THE CURRENT REFORMS ON FORENSIC SCIENCE:
INTERNATIONAL EXPERIENCE AND FIRST STEPS IN LITHUANIA

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ABSTRACT

The value of forensic science for the investigation of crimes and assurance of freedom, security and justice has been assessed recently. Therefore, the first researches on forensic science appeared not only in the United States of America but also in European Union. The objective of the European Commission to create the common European Forensic Science Area marks the beginning of harmonization of forensic science, its expansion from national into international level and also requires the improvement of forensic science in many member states. The Ministry of Justice of the Republic of Lithuania agrees that the current system of forensic science in Lithuania is organized and works improperly. Therefore, the first steps for the reform on forensic science in the connection with creation of common European Forensic Science Area has just taken in Lithuania.

Key words: forensic science, vision 2020, improvement

1. TOWARDS THE IMPROVEMENT OF FORENSIC SCIENCE

The crime rate in European Union (hereinafter EU) is still improving despite its member states efforts to combat it. Therefore, the significant actions in EU policy for fighting against crime are taken recently by choosing forensic science as the main tool for this fight. Hence, European Council envisaged the close relation between freedom, security and justice with forensic science and declared it in Draft Council Conclusions on the vision for European Forensic Science 2020 including the creation of a European Forensic Science Area and the development of forensic science infrastructure in Europe (1). It could be noted that this document also marks the beginning of harmonization of forensic science and its expansion from national into international level. Thus, the common European Forensic Science Area was decided to be created as the measure for fighting against crime, the improvement of work of law enforcement institutions and performance of justice. The vision for European Forensic Science 2020 itself is very short declaration: “In order to foster cooperation between police and judicial authorities across the European Union with a view to creating a European Forensic Science Area by 2020, Member States and the Commission will work together to make progress in the following areas, aiming to ensure the even-handed, consistent and efficient administration of justice and the security of citizens:

- accreditation of forensic science institutes and laboratories;
- respect for minimum competence criteria for forensic science personnel;
- establishment of common best practice manuals and their application in daily work of forensic laboratories and institutes;
- conduct of proficiency tests/collaborative exercises in forensic science activities at international level;
- application of minimum quality standards for scene-of-crime investigations and evidence management from crime scene to court room;
- recognition of equivalence of law enforcement forensic activities with a view to avoiding duplication of effort through cancellation of evidence owing to technical and qualitative differences, and achieving significant reductions in the time taken to process crimes with a cross-border component;
- identification of optimal and shared ways to create, update and use forensic databases;
- use of advances in forensic science in the fight against terrorism, organised crime and other criminal activities;
- forensic awareness, in particular through appropriate education and training of the law enforcement and justice community;
- research and development projects to promote further development of the forensic science infrastructure” (1).
Problems might appear in implementation of this document first of all because of the different concepts of forensic science itself and different systems of law enforcement institutions. Accordingly, as you can see above, vision for European Forensic Science 2020 is an abstract document of one page with only the main directions for creation of common European Forensic Science but with no even abstract guidelines for its implementation. Therefore, the scientific researches and models how to implement Vision for European Forensic Science 2020 are vital in each member state in order functioning common European Forensic Science area would be created by 2020.

The first researches on creation of European Forensic Science Area, the evaluation situation of forensic science and optimization of institutional system of forensic science institutions appeared recently. For example, European Commission having agreed that forensic science plays an important role in fighting against crime and provide funding for joint research project “Improving Forensic Science Methodologies across Europe (IFMAE)” of consortium of scientists from the Netherlands, Germany, Poland, Spain, Cyprus, Ireland, United Kingdom, Czech, Finland, Belgium, Sweden, Switzerland and Canada (the project is funded for the period of 2013-2015). The purpose of this project is to produce the Best Practice Manuals for investigation of terrorism, organised crime and trafficking in human beings (2). Research on forensic science was also recently performed in the Netherlands. The Netherlands Forensic Institute was asked by the US National Institute of Standards and Technology to write a paper called “Trends, Challenges and Strategy in the Forensic Science Sector” by focusing on governance of a modern forensic science organization in Netherlands (3). Understanding who are or might be the customers of forensic science institutions in the Netherlands, what do the customers need, how to increase the value of the information forensic science institutions might provide to them, and how to accelerate the operations in forensic science institutions operations – all the main problems analysed in a study. The conclusions of researches in the Netherlands is very similar to conclusions of researches in USA: “Good forensic science and medical examiner practices are of clear value from a homeland security perspective because of their roles in bringing criminals to justice and in dealing with the effects of natural and human-made mass disasters”(4).

If we take a look at the situation over the Atlantic Ocean, we could find that research about the improvement of forensic science system and forensic science itself are also dedicated to the scientists and research institutions. For example, Congress of United States of America imposed the National Academy of Sciences to conduct a study on forensic science that led to report “Strengthening Forensic Science in the United States: A Path Forward” published in 2009 (4). The above mentioned research was just the start of much deeper interest in forensic science in United States of America (hereinafter the USA). Hence, a few years later one more scientific study on forensic science was performed by professor J. E. Laurin. The purpose of later research was to broaden the understanding of how forensic science is created and used in criminal cases. J. E. Laurin points to a raft of yet unaddressed issues concerning the meaning of scientific integrity and reliability in the context of investigative decisions that are by and large committed to the discretion of decidedly unscientific actors in her study (5). As a result, the performed solid researches in USA proves one more time that forensic science is in need of permanent research and plays even more important role in fight against crime than it was thought before.

The researches in USA has not only scientific value but also led to introduction of sweeping legislation to improve the use of forensic evidence in criminal cases. The Criminal Justice and Forensic Science Reform Act (S. 2177) proposed in March 28, 2014 promotes national accreditation and certification standards and stronger oversight for forensic labs and practitioners, as well as the development of best practices and a national forensic science research strategy (6). Key provisions in the Criminal Justice and Forensic Science Reform Act would include:

- creation of an Office of Forensic Science (OFS) within the Office of the Deputy Attorney General at the Department of Justice, and requirement of coordination between the new office and the National Institute of Standards and Technology (NIST).
- establishment of a Forensic Science Board (FSB), with members appointed by the President.
- requirement that all forensic science laboratories that receive federal funding be accredited according to rigorous standards set by the FSB and OFS.
- requirement that all relevant personnel who perform forensic work for any laboratory or agency that receives federal money to become certified in their fields.
- creation of Committees of scientists to examine forensic science disciplines to develop standards, best practices, and research priorities;
- promoteness of basic and applied scientific research in the forensic sciences, and encourage public-private collaborations.
- providing support and training for State and local laboratories and law enforcement. (7)

Bearing in mind problems uncovered by previous researches in Lithuania and good practice of the USA and the Netherlands by carrying out research for solving problems of inefficiency of institutions of forensic science and criminal justice, and continuing researches on improving Lithuanian criminal justice system, making it harmonized with common vision of European Forensic Science 2020 the authors of this article joined together for the implementation of project “Conception of the vision for European Forensic Science 2020 implementation in Lithuania (EUROVIFOR)” (hereinafter the Project EUROVIFOR). The Project is funded for the period of 1 March 2014 - 31 December 2016.

We performed a short survey on lawyers in order to find out what weaknesses of Lithuanian forensic science system they envisaged and believes that could be solved by creation of European Forensic Science Area.

The results of this survey (see Fig. 1) shows that the problems of forensic science in Lithuania are related with insufficient scientific background, state policy and inadequacy between nature of work and wages of
personnel working in forensic science area. The lack of qualification, the need for compulsory studies of criminalistics and forensic science for lawyers and the lack of research institution for forensic science are three main and interrelated problems which appear because of the lack of scientific background in forensic science in Lithuania. Thus, the conclusion is that the research institution for forensic science is vital in Lithuania. As you can find later in this article, the institution, responsible for the reform of forensic science institutions in Lithuania, is of the same opinion. Hence, the following part of this article would shortly overview the situation of forensic science institutions in Lithuania and plans for its reform.

<table>
<thead>
<tr>
<th>Lack of qualification (37)</th>
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<tr>
<td>The need for compulsory studies of criminalistics (forensic science for lawyers) (26)</td>
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<td>Lack of research institution for forensic science (14)</td>
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<td>Insufficient funding for investigation of crime (13)</td>
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<td>Lack of international cooperation and spread of good practice (8)</td>
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<td>Lack of motyvation of specialists, experts, investigators (8)</td>
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<td>Heavy workload of specialists, experts and investigators (7)</td>
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<td>Duplication of functions of forensic science institutions (7)</td>
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<td>The gap between science and practice of criminalistics (forensic science) (6)</td>
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*Fig. 1 Results of survey on weaknesses of Lithuanian forensic science system*

2. THE CURRENT SITUATION OF FORENSIC SCIENCE IN LITHUANIA

The forensic examinations in Lithuania are performed by Forensic Science Centre of Lithuania (hereinafter FSCL), the Lithuanian Police Forensic Science Centre (hereinafter PFSC), the State Forensic Medicine Service under the Ministry of Justice of the Republic of Lithuania (hereinafter SFMS), the National Service of Forensic Psychiatry under the Ministry of Health of the Republic of Lithuania (hereinafter NSFP), the Fire Research Centre under the Fire and Rescue Department under the Ministry of the Interior of the Republic of Lithuania (hereinafter FRC). The activities of above mentioned forensic science institutions are coordinated and controlled on departmental basis by different state institutions (see Fig. 2).

*Fig. 2. Institutional subordination*

Also the relation between the common number of employees and experts in forensic science institutions varies. For example, 73 per cent of experts of total number of employees are only in FSCL. Unfortunately, the percentage rate is lesser in the other forensic science institutions: 39 per cent in PFSC, 27 per cent in SFMS, 21 per cent in NSFP. Moreover, the system of social guarantees and wages for experts and other employees also differs. Such a situation is because of lack of unified state policy in forensic science. The departmental dependence is not able to ensure that issues about the perspectives of development of forensic science institutions and the identification of areas of forensic examinations would be jointly addressed. As a consequence, the same forensic examinations are carried out by the experts of same qualification, the same techniques are
used, the accreditation is planned for the same forensic examinations in the different forensic science institutions. It should also be noted that there is no possibility to obtain bachelor or master degree in forensic science because there is no such as a study program at universities of Lithuania. Therefore, the only way to become an expert in forensic science in Lithuania is the practical work in forensic science institutions. Finally, the lack of forensic science research institute (research organization) is another problem. Mostly, the partners in international research projects are research institutions. Because there is no forensic science research institution, this creates difficulties for participation of Lithuanian forensic science institutions in international research projects, or even precludes it. All things considered, the Ministry of Justice of the Republic of Lithuania, institution responsible for forming of state policy in the area of forensic science, agrees that the current system of forensic science institutions is organized and works improperly. According to the Ministry of Justice of the Republic of Lithuania the main problem is that the activities of forensic science institutions are organized on the departmental level and the rights and obligations are owned by different ministries or institutions. Consequently, the lack of systematic approach and strategic planning appears. Thus to inefficient usage of state funding for forensic science institutions, improper performance of their tasks, and no searches for the priority areas those could compete with foreign forensic science institutions. All things considered, the objective to establish forensic science research institution (research organization) which would operate efficiency and would rational use the funds of state, was set by the Ministry of Justice of the Republic of Lithuania. The main tasks for reaching the above mentioned objective are:

1) the rational usage of state funding (the rational allocation of state funds by not investing in the technologies or equipment or accreditation of different forensic science institutions those carry out the same forensic investigation);
2) the strategic settlement of priority areas of forensic examination which are not carried out in the other Baltic States (searching for the ability to attractive for the foreign institutions);
3) the initiation of researches in the area of forensic science (this would help to ensure the quality of forensic examination and to integrate into the area of European researches).

Two alternatives for the improvement the operation of forensic science institutions in Lithuania are being discussed at the moment. The first alternative is to merge FSCL, SFMS, PFSC, NSFP, FRC into one institution – state research institute. The second alternative is to liquidate the SFMS and create state research institute instead of it. The rest of forensic science institutions would remain untouched of reorganization. While both of alternatives for improving the system forensic science institutions are applauded, as well as it is believed that both of them would reach the above mentioned objective and tasks. But the first alternative looks like the optimal variant for the Ministry of Justice of the Republic of Lithuania. While not all concerned authorities are of the same opinion. Prosecutor General's Office of the Republic of Lithuania, National Courts Administration and Vilnius University are of the same position as the Ministry of Justice of the Republic of Lithuania. On the other hand, the Ministry of the Interior of the Republic of Lithuania, the Fire and Rescue Department under the Ministry of the Interior of the Republic of Lithuania, Mykolas Romeris University, the Lithuanian University of Health Sciences and the Police Department under the Ministry of the Interior of the Republic of Lithuania are of the different opinion. They support the second alternative – to liquidate the SFMS, create state research institute instead of it and to remain the rest of forensic science institutions untouched of reorganization. Ministry of Education and Science of the Republic of Lithuania and the Ministry of Health of the Republic of Lithuania do not agree with neither first nor second alternative.

According to the results of our research, we think that the best option would be to a reorganization of part of forensic science institutions into the National Forensic Science Institute (research organization). Furthermore, the National Forensic Science Centre also should be established. This institution would be responsible for improvement forensic science specialist participation in pre-trial investigation activities. (The specialist is a figure of Lithuanian criminal procedure possessing the necessary special knowledge or skills for the investigation of objects and providing the conclusions or explanations (Article 89, Criminal Procedure Code of the Republic of Lithuania). The expert is another figure in Lithuanian criminal procedures possessing the necessary special knowledge and included in the List of Experts or the Republic of Lithuania (Article 84, Criminal Procedure Code of the Republic of Lithuania).

The problem of conception of special knowledge and its usage in criminal procedures was researched in 2005 – 2008 by scientists of Mykolas Romeris University. Project „The Scientific Conception of Application of Special Knowledge in Crime Investigation and Mechanism of its Implementation“ performed by scientists of Mykolas Romeris University was funded for the period 2011-2012. The role of specialist has increased significantly in criminal procedures in Lithuania since 2003. Moreover, the conclusions of specialist become the most common form of application of special knowledge in pre-trial investigation. Accordingly, the submission of conclusions of specialists, the investigation of crime scene, the management for data basis forensic science those are strongly in need in current system of forensic science institutions could be the main tasks of the National Forensic Science Centre.

We believe that the positive impact would appear soon after our proposed and above mentioned reorganization of forensic science institutions. The reasons are as follow:

- the activities of forensic science institutions would be coordinated in hands of one ministry but not by three of them;
- the duplications of functions of forensic science institutions would be avoided, its management would be improved as well;
- the flow of expert work would be designated properly;
• appropriations of national budget would be planned more rationally. This would lead to renewal of infrastructure, equipment and technologies according to the EU standards;
• the high professional qualification and quality of expertise and investigations would be ensured because of the centralized development of professional skills;
• the forensic science examinations would be certificated and standardized and the activity of forensic science institutions would be accredited;
• the current problems of forensic science would be solved efficiency by lowering the workload of forensic science experts, dealing with the problem of human resources, ensuring appropriate wages and refusing the performance of not regulated functions;
• the coordinated order for the fees of forensic science expert services would be laid down.

Such a system would be much more effective because would bring the experts and specialists to crime scene, also would save time and resources. Notwithstanding, we think that the reform of forensic science institutions should go alongside with the reform of all institutions of criminal justice. All our insights towards the improvement of forensic science system in Lithuania have been proposed to the Ministry of Justice of the Republic of Lithuania. We hope that successful dialogue between representatives of science and public authority has just started. Hence, the successful improvement of forensic science system in Lithuania towards creating common European Forensic Science Area would be reached soon.

3. CONCLUSIONS

Draft Council Conclusions on the vision for European Forensic Science 2020 including the creation of a European Forensic Science Area and the development of forensic science infrastructure in Europe emphasize the close relation between freedom, security and justice with forensic science. Hence, the internationalization of forensic science is unavoidable under creation a common European Forensic Science Area. This could also be an opportunity for each member state to improve its national forensic science systems.

The first steps are made towards the improving the efficiency of forensic science in Lithuania. Two possible ways of reorganization of forensic science institutions are being proposed. But reorganization of forensic science institutions is not enough for creation a properly functioning forensic science system integrated into common European Forensic Science Area. Consequently, the complex actions should be taken for improvement of forensic science in Lithuania. And the reform of forensic science institutions should go alongside with the reform of all institutions of criminal justice.

The first researches on creation of common European Forensic Science Area, the evaluation situation of forensic science and optimization of institutional system of forensic science institutions appeared recently not only in EU but also in USA. Accordingly, each national model of implementation of vision for European Forensic Science Area 2020 should be incorporated and function properly into model common for all eu. Therefore, joint international researches are applauded. Horizon 2020 with its four topics on forensic science could be a program motivating scientists to join together for searching the best way of vision for European Forensic Science 2020 Implementation in Europe. The proper attention for this issue should take part in international conferences on forensic science. First of all it should be addressed in a forthcoming X international scientific – practical conference “Criminalistics and Forensic Examination: Science, Studies, Practice” (the conference will take part on July 25-26, 2015 in Vilnius, Lithuania).

REFERENCES
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