a distance from EA “BAS” office, information system for document turnover and a database of accredited labs and CABs operating a tracking facility at each step of the accreditation process from registration of an application through the follow-up until expiry of an accreditation certificate, surveillance and current status of accreditation. The IT equipment should also provide for electronic signature at each work place and modern software products, e.g. operational systems, anti-virus software and text programs (XP or latest).

The procurement of a state-of-the-art information system and IT equipment for EA "BAS" will ensure operation of own and external assessor teams, in addition diminishing administrative work for handling and tracking client contracts. The effective personnel performance will result in lesser human resource demand.

In June 2004 by Decree ? 523 /23.06.2004 the Council of Ministers transferred to EA “BAS” property - a room of 250 sq. m., located on the second floor in the same building as the headquarter offices. The room has been designated to serve as a training and conference center for EA “BAS”. At completion of its renovation, the room will require modern presentation and conference facilities, meeting EA “BAS” needs to host seminars, presentations and trainings for its assessors, clients and partner organizations.

List of equipment for EA "BAS"

No	**Designation**	**Unit**	**Price per unit,** EUR	**Price,** EUR
1	Notebook CPU:Intel® Pentium®M processor 2.0GHz RAM:512MB DDR; HDD:60GB CD: CD-RWR	25	2 000	**50 000**
2	Network Printer – LJ, A4, Black & White, 600x600 dpi, speed 24 ppm, network ready	4	1400	**5 600**
3	UPS – 3 kWA, 120 min – load; Input Volt 187-285 VAC 1 phase, Output – 220 VAC 1 phase	2	1 500	**3 000**
4	Workstation CPU: CELERON D 2400Mhz, S478, 256k, 533Mhz RAM: 512 MB DDR HDD: 120.0 GB CD: CD-RWR Monitor: 17’ Flat	5	800	**4 000**
5	Copy center (including network, printing, copying, stapling, duplex)	1	11 000	**11 000**
6	Scanners	5	300	**1 500**
7	Integrated Management Information System	1	30 000	**30 000**
8	Licenses software, 30 notebooks + 5 work stations	35	35 000	**35 000**
9	OS, MS Office	1	500	**500**

10	Electronic signature devices	35	300	**10 500**
11	19`` 42 Units RACK	1	2 000	**2 000**
12	System software, with client licenses - CorelDRAW Graphics Suite 11, English, Win98/2000/ME/NT/XP/Mac; ABBYY FineReader 6.0 Professional – Software for Optical Character Recognition for Cyrilillic Symbols	5	210	**1 050**
	Technical equipment specification for the conference/ seminar/ training room, transfered to EA BAS by Decree ? 523 /23.06.2004 of the CoM			
13	WorkStation Motherboard-System bus 800 MHz, DDR 400, ATA 100/Serial ATA/SCSI, USB 2.0 Fi-Wi, AGP 8X/Blue tooth, SB; Processor – min 2.0 GHz; FDD- 3.5", 1,44 MB; HDD Controller; HDD – 1x60GB or up; Ultra ATA100/133, 7200 Rpm; RAM- 512 DDR 400; Video- 64/128 MB DDR video card 8xAGP; CDRW – 40/12/48; Speakers; Network card 10/100 Mb/s Ethernet; I/O ports – serial, parallel, USB 2.0 - 4 ports FI-WI (IE 1394)/Blue tooth; Keyboard; Mouse; pad; Microsoft Windows XP Professional Edition CD-ROM OEM; Monitor – 17" Flat display Monitor, 0.24 dpi;	4	1700	**6 800**
14	Notebooks 15" Viewable TFT Color Display; P4/2000/512K; 512 DDR, 40 GB 7200/ DVD+ RWR FDD 56k SB; LAN WIN XP Pro, Li-Ion battery	5	1 700	**8 500**
15	Multimedia projector 2400 ANSI Lumen Brightness; 1024x768 XGA Resolution; 400:1 Contrast; SXGA/UXGA comp. Inputs: DVI, RGB, Audio: stereo, Video-RCA, S-video, Outputs: USB, RGB, Audio: stereo RGB cable, Remote control, CD Rom, A/V cable, MACadapter, PC Audio cable, USB cable, power cord, manual Automatic and adjustable, Soft case, Screen	2	1 300	**2 600**
16	Electronic board for multimedia presentations	1	7 000	**7 000**
17	Copying machine Laser, digital, black and white, printer option, speed min 60 copies/min., A3 max	1	1 500	**1 500**
18	Audio system Presidential post, delegate posts, post controller, amplifier, two-band columns	1	4 000	**4 000**
19	Conference chair-tables	90	30	**2 700**
20	Conference tables, 2 x 12 persons, or 4 x 6 persons	2	350	**700**
21	Module lecturer configuration for multimedia, OHP, PC	1	400	**400**
22	Laminating machine	3	150	**450**
23	Binding machine	3	400	**1 200**
24	Air-conditioning installation, split system warm/cold and ventilation for a room of 250 sq. m.	1	10 000	**10 000**
			TOTAL	***200 000***

ANNEX 5 PRELIMINARY FORECAST

DIRECTORATE GENERAL "NATIONAL CENTER OF METROLOGY"

The mission of the GD "National Center of Metrology" in its quality of unique national metrological institute (NMI) in Bulgaria is, by creating and developing a system of national standards in the Republic of Bulgaria, to guarantee a stable basis for achievement of accuracy and traceability of measurements in the country and to create prerequisites for the development of the legal metrology, accreditation and certification as well as for the improvement of Bulgarian products competitiveness.

When implementing the trade agreements the World Trade Organization (WTO) requires availability of an internationally recognized measurement system. The international agreement for accreditation serves as an instrument for creation of confidence in the competence of measuring and testing laboratories, based on the concept that the performed measurements and test results are reliable, traceable and comparable. All this requires availability of an international network of trustworthy national standard laboratories which the trade partners could confide in and which the calibration and testing laboratories could refer to.

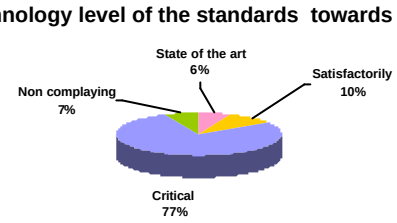
The national measurement system in its substance is considered as a national infrastructure. The National Center of Metrology is the source of traceability in the country by maintaining the national measurement standards and disseminating the reproduced by them values to the daily measurements in the industry, commerce and public utilities sector, for scientifically research activities, for the needs of the state and executive authorities.

In the last years the Bulgarian industry reports on stable and continuous growth of about 5 % per year. The Bulgarian legislation has been harmonized with the European as regards the requirements to the environment, the production safety related to the preservation of the consumers' life and health, the implementation of good production and laboratory practices, quality management systems and systems using HACCP etc. 25 % of the imported goods in the country comprise new industry capacities on a state-of- the-art technological level.

All this leads to the increase of the calibration needs having an expanding range and higher accuracy as well as to the requirement for achieving international recognition of the measurement, testing and certification results.

The national measurement standards represent the technical base of the quality infrastructure. Within the framework of the program PHARE 2000, project BG 0003.02.02, part "TA" a review of the available at the GD NCM standard equipment, its status and capabilities has been performed.

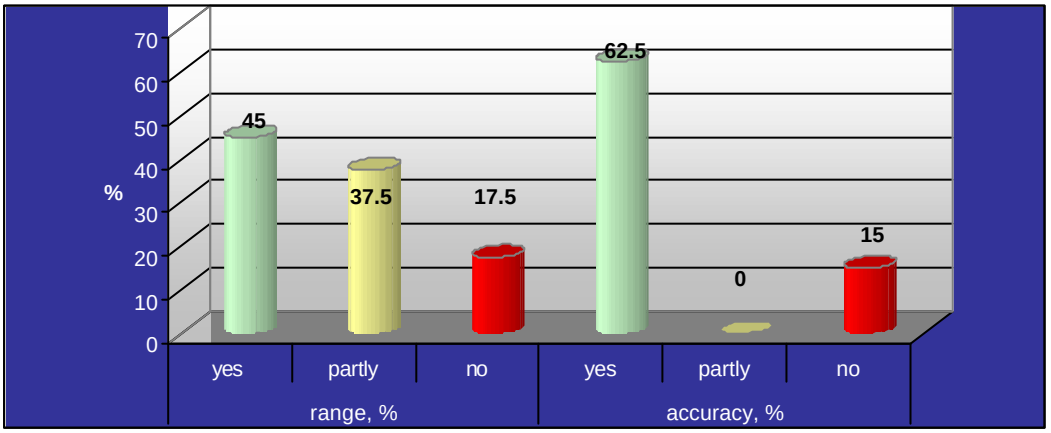
It has been ascertained that a significant part of the measurement standards does not comply with the modern level of development of the measuring technique. The measurement standards having a technological level of the 80-ty years of 20th century prevail. They do not comply with the required in the country accuracy any more and they do not achieve the satisfactory degree of equivalence to the international measurement standards or to the national measurement standards of the countries members of the Meter convention. Only 12 % of the measurement standards are estimated as being up-to-date. 28 % of the measurement standards, which functions are partly or completely stopped, have a critical status. The main problem is their wearing off and their falling behind the modern technological level particularly significant regarding the state-of-the-art IT implementation. The trend of deterioration of the operation status of the measurement standards is constant in the last two years as seen on Figure below:



For evaluation of the Bulgarian industry needs of traceability and measurement accuracy an inquiry among 250 companies has been performed within Project PHARE 2000 Program. The results received determine 3 groups of measurement scope depending on their significance to the industry:

- ✓ Group 1: more than 70 % of the enterprises develop activity in the field of temperature measurements, mass measurements, electrical measurements, pressure measurements, length measurements and chemical measurements;
- ✓ Group 2: about 50 % of the enterprises develop activity in the field of force measurements, time and frequency measurements, flow measurements;
- ✓ Group 3: approximately 36 % of the enterprises develop activity in the field of optical measurements, volume measurements and ionizing radiation measurements.

By analyzing the customer's needs in the country it has been found out that the existing measurement standards ensure traceability for less than 50 % of the needs regarding the range and approximately 60% - regarding the accuracy, as it is shown on the Figure below:



To meet the requirements of the MRA (signed by SASM/GD NCM in October 1999) GD NCM presents via EUROMET its ? ? ? tables which reflect the existing capabilities in the measurement subject fields. A great part of them does not satisfy the current industry needs, such as: pressure, viscosity, density, inductance, capacity and force measurements. The calibration in these fields is performed with uncertainty significantly exceeding the industry requirements, or in limited ranges, or in certain cases – for specified values only.

GD NCM has not presented CMC tables for other measurement fields (temperature, flow, electrical resistance, ionizing radiation, force, hardness etc.) due to the lack of modern measurement standards.

Supply of equipment according to Project PHARE 2005/6 is envisaged for the following fields of measurement: length, electrical quantities, time and frequency, mass and related quantities, photometry and radiometry, ionizing radiation, chemistry.

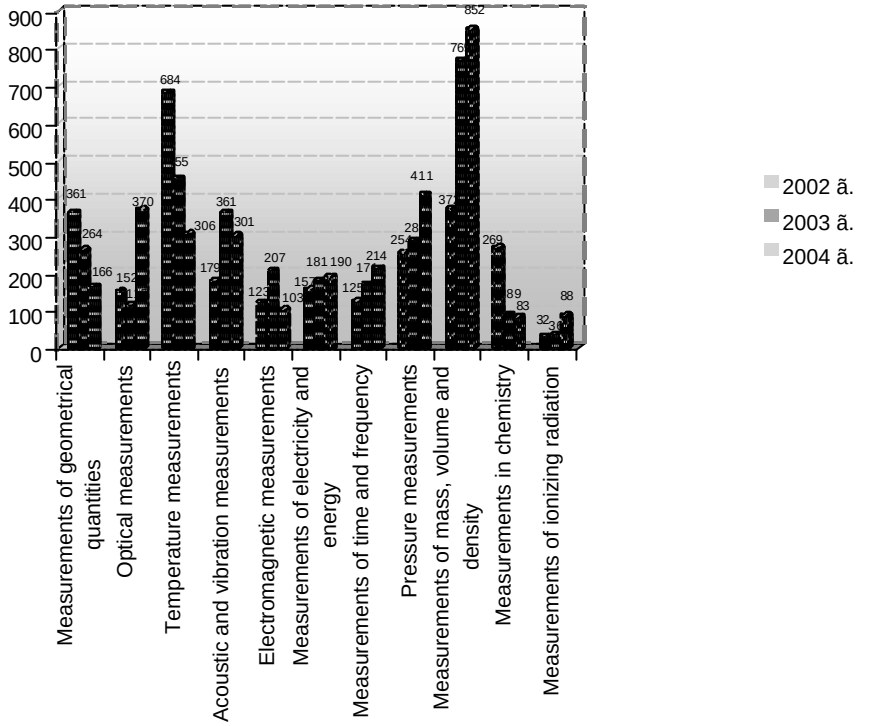
A list of the most needed equipment in measurement subject fields has been prepared, with the assistance of European experts, for satisfying the industry needs and for meeting MRA requirements for equivalence of the national measurement standards as well as for international recognition of measurement and calibration results performed by GD NCM. The following factors have been taken into account:

- Price of the measurement standards and equipment assuring their normal performance
- Availability of expensive measurement standards with operation resources covering a future period of 5 to 10 years
- Number and accuracy of the available measurement standards of lower accuracy levels in the country
- Meeting the requirements of Aquis communataires
- Bulgarian producers of measuring instruments
- Impact degree of the reproduction of a unit on the system of national measurement standards
- Possibilities for co-operation with other metrological institutions
- Harmonized incorporation of the Bulgarian fundamental metrology in the infrastructure of the European measurement system
- Practice of countries commensurate with Bulgaria.

The equipment requested according to Project PHARE 2005/6? is aimed at assuring traceability of measurements for the industry needs. Modernization, additional equipping, substitution of the morally and technically outdated equipment with expired operational resource and incapability of proving to a sufficient degree the equivalence during international comparisons, is envisaged at first place. No purchase of primary measurement standards is planned. On the other hand this means that the yearly expenses for calibration of secondary and reference standards outside the country will increase. The expenses, for a given period of time and in certain cases, are commensurate with the price of the primary standard without providing possibilities for examinations inherent to the primary standards.

Development of measurement subject fields with limited customer needs is not envisaged, e.g. high frequency measurements, hydro acoustics etc., and the available in the country measuring instruments for these quantities are directed to foreign laboratories. In some fields it has been stacked on the use of reference and working standards of lower accuracy levels, e.g. fluid flow measurements and movement parameters.

The calibrated in GD NCM measurement standards and measuring instruments in the period 2002 – 2004 are between 2700 and 3000 per year. Their number with respect to the subject field measurements is shown on the table.



155 applications for calibration were refused in 2004 due to lack of technical capabilities (measurement standards).The consequences arising are impossibility of meeting the requirements of the harmonized legislation or raising the costs of Bulgarian production and deteriorating its competitiveness due to the necessity of their quality conformation abroad.

Examples:

- Viscosity measurements - GD NCM poses a set of 33 viscosity meters, type "Webelode". The calibration of 10 of them (which does not assure the whole range and solves the traceability problem for several years) would cost 20 000 Euro, the system modernization by means of automation of the simultaneous reading of the discharge time for 3 viscosity meters amounts to 15 000 leva (appr. 7 500 Euro).
  There are 3 European directives (98/70/EC; 1999/32/??; 2003/17/??) for quality control of liquid fuels which lay down the requirements to their quality assured by means of calibrated measuring instruments for viscosity and density.
- The country does not dispose of a measurement standard for ozone concentration and no traceability is provided but this activity is needed in connection with the implementation of the 3 European directives for ozone: 92/72/EEC from 1992, 96/62/?? from 1996 and 2002/3/??. For observation of the ozone in the ground layer the Ministry for environment and waters maintains a national system for quality control of the atmospheric air by means of automated stations in the country. The ozone concentration is one of the continuously measured indicators.
- GD NCM does not dispose of a measurement standard for composition of gas mixtures necessary for the implementation of the national and European legislation to:
  - Quality management of the air – framework directive 96/62/EC;
  - Specifications/norms for fine dust particles, plumb, sulphur dioxide and nitrogen oxides - framework directive 99/30/EC, directive 99/69/?? for carbon oxide and carbon oil in the atmosphere.
- The pressure standards providing traceability of measurements related to the implementation of the European directives for pressure equipment are in use for a period of 20 to 40 years.

The Ministry of economics realized a pilot project for supporting the implementation of the HACCP system in small and medium sized enterprises in the field of meat processing and dairy industry. In 2005 contracts for free aid were signed with 68 meat processing enterprises. The provision of free aid to dairying enterprises is forthcoming in 2006. For the implementation of the HACCP system it is necessary to provide traceability and national measurement standards with satisfactory equivalence for pressure, temperature, mass, volume, density and viscosity measurements; for time and frequency measurements for technological processes synchronization; for chemical analyses of composition and content of substances and elements in the products. Every year the EC grants to Bulgaria export quotas for such kind of production, and after 01.01.2007 it is expected to be a part of the EC market. The problem solving is directly related to the competitiveness not only of these enterprises but also to the European market as a whole as well as to the provision of safe products to the consumers.

One of the basic quantities in the electrical measurements is the electrical resistance which is within the scope of the Low Voltage Directive (LVD). Due to a permanent damage of the national measurement standard the traceability of the quantity is provided by means of a transfer standard Wavetek 4950. This narrows the range and leads to an increase of the uncertainty of unit dissemination up to 48 times which does not satisfy the industry needs.

In the field of time and frequency measurements the country disposes of a primary measurement standard – cesium generator purchased in 2000. The generator's producer guarantees 5 years usage during which its metrological characteristics will be preserved. Only this measurement standard among the similar ones in the Southeastern Balkan countries participates in the formation of the World time scale. It provides traceability to BIMP for three units – time, time interval and frequency. It is a fixed one and performs daily distance comparisons with a GPS system. As a result

of our good co-operation and the international reputation of the laboratory BIPM has given to GD NCM free of charge a specialized GPS receiver for temporary use. Due to the geographical situation of Bulgaria the standard has regional significance. The laboratory has a 20-year experience in this field and it issues about 200 calibration certificates per year.

As a comparison, the number of calibrations performed by GD NCM is comparable to that performed by PTB - Germany and UME - Turkey but we have to take into account the staff proportion: PTB has over 1000 persons staff, UME - about 400, GD NCM – 75 persons.

The trend in future is GD NCM to reduce the number of calibrated standards to the typical for a NMI accuracy level in connection with the final establishment of the metrological infrastructure of the country while preserving constant the number of the personnel in the standard laboratories related to the supplies according to this project.

There are types of measurements where the carrying out of a calibration request is delayed from 6 to 7 months since the application date – electrical energy measurements, temperature measurements.

The prices of the standards' calibration are formed according to the Tariff of the Ministry of finance and as a rule they are much lower (sometimes up to 10 times) than that in other European countries in spite of the power-consuming standards and equipment for maintenance of the laboratory environment and the lack of measurement automation, as well as in spite of the insufficient number of computers in the majority of laboratories. Significant influence on the maintenance of the standards exerts the money paid by SASM/DG NCM each year for calibration, transportation, insurances and bank deposits for the period of their stay abroad.

The GD NCN's customers assume only as an exception the risks connected to the transportation of the measurement standards abroad and the related to this higher costs for calibration, transportation, insurances, deposits, business trips and lost benefits for the time of standards' absence.

The GD NCM's buildings are evaluated as extremely inappropriate, having unsuitable location and being a subject to the impact of significant influence factors which to a great extent are uncompensated by the appropriate technical instruments or other protective measures. Due to that fact, be virtue of a Decision of the Counsel of Ministers No.307 dated 19.04.2004, SASM has been granted a terrain within the village of German - Sofia municipality, for the construction of a new metrological complex.

<u>During 2004</u>

- The carrying out of a preliminary hydro-geological study of the terrain, elaboration of a project for detailed construction plan and obtaining of a visa for project elaboration from the Municipality of Sofia is already contracted.
- The concept for the new metrological complex is elaborated.
- Drafts of technical specifications for the national standard laboratories are prepared.

<u>Planned until the end of 2005:</u>

- Elaboration of a working project for all parts of the buildings and installations of the new metrological complex;
- European experts' evaluations of the project compliance to the requirements for standard laboratories, PHARE 2002, project BG 0201.12.

<u>From the beginning of 2006 to the end of 2007:</u>

- First stage of the new metrological complex construction — reconstruction of the existing buildings, construction of new building (1), communication facilities building up.

<u>From the beginning of 2008 to 2009:</u>

- Second stage of the construction – new building (2) and finalization of the vertical planning of the whole complex.

It is envisaged the equipment supplied according to project PHARE 2005/6 to be installed in the laboratory premises of the new metrological complex in the village of German. The design and construction of the new metrological complex is set in the budget forecast for the period 2006 – 2008 according to the "Long-term program for the development of the national measurement standards of the Republic of Bulgaria for the period 2004 – 2010" adopted with a Decision of the CM dated 06.01.2005. For the long-term program execution the Bulgarian government has expressed its commitment by providing a budget financing surpassing twice the finances planned according to the international programs and projects.

New metrological complex – National standard laboratories
First stage – by the end of 2007
(Laboratories for which no delivery of equipment is foreseen under PHARE 2005-2006)

Subprogram	Laboratory
"Mass and related quantities"	"Mass"
	"Density and small volumes"
	"Large masses and large volumes"
	"Pressure"
	"Force"
	"Hardness"
"Electricity and magnetism"	"National standards for AC and DC voltage, current, capacity and inductance"
	"National standard for resistance"
	"National standard for magnetic inductance"
	"Radio frequency measurements"
	"Calibration of standards of electrical quantities"
	"Measuring transformers and high voltage"
	"Electrical power and energy"
"Time and frequency"	Standard laboratory for time and frequency measurements"
	Laboratory for time and frequency calibrations
"Temperature"	"Low temperatures"
	"Medium temperatures"
	"High temperatures"
	"Relative air humidity"
	"Calorimetry and flash point temperature"
"Photometry and radiometry"	"Photometry"
	"Radiometry"
	"Optical properties of materials"
"Metrology in chemistry"	"Electrical chemistry"
	"Viscosity"
	"Mass spectrometry"
	"Gas analytical measurements"

"Ionizing radiation"	"Photon dosimetry"
	"Radionuclids activity"
	Specialized premises

Second stage of the construction –2008/9

"Acoustics and vibrations"	"Acoustic measurements"
	"Noise-silencing chamber"
	"Parameters of movement and impact acceleration"
"Length" *	Laboratories for length and angle measurements

** (equipment delivery under PHARE 2005-2006 Programme is foreseen. The laboratory's premises to be supplied are located at 2,"Prof.P.MutafchievSt., Sofia)*

DIRECTORATE GENERAL "MEASURES AND MEASURING INSTRUMENTS"

Within 2005 - 2007 period, Bulgarian economy should prepare for its successful functioning as part of the single European economic ?rea.

Governmental programmes aimed at establishing stability and creating opportunities for expansion of Bulgarian economy, at stimulating competitiveness of Bulgarian industry, as well as at transposition of *acquis* for safe conditions and environment, may be achieved through an active policy towards promotion of metrology, including the successful integration of the latter into the metrological infrastructure of Europe.

Metrology, as science and practice of measurements, plays an essential role for industrial productivity and commercial transactions, and serves the society in achieving higher quality of life. Accurate and reliable measurements are essential prerequisite for public safety, energy saving, environmental protection, healthcare, product innovation, as well as for strengthening the positions of manufacturers and development of entrepreneurship in the conditions of globalisation and competitive national and international market.

Bulgarian legislation as regards measurements (in particular the Law on measurements, promulgated in issue 46/2002 of State Gazette, and the related to it secondary legislation) is harmonised with the European one, the latter including EU Framework Directive 71/316/??? plus 23 specific Directives (16 base Directives and 7 amending Directives) from the Old Approach.

Law on Technical Requirements to Products (promulgated in issue 86/1999 of State Gazette) establishes the horizontal framework for transposition of the New Approach directives into national legislation. This Law introduces the New Approach principles as regards technical requirements, as well as the Global Approach principles as regards conformity assessment. One of the primary objectives pursued by this Law is removing technical barriers to trade in the framework of the EU.

Upcoming is transposition into Bulgarian legislation of MID Directive 2004/22/??, adopted by EU on 26.02.2004 in the aim of establishing internal market for measuring instruments subject to metrological control through:

- Establishment of essential requirements to the measuring instruments and drafting of conformity assessment procedures and the current high level of protection of consumers;
- Mutual recognition of the results of conformity assessment among member-states in order that free movement within European market be ensured.

Ensuring accuracy and reliability of measurements as regards public safety, environmental protection, state and municipal receivables, as well as commercial transactions, these all represent state task assigned to SAMTS, and in particular DG "MMI".

DG "MMI" is responsible for the activities in the field of legal metrology and carries out type examination, initial and subsequent verification of measuring instruments subject to metrological control.

The adopted by the Government "Strategy for improvement of quality policy and quality infrastructure" providing for establishment of Bulgarian Institute on Metrology by segregation of DG "National Centre for Metrology" and DG "Measures and Measuring Instruments" from the existing SAMTS organisation. In preparatory stage is the Law on amendment of the Law on measurements, which reflects the envisaged transformations in the quality infrastructure in the field of metrology. One of the activities provided for by the Law on amendment is conformity assessment of measuring instruments to essential requirement of the New Approach Directives, this activity being incumbent on the DG "MMI" experts.

This imposes the necessity of analysing and optimising metrological control of measuring instruments within the country, by upgrading the existing laboratories and establishing new ones for testing of measuring instruments, as well as preparation and carrying out of the activities for achievement international recognition of type-examination results form of measuring instruments.

Fulfillment of this objective requires significant investments not only by the Government of Bulgaria but also by external sources. Taking into consideration the level of economic development of the country for the passed 15 years and the impossibility for the Government to invest in the qualitative development of metrology, and in particular of legal metrology, SAMTS seeks financial and technical assistance by applying for participation in various international programmes and projects, among which the PHARE programme.

In this project under PHARE programme (PHARE 2004-2006), DG MMI" requests supply of equipment and technical assistance for fields where these are urgently needed. For the last 25-30 years, no investments have been made in the fields proposed. The fields have been selected after an analysis of the present state of the equipment has been carried out and the mutual influence of the factors listed below has been taken into consideration:

- Depleted operational resource of the equipment and lack of equipment for particular testing scopes and verification of taximeters, electricity meters and gas flow rate meters;
- The total number of measuring instruments subject to metrological control;
- Growing tendency for gasification of great percent of households and industrial enterprises within the country;
- Transposition of aquis in the field of conformity assessment of measuring instruments in particular of type examination and verifications;
- Satisfaction of requirements of international recommendations in the field of legal metrology;
- Satisfaction of the requirements for participation and applying for the declarations mutual confidence for acceptance of the results from type examinations of measuring instruments (DoMC) under the Agreement on Mutual Acceptance (OIML-? ? ?);
- Competency;
- Value of the requested equipment and devices assuring their proper operation.

Information about the approved and verified measuring instruments, as well as about the incomes from this activity for the 2002 – 2004 period, as regards the subjects for which DG "MMI" applies through the present project, is given below.

Approved types of gas flow rate meters within the declared range

Year	2002	2003	2004
Number	1	9	17
Total sum of fees[1] in BGN per service	150	1 350	4 350

The tendency for increase in the number of applications submitted and number of the approved types of gas flow rate meters within the range declared indicates the growing necessity of availability of such measuring instruments in the country.

Verification of gas flow rate meters

The lack of adequate in range and accuracy equipment, does not allow DG "MMI" to carry out verification of gas flow rate meters within the range declared. The "Gaztek" enterprise was authorised in 2003 for performing verifications of gas flow rate meters. According to data provided

[1] The fees have been gathered from administrative services which do not include price for testing of measuring instruments

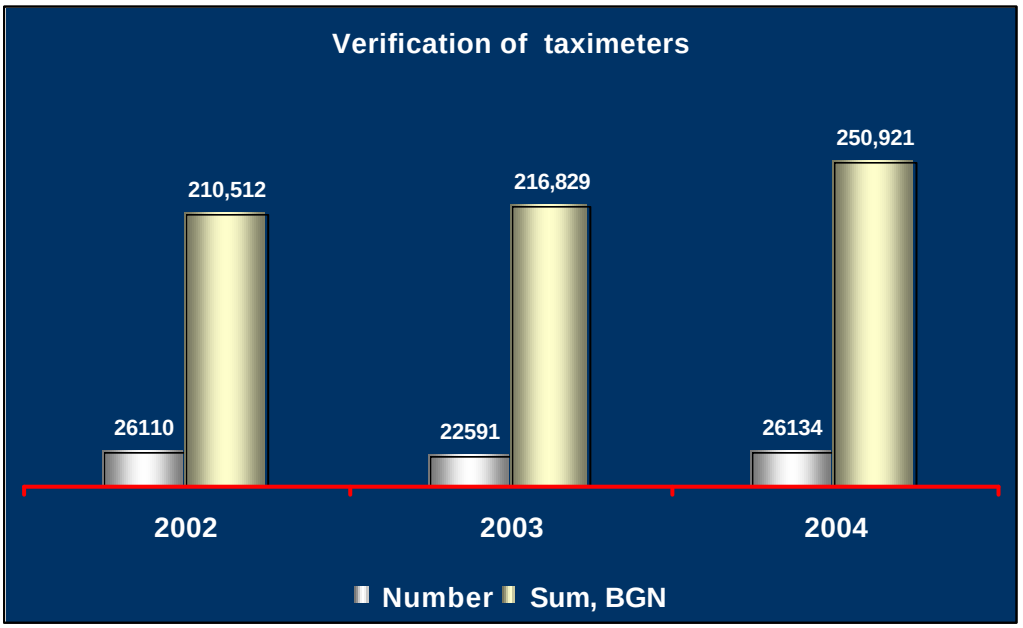
by this enterprise, about 800 verifications of the approximate value of 96 000 BGN are performed annually within the country.

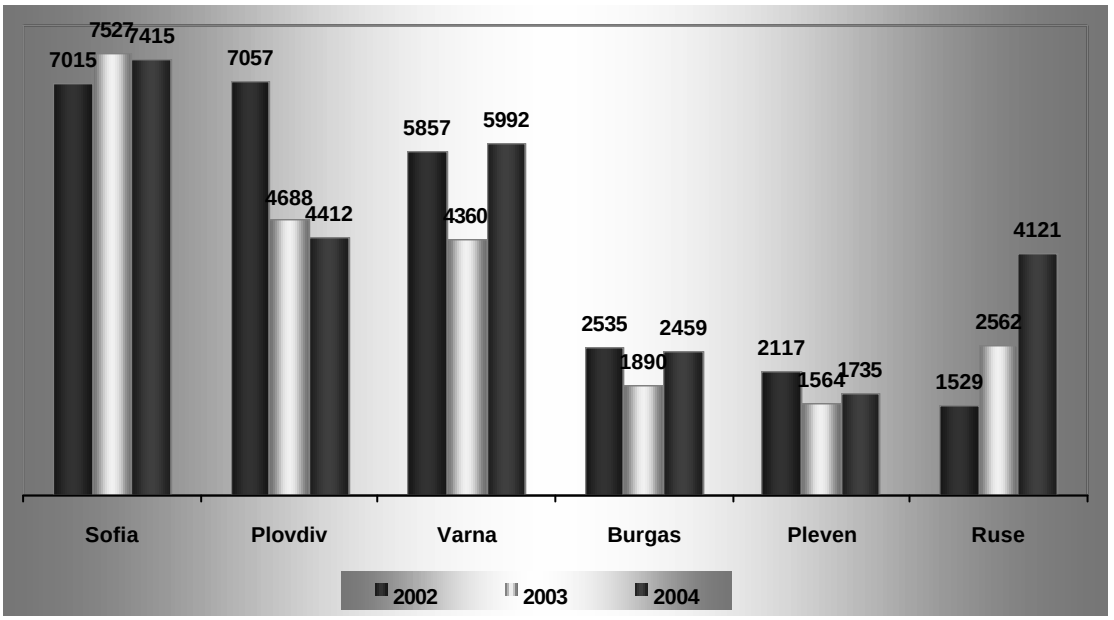
Taking into consideration the forthcoming gasification of the country (up to the present moment the level of gasification is only about 1,5 %), and the construction of cross-border gas pipelines, the figures given are expected to increase many times.

Approved types of taximeters

Year	2000	2001	2002	2003	2004
Number	12	-	-	2	-
Total sum of fees in BGN per service	4 800			1 600	

Verification of taximeters





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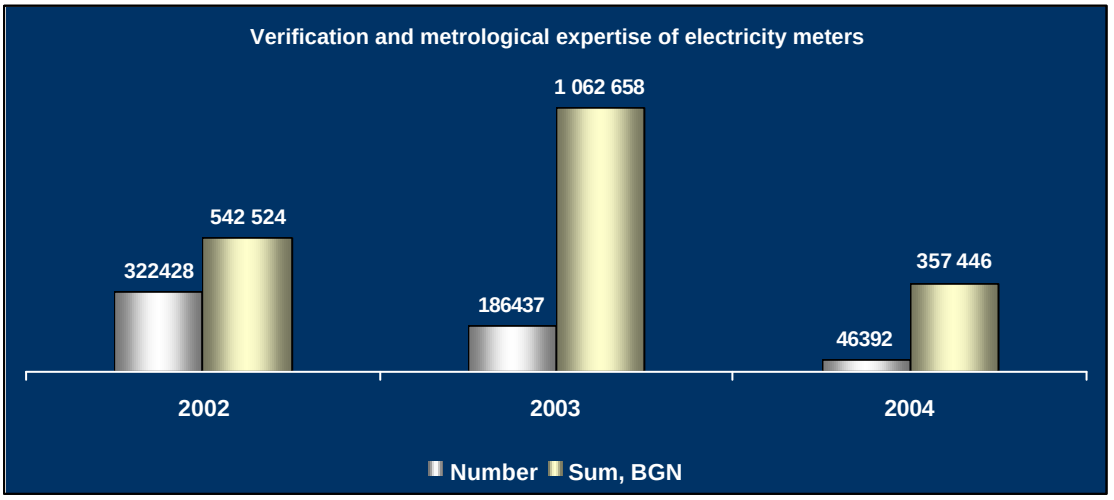
Approved types of electricity meters

Year	2002	2003	2004
Number	33	22	29
Total sum of fees in BGN per service	9 000	22 000	29 000

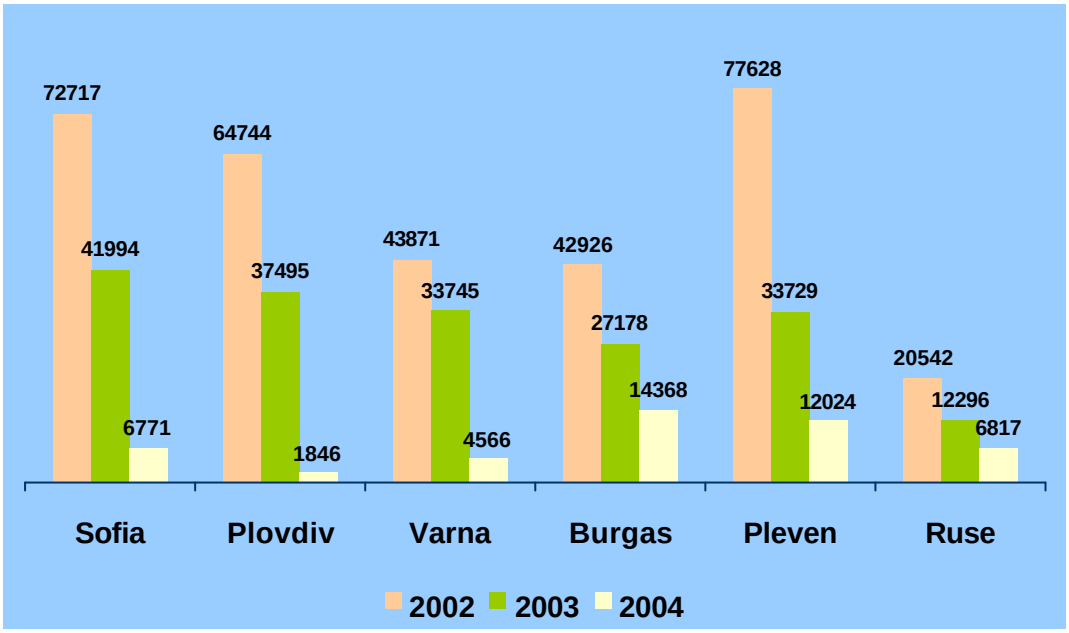
Verification and expertise of electricity meters



The tendency for decrease in the number of verifications is due to the fact that since 2003 several laboratories (their number being over 10) have been authorized for performing this kind of activity.

The given data as regards 2004 refer predominantly to metrological expertise of electricity meters on request of natural persons and legal entities.

The number of the verifications and expertise performed is distributed among regions as shown in the figure below:



Approximately 600 types of measuring instruments have been tested during the given period. About 70 % of them are tested for climatic impacts, which stands for average 24 hours per tested type. Total time allotted for tests for climatic impacts during the given three-year period is about 10 000 hours.

The existing equipment, being installed in the 80's and combining outdated technical solutions and unsuitable overall dimensions, does not allow carrying out of tests within wide temperature range and within the respective humidity.

The lack of adequate equipment in DG "MMI" cannot perform testing for vibration resistance of measuring instruments. Great percent of the measuring instruments, are subject to such testing, as referred to in international documents recommendations, European norms, and national legislation, as the measuring instruments should also meet the requirements (as specified in OIML D 11, edition 1994) as specified follows:

Random vibration

Total frequency range	10-150 Hz
Total RMS level	1,6 $m.s^{-2}$ up to 16 $m.s^{-2}$
ASD level 10-20 Hz	0,048 $m^2.s^{-3}$ up to 4,8 $m^2.s^{-3}$
ASD level 20-150 Hz	- 3 dB/octave
Number of axes	3
Duration per axis	2 minutes in each functional mode as defined in the appropriate OIML Recommendation or a longer period if necessary for carrying out the measurement

Sinusoidal vibration

Frequency range	10-150 Hz
Maximal acceleration level	2 $m.s^{-2}$ up to 10 $m.s^{-2}$
Number of sweep cycles per axis	20

The fees, which are being gathered at present, are not relevant to the actual value of the service delivered. Pricing is state policy and does not depend on the resources invested.

Number of personnel involved in performing this activity is given below:

Measuring instruments / **Personnel**	Gas flow rate meters	Taximeters	Electricity meters
Number of personnel carrying out testing of measuring instruments	-	1	2
Number of personnel carrying out verifications of measuring instruments	-	12	24
Annual expenditures for work salary in BGN	-	93 600 BGN	187 200 BGN

Budget forecast for the period following the equipment supply

Testing of measuring instruments

Measuring instruments	Gas flow rate meters	Taximeters	Electricity meters
Time of operation of the equipment given in hours per year	900 hours per year	84 hours per year	840 hours per year
Expected incomes / expenditures			
Price of the service given in BGN	3 000 BGN	1 650 BGN	42 000 BGN
Number of personnel involved in delivering the service	2[2]	1[3]	2
Annual expenditures for work salary given in BGN	14 400 BGN	7 200 BGN	14 400 BGN

[2] The personnel involved in delivering the service, is also involved in testing of other measuring instruments and other activities.

[3] The sums are calculated taking into account the average work salary of SAMTS employees up till March 2004. The sums include also revenue taxes and health and retirement insurance. Expenditures for work salary increase with and average annual pace of 8 %.

Verification of measuring instruments

Measuring instruments	**Gas flow tare meters**	Taximeters	Electric meters
Time of operation of the equipment given in hours per year	1 500 hours per year	780 hours per year for a rig	1 040 hours per year for a rig
1.2. Expected incomes / expenditures			
Price of the service given in BGN	60 000 BGN per year	31 200 BGN per year for a rig	65 000 BGN per year for a rig
Number of personnel involved in delivering the service	2	2 (of 12 in total – for the 6 rigs)	4 (of 22 in total – for the 5 rigs)
Annual expenditure for work salary given in BGN[4]	14 400 BGN	14 400 BGN (86 400 BGN for 12 experts)	28 800 BGN (158 400 BGN for 22 experts)

[4] The personnel involved in delivering the service, is also involved in testing of other measuring instruments and other activities.

Preparation of DG "MMI" laboratories where the equipment will be supplied

The equipment supplied to DG "MMI" will be installed in the existing laboratories within SAMTS. At present, the ambient conditions of these laboratories have indications incompatible with the indications required as regards the activities performed. Therefore, premises should be repaired thus allowing maintenance of suitable ambient conditions in the laboratories, as required for the proper operation of the equipment supplied.

Expenditures for repair works of the premises, where the requested equipment will be installed, are provided for in the Budget forecast 2006–2008, as follows:

Paragraphs	Budget 2006	Budget 2007
2. Capital expenditures		
General overhaul of fixed assets:		
• Repair works of the premises of six laboratories for verification and expertise of electricity meters in the Regional Departments in Sofia, Plovdiv, Burgas, Varna, Ruse, Pleven.	300 000 BGN	
• Establishment of stations for verification of taximeters in the Regional Departments in Sofia, Plovdiv, Burgas, Varna, Ruse, Pleven.		96 000 BGN
• Repair works of premises for testing of climatic impacts in "TEMI" Department, DG "MMI", Sofia		28 000 BGN
• Repair works of premises for testing of mechanical impacts (vibration) in "TEMI" Department, DG "MMI", Sofia		32 000 BGN
• Repair works of premises for verification and testing of gas flow rate meters in Sofia Regional Department		44 000 BGN
Total expenditures:	**300 000 BGN**	**200 000 BGN**

ANNEX 6: Reference list of relevant laws and regulations

- Law on Measurements, adopted 24 April 2002 (State Gazette, issue 46/07.05.2002). The Law entered into force on 8 November 2002;
- Law amending the Law on Technical Requirements for Products, adopted in 2002 (State Gazette, issue 63/28.06.2002, as last amended State Gazette, issue 93/01.10.2002). The Law entered into force as from 3 December 2002;
- Ordinance on units of measurement allowed for use in the Republic of Bulgaria, transposing Directive 80/181/EEC, Decree of the Council of Ministers ? 275 of 29 November 2002 (State Gazette, issue 115/10.12.2002). The Ordinance entered into force on 13.12.2002;
- Ordinance on the order for authorization of persons for verification of measuring instruments that are subject to metrological control, Decree of the Council of Ministers ? 31 of 2003 (State Gazette, issue 17/21.02.2003). The Ordinance entered into force on 24.02.2003;
- Ordinance on the order for approval of national measurement standards of the Republic of Bulgaria and the way of use and keeping of the measurement standards, Decree of the Council of Ministers ? 74 of 2003 (State Gazette, issue 33/11.04.2003). The Ordinance entered into force on 14.04.2003;
- Ordinance on the conditions and order for carrying out market surveillance, Decree of the Council of Ministers ? 110 of 20 May 2003 (State Gazette, issue 49/27.05.2003). The Ordinance entered into force on 23.05.2003;
- Ordinance on the order and way of carrying out metrological supervision, Decree of the Council of Ministers ? 218 of 30 September 2003 (State Gazette, issue 88/07.10.2003). The Ordinance entered into force on 10.10.2003;
- Ordinance on the essential requirements and conformity assessment of appliances burning gaseous fuels, transposing Directive 90/396/EEC, (State Gazette, issue 100/14.11.2003). The Ordinance entered into force on 17.11.2003;
- Ordinance on the essential requirements and conformity assessment of construction products, transposing Directive 89/106/??? (State Gazette, issue 93/14.11.2000; amendment, State Gazette, issue 75/28.08.2001; as last amended, issue 109/16.12.2003, in force from 01.01.2004). The Ordinance entered into force on 15.11.2001;
- Ordinance on the essential requirements and conformity assessment of electrical equipment designed for use within certain voltage limits, transposing Directive 73/23/EEC (State Gazette, issue 62/13.07.2001; amendment, State Gazette, issue 74/22.08.2003). The Ordinance entered into force on 14.01.2003;
- Ordinance on the essential requirements and conformity assessment for electromagnetic compatibility, transposing Directive 89/336/EEC (State Gazette, issue 78/11.09.2001; amendment, State Gazette, issue 13/11.02.2003, amendment, State Gazette, issue 65/27.07.2004). The Ordinance entered into force on 12.09.2002;
- Ordinance on the essential requirements and conformity assessment of equipment and protective systems intended for use in potentially explosive atmosphere, transposing Directive 94/9/EC (State Gazette, issue 81/21.09.2001; corrigendum, State Gazette, issue 90/19.10.2001; amendment, State Gazette, issue 13/11.02.2003). The Ordinance entered into force on 01.07.2003;
- Ordinance on the essential requirements and conformity assessment of simple pressure vessels, transposing Directive 87/404/EEC (State Gazette, issue 85/02.10.2001; amendment, State Gazette, issue 87/13.09.2002, in force from 03.08.2002). The Ordinance entered into force on 03.10.2002;
- Ordinance on the essential requirements and conformity assessment of machinery, transposing Directive 98/37/EC (State Gazette, issue 91/23.10.2001; amendment, State Gazette, issue 13/11.02.2003). The Ordinance entered into force on 27.04.2003;
- Ordinance on the essential requirements and conformity assessment of toys, transposing Directive 88/378/EEC (State Gazette, issue 62/13.07.2001; amendment, State Gazette, issue 13/11.02.2003; issue 104/28.11.2003). The Ordinance entered into force on 14.07.2002;

- Ordinance on the essential requirements and conformity assessment of lifts, transposing Directive 95/16/EC (State Gazette, issue 94/02.11.2001, as last amended State Gazette, issue 100/14.11.2003). The Ordinance entered into force on 14.11.2003;
- Ordinance on the essential requirements and conformity assessment of recreational craft, transposing Directive 94/25/EC (State Gazette, issue 96/09.11.2001; corrigendum, State Gazette, issue 11/31.01.2002, amendment, State Gazette, issue 13/11.02.2003). The Ordinance entered into force on 10.05.2003;
- Ordinance on the essential requirements and conformity assessment of explosives for civil uses, transposing Directive 93/15/EEC (State Gazette, issue 26/12.03.2002; amendment, State Gazette, issue 13/11.02.2003). The Ordinance entered into force on 31.12.2002;
- Ordinance on the essential requirements and conformity assessment of personal protective equipment, transposing Directive 89/686/EEC (State Gazette, issue 48/14.05.2002; amendment, State Gazette, issue 13/11.02.2003). The Ordinance entered into force on 16.11.2003;
- Ordinance on the essential requirements and conformity assessment of radio and telecommunications terminal equipment, transposing Directive 99/5/EC (State Gazette, issue 79/16.08.2002; amendment, State Gazette, issue 13/11.02.2003). The Ordinance entered into force on 12.09.2002;
- Ordinance on the essential requirements and conformity assessment of pressure equipment, transposing Directive 97/23/EC (State Gazette, issue 87/13.09.2002). The Ordinance will enter into force on 13.03.2004. As regards the part for designated bodies it is in force as from 17.09.2002;
- Ordinance on the essential requirements and conformity assessment of household electric refrigerators, freezers and combinations thereof, transposing Directive 96/57/EC (State Gazette, issue 84/03.09.2002). The Ordinance will enter into force on 05.03.2004;
- Ordinance on the essential requirements and conformity assessment of non-automatic weighing instruments, transposing Directive 90/384/EEC (State Gazette, issue 52/06.06.2003). The Ordinance will enter into force on 01.01.2005;
- Ordinance on the essential requirements and conformity assessment of machinery and equipment for use outdoors with respect to the noise emission in the environment, transposing Directive 2000/14/EC (State Gazette, issue 11/10.02.2004). The Ordinance will enter into force on 12.02.2005;
- Ordinance on the essential requirements and conformity assessment of hot-water boilers fired with liquid or gaseous fuels with respect to the efficiency requirements, transposing Directive 92/42/EEC (State Gazette, issue 56/29.06.2004). The Ordinance will enter into force on 29.06.2005, except from the provisions of chapter four, which enter into force on 29.12.2004;
- Ordinance on the essential requirements for cableway installations designed to carry persons and conformity assessment of their safety components and subsystems, transposing Directive 2000/9/EEC (State Gazette, issue 64/23.07.2004). The Ordinance will enter into force on 01.01.2006, except from the provisions of chapter four, which enter into force on 26.07.2004;
- Ordinance on the essential requirements and conformity assessment on energy efficiency requirements for ballast for fluorescent lighting (State Gazette, issue 77/03.09.2004). The Ordinance will enter into force on 01.02.2005 except from article 7, paragraph 2, point 2, which enters into force from 21.11.2005 Article 7, paragraph 2, point 1 in force till 20.11.2005.

ANNEX 7: Reference list of relevant strategic plans and studies

1. Middle-term Strategic Planning
2. Long-term Strategic Orientation Plan
3. Long-term programme for development of the national measurement standards of the Republic of Bulgaria
4. Strategy for enhancement of the quality policy through development of national policies on standardisation, metrology and accreditation, national conformity assessment and market surveillance of industrial products systems

ANNEX 8: LIST OF ACRONYMS AND ABBREVIATIONS

AP – Accession Partnership
ATEX – Directive concerning equipment and protective systems intended for use in potentially explosive atmospheres
BAS – Executive Agency “Bulgarian Accreditation Service”
BIPM – Bureau International des Poids et Mesures
CA – Conformity Assessment
CABs – Conformity Assessment Bodies
CEOC – European Confederation of Organisations for Testing, Inspection, Certification and Prevention of Accidents
CFCU - Central Finance and Contracts Unit
CIPM – Comité International des Poids et Mesures
CIVEX – Civil Explosives Directive
CMC – Calibration and Measurement Capabilities
DG "NCM" – Directorate General "National Center of Metrology"
DG "MMI" – Directorate General "Measures and Measuring Instruments"
DG "MSv" – Directorate General "Metrological Supervision"
DG "MS" – Directorate General "Market Surveillance"
DG "DCABs" – Directorate "Designation of Conformity Assessment Bodies"
DG "TI" – Directorate General "Metrological Supervision"
EA – European Co-operation for Accreditation
EA MLA – EA Multilateral Agreements
EC – European Commission
EC Delegation – Delegation of the European Commission to Bulgaria
EMAS - Eco-Management and Audit Scheme
EMC – Electromagnetic Compatibility
EU – European Union
EUROMET European collaboration I measurement standards
FQMS Fuel Quality Monitoring System
GLP – Good Laboratory Practice
HRE – High-risk equipment
I – Investment
IB – Institutional Building
IT – Information Technology
KMS – Knowledge Management System
LTP – Long-term program for development of the national measurement standards of the Republic of Bulgaria
LTRP – Law on Technical Requirements for Products
LVD – Low Voltage Directive
MID – Measuring Instruments Directive
MLAs – Multilateral Agreements in the field of Accreditation
MRA – Mutual recognition of national measurement standards and of calibration and measurement certificates issued by a national metrology institute
NA – New Approach
NPAA – National Programme for the Adoption of the Acquis
PECA – Protocols to the Europe Agreement on Conformity Assessment and Acceptance of Industrial Products
PED – Pressure Equipment Directive
PTs - Proficiency Testing Schemes
RMO – Regional Metrological Organisation
SAMTS – State Agency for Metrology and Technical Surveillance

TA – Technical Assistance
TAIEX office – Technical Assistance Information Exchange Office
ToRs – Terms of Reference
TS – Technical Specifications
WELMEC – Western European Legal Metrology Co-operation