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# ANNUAL REPORT 2017

European Network of Forensic Science Institutes

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# ENFSI



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# ENFSI BOARD



Erkki Sippola,  
Chairman  
NBI, Finland



Dorijan Kerzan  
Treasurer  
NFL, Slovenia



Dariusz Zuba  
IFR, Poland



Kornelia Nehse  
LKA KTI Berlin, Germany



Michael Bovens  
FOI Zurich, Switzerland

## ENFSI SECRETARIAT



Isabelle Jopp  
BKA, Germany



Elisabeth Pickersgill  
BKA, Germany

# Message from the Chairman



## Dear colleagues, partners and stakeholders!

2017 was again an exciting year for the forensic science community inside and outside of ENFSI.

The EU Council Conclusions with the Action Plan on the way forward in view of the creation of a European Forensic Science Area (EFS2020) is a key challenge that tied up ENFSI's resources more than anything else in 2017. The specifically established EFS2020 Task Force gathered information of the current state of the art concerning published Best Practice Manuals as well as the usage of forensic databases and proficiency tests in different countries. The report provided by the Task Force was presented to the EU Law Enforcement Working Party and was well accepted. Similarly, ENFSI's proposal to make concrete steps to place pan-European forensic databases in Europol was received at the Europol HENU meeting.

The implementation of EFS2020 goals has been acknowledged and consequently been included in the annual plans of ENFSI Expert Working Groups and Standing Committees. Needless to say, EFS2020 is also on the agendas of the ENFSI Member Laboratories. In conclusion, ENFSI has impressively demonstrated that its forensic community can be effectively harnessed to implement political decisions such as the EFS2020 Council Conclusions and Action Plan. This demonstrates notably the significance of ENFSI's professional role in Europe!

This remarkable position has not come without effort. Past Boards and Chairs have worked hard to raise ENFSI to its current position. Holding the status of a non-profit association recently taught us that ENFSI has to be professional also in terms of fulfilling national legislation. Currently there is notable pressure to amend ENFSI Policy Documents, especially the Constitution, so as to fully comply with German laws concerning associations. This will be one of the main topics of the ENFSI Business meeting in Budapest in May 2018.

The terms of Board Members Jan De Kinder (Chairman), Dominique Saint-Dizier and Ondrej Laciak ended on May 19, 2017. I would like to take the opportunity to acknowledge once again what they have achieved and thank them for their significant contributions to ENFSI. The new ENFSI Board was supported by Gabriele Juodkaite-Granskiene as the Chairperson Designate and Dorijan Kerzan. In October 2017 we got news from Gabriele; informing the Board about her forthcoming appointment as Judge in the Lithuanian Supreme Court. Even though we felt sad because of Gabriele's departure we were also proud of the acknowledgement of her legal expertise.

What a great stepping stone in one's career ENFSI can be if this even paves the way for a promotion as Judge in the highest court of your country!

An ever-increasing workload on the Board required immediate actions after Gabriele's resignation and thus Michael Bovens from the Forensic Science Institute Zurich was appointed after a mutual agreement as a temporary Board Member until the Annual Meeting 2018.

Education and Training issues have been discussed in ENFSI since its establishment. Demands on competency are constantly increasing, not only concerning forensic experts but also the end-users of forensic services. Therefore ENFSI needs to be more active on E&T in the future. The Quality and Competence Standing Committee and the R&D Standing Committee made a joint initiative concerning E&T, which was highly appreciated by the Board. The initiative started vivid discussions on how to best foster the development of the E&T. In 2018 we will see concrete actions in this area.

I am really proud of being the Chairman of ENFSI. Every day there are new challenges, but also new rewards are within the reach when working hard together.

Yours,  
Erkki Sippola

# Dorijan Kerzan

MEMBER OF THE 21ST ENFSI BOARD



## Dear ENFSI members!

Thirty years ago, after a short involvement with military in the time of Slovenian independence war and after finishing my studies of linguistics, I did not have any clear idea about what forensic science actually is. I even didn't know that there is such thing as forensic science (it was long before CSI hit the screens). Yet, I have found myself in a position to choose between several options that would lead my future career and life. I have chosen forensic science and looking back today, this has been one of the best decisions I have ever made.

My career as a forensic scientist started in the document examination department of our institute. As a linguist I was supposed to lead the project on audio and voice analysis, which unfortunately could not be launched due to lack of funding, but I have simultaneously been trained as a handwriting and document examination expert as well, which has been my field of work since then.

After five years as forensic expert I became the head of department in 1997. After holding this position for 13 years, I have been appointed assistant director of the laboratory. In difficult times of economic crisis our laboratory has succeeded to move into new, purpose-built premises. In 2015 I have been assigned to the director of the National Forensic Laboratory.

My involvement with ENFSI started back in the last century, when I firstly briefly attended meetings of the Expert Working Groups on Forensic Speech and Audio Analysis and Documents. Later, in 1998, I became a member of the Handwriting Expert Working Group and remained in the group until 2009. In the same year I was appointed NFL's ENFSI Permanent Representative.

Being honored by the Membership with the election as a new Board Member in Berlin, I was at the same time well

aware of the challenges and responsibilities that come with the position. We are facing quite a peculiar time in European forensics: There are NAS and PCAST reports from the US, which are challenging the essence of forensic research (very often from specific and also utterly incorrect assumptions), while Europe is working on the establishment of a European Forensic Science Area with common standards, a goal ENFSI has been striving for many years. There is no doubt that the efforts of ENFSI in the process of accreditation of institutes have been crucial. Knowledge has been shared and distributed among the laboratories and the results are very encouraging.

Yet, the structure of the organization with members across Europe, including EU members and non-members, might impede to some degree the necessary cooperation with stakeholders. Hence, my personal ambition is to promote ENFSI's scientific, organizational and professional achievements. I feel we should do more to promote excellent Best Practice Manuals that were produced by ENFSI Expert Working Groups which bring together some of the best scientists in Europe. It's my utmost wish that Working Groups continue this amazing work which brings ENFSI to the forefront of the World, as our Constitution states. Further I would like to see ENFSI Working Groups' deliverables made publicly available. The scientific work of ENFSI Expert Working Groups should always be emphasized and presented, both on the ENFSI website and in scientific papers published in the most distinguished journals. Moreover I would like our Member laboratories to be more publicly visible and presented in a way that acknowledges their excellent scientific achievements, knowledge and professionalism.

Yours,  
Dorijan Kerzan

# Michael Bovens

MEMBER OF THE 21ST ENFSI BOARD



MESSAGE FROM THE BOARD  
AND SECRETARIAT

## Dear ENFSI members!

Quite unexpected I received in November 2017 the invitation of the ENFSI Board for direct involvement in the Board. This because, also unexpectedly, Gabriele Juodkaite-Granskiene was honorably called Judge of the Lithuanian Supreme Court and had to retire already soon after election in May 2017 as Chairman Designate. After sorting out the priorities and checking the personal resources, I also received the green light from my reporting line. I was very pleased and honored to accept the immediate participation in the Board from December 2017 onwards. I hope that the confidence the Board has given me will soon also win and be confirmed with the entire membership.

My major role within the Expert Working Groups was on Drugs, where I have been member of since 1997 and served from 2002–2012 in the Steering Committee, from 2007–2012 as Chairman. During that time and until today I have had the privilege to work with so many talented and committed scientists and managers, that a series of products could be finalized, be it internal documents or booklets, Guidelines, calculators for the forensic drug analysis community, and they are still in use.

It is that spirit which makes ENFSI powerful and known, not only in Europe and it is my motivation to continue in the Board, working with dedicated members with distinguished talents and cooperation to help keeping forensic sciences

a trustful valuable science. Keeping it simple in the sense that is well understood for our customers as well as practical and doable for all technicians and scientists on lab level.

At the age of 54 I look back on a civil forensic career starting in 1995 as head of the drug section, continuing as head of the department of chemical analysis in 2008. After restructuring and reorganisation to the Zurich Forensic Science Institute – the merged forensic state laboratory – I moved more into the forensic management as chief scientist.

In parallel, I have been serving 34 years as officer in the swiss army in several functions from Special Operation Capable as lieutenant to chief joint staff NBC as colonel. These times in leadership and management, training and education, on both sides as trainee and trainer were defining and distinctive, ensuring always having both feet on the ground.

I am looking forward to fruitful discussions with the members an stakeholders and good decision making, cooperative processes to keep ENFSI the driving force of Forensic Sciences in Europe.

Yours,  
Michael Bovens

# Isabelle Jopp and Elisabeth Pickersgill



Dear ENFSI members,

the last two years in the Secretariat passed very fast. The cause of this is not only an increase of work and new challenges we faced permanently but also the pleasure we always had when working with the ENFSI membership!

Travelling with the Board is always a chance to gain impressions from a science point of view and to witness decision making in challenging cases. We can also benefit from the direct interaction with engaged colleagues all over Europe. Some of the places we visited filled our cameras with beautiful photos and the notebook with pages of meeting minutes.

In 2017 we had to overcome several bureaucratic obstacles regarding the Direct Grant 2016 application process, spending hours on conversations with tax consultancies and endless hours to comply with the EC Participant Portal requirements.

The Europol Platform for Experts and the public ENFSI website are platforms that still need to be further developed and require more attention from the whole ENFSI community.

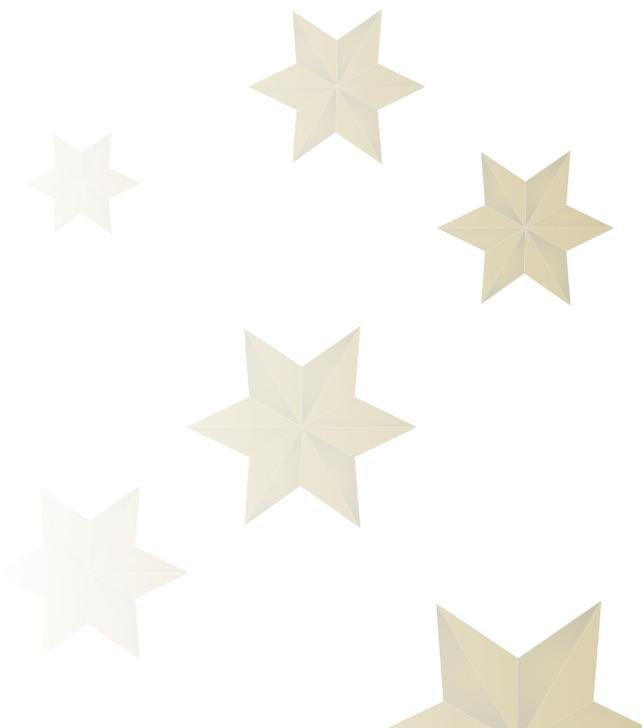
We are always happy to assist everyone who needs to get access and update information or is looking for a helping hand with regard to technical issues.

Reimbursement claims are processed as quickly as possible but sometimes require some queries and time that is not always immediately available. We again kindly ask you for patience if we need more time. It is in our all interest that the ENFSI budget is managed properly.

We hope to see as many of you as possible during the upcoming major events!

All the best for 2018, we are looking forward to an exciting year with you!

Yours, Isabelle & Elisabeth  
From the ENFSI Secretariat



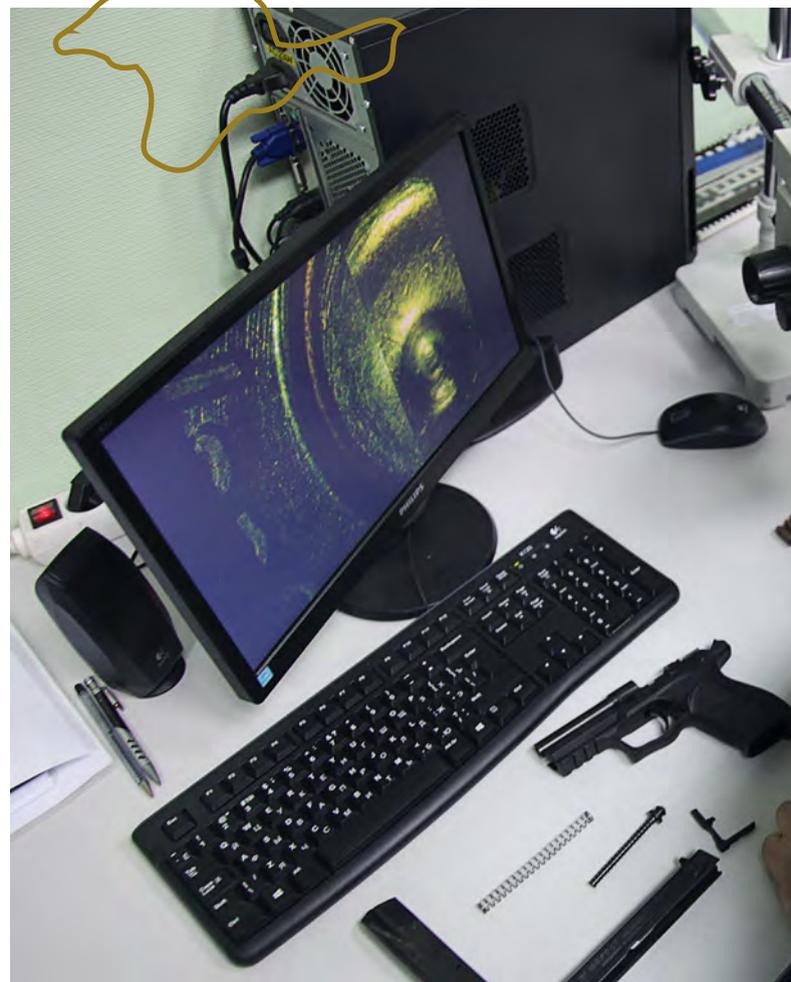
NEW

PLACES

NEW

FACES

Kyiv Scientific Research Institute of Forensic Expertise  
of the Ministry of Justice of Ukraine (KFI) & Hon. Prof.  
M. S. Bokarius Kharkiv Research Institute (KhRIFE)



# KFI, Kyiv

Kyiv Scientific Research Institute of Forensic Expertise is a government institution of the Ministry of Justice of Ukraine. It has been operated since the year 1913 and it is the first expert institution on forensics in the Ukraine.

The institute provides services to law enforcement agencies of the Ministry of Internal Affairs of Ukraine, the Security Service of Ukraine, prosecutors' offices, customs' offices as well as to the courts of all levels on civil administrative and/or criminal cases.

Today Kyiv Forensic Institute is one of the leading forensic institutions of Ukraine with qualified professionals, who are consistently trained and updated on their knowledge. Since the KFI's establishment it has made more than a million examinations, including about 950 thousand during the period of independence of Ukraine.

The institute is equipped with modern laboratories of international standards. Currently, during the work, experts use modern electronic equipment for the detection of latent traces, laser instruments (infrared and ultraviolet spectrometers), technical means for X-ray diffraction analysis and gas chromatography. Kyiv Forensic Research Institute is accredited in compliance with the ISO/IEC 17025 standards and operates in line with international forensic practice. KFI provides services to the state and budgetary agencies, to private, commercial and non-commercial institutions as well as legal and natural persons/entities.

## The institute performs services in forensic fields such as:

- Handwriting and Linguistic Examinations
- Technical Examination of Documents
- Examination of Weapon
- Trace Examination
- Blast Research
- Research of Photo, Portrait and Holographic Images
- Research of Video and Sound Recording
- Research of Materials, Substances and Products
- Biological Examinations
- Engineering and Transport Examinations
- Examinations on Occupational and Life Safety
- Construction, Technical and Evaluative Examinations
- Examinations on Land Evaluation and Land Management
- Fire and Technical Examinations
- Computers and Telecommunications Technical Expertise
- Road and Technical Examinations
- Electrical and Technical Examinations
- Engineering and Environmental Examinations
- Economic Examinations
- Commodity Examinations
- Transport-Commodity Examinations
- Psychological Examinations
- Military Examinations
- Examinations of Works of Arts
- Examinations of Military Property

The institute has its own information base which comprises a scientific library with more than 50,000 copies of printed publications, an archive that holds the documentary basis of the institution since 1944 as well as full-scale collections and standardized methods of investigating various physical evidences registered in the Ministry of Justice of Ukraine.

Having valuable experience of expert and scientific work accumulated over a 100-year period of activity, the KFI's staff has a great potential for continuing the fight against crime and serving the justice of Ukraine.



# KhRIFE, Kharkiv

Hon. Prof. M.S. Bokarius Kharkiv Research Institute of Forensic Examinations (hereinafter referred to as “KhRIFE”) is one of the oldest state institutions specialized on forensic expertise in Ukraine. The institute, headed by Oleksandr Mykolaiovych Kliuiev, Doctor of Law, Professor, Honored Lawyer of Ukraine, has been very active in developing and improving its structure, increase the professionalism and scientific level of the institute’s employees and improve its material and technical base.

The history of the formation and development of the KhRIFE dates back to 1923. The founder and the first director was Honored Professor Mykola Serhiiovych Bokarius, from whom the name of the institute derived. KhRIFE is the only institution in the system of forensic-expert institutions of Ukraine, which bears the name of the founder.

The goal of KhRIFE activities is to provide pre-trial investigation bodies (prosecution authorities), criminal defense, courts and other state bodies, as well as legal entities and individuals with proper qualified and objective expertise, oriented towards maximum use of science and technics achievements and conducting expert studies beyond the range of the legal proceedings.

Today, the activities of the institute include expert knowledge, scientific-research and training-methods. To realize the implementation of the aforementioned areas it is organized in 10 laboratories and 5 sections, in the headquarters and two further premises in Poltava and Sumy. The institute employs highly qualified scientific personnel, to name in particular 8 doctors of science and 28 candidates of science, providing high level forensic expertise. Since the expert activities are carried out in more than 70 expert disciplines the institute fully meets the needs of the above mentioned costumers in a broad range of forensic fields. Employees of the institute participate in research developments that result in the creation of original, unique authoring techniques widely used in the expert practice of specialized forensic institutions in Ukraine and abroad. The KhRIFE is one of the leading institutes in the development of important scientific findings, e.g. half of all research topics of forensic institutions of the Ministry of Justice of Ukraine is developed by this institute. The Quality Management System was introduced in the institute and activities undertaken are in accordance with the requirements of the international standard ISO/IEC 17025: 2005, IDT.



The KhRIFE is involved in international activities such as: international scientific and practical conferences, symposia and seminars, exchange of scientific information and methods of expert research, scientific publications in the field of forensic science and criminalistics. The institute is profiting from the positive effects of these activities with regard to the further development of the institute and the expansion of the possibilities of forensic examinations. International scientific and practical conferences "Arotsker reading" and "Actual issues of Forensic Science and Criminalistics" are annually held.

One of the most important tasks of scientists and forensic experts from the institute is the cooperation with specialized forensic institutions in Ukraine and abroad. In 2017, KhRIFE was proud to be accepted as a member of ENFSI. Within the framework of cooperation, the activities of the KhRIFE are aimed at harmonizing the legislation on forensic examination; providing preparation for accreditation of forensic laboratories in accordance with international quality standards; formation of the European management system in the field of forensic examination in accordance with international requirements; coordination of scientific and methodical work on the development of new kinds (types)



of forensic expertise, aimed at prevention of terrorism, extremism, corruption, drug crime, cybercrime and the like; the organization of professional training and professional development of forensic experts; carrying out activities to confirm competence and clarifying the competence boundaries of forensic experts.

The Institute plans to further improve its activities to strengthen the rule of law and provide practical assistance to judicial and investigative bodies, as well as to citizens by protecting their rights and legitimate interests.



ENFSI

IN

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# Standing Committees

## Members of the Research and Development Standing Committee

### **Bart Nys**

(Chairperson, INCC, Belgium)

Tapani Reinikainen

(member, NBI, Finland)

Sean McDermott

(member, FSI, Ireland)

Thomas Biermann

(member, BKA, Germany)

Christophe Champod

(member, UNIL, Switzerland)

Ullar Lanno

(member, EFSI, Estonia)

Cecilia Vahlberg

(member, NFC, Sweden)

Didier Meuwly

(Co-opted member, NFI, Netherlands)

Dariusz Zuba

(Board Liaison, IFR, Poland)

Michael Bovens

(Board Liaison for E&T, FOR-ZH, Switzerland)

## Members of the Quality and Competence Standing Committee

### **Chanda Lowther-Harris**

(Chairperson, MPS, UK)

Wim Neuteboom

(member, The Netherlands)

Maria Kambosos

(member, BKA, Germany)

Merike Rump

(member, EFSI, Estonia)

Sanja Krajinović

(member, CFIIV Ivan Vucetic, Croatia)

Martin Hanly

(member, Eurofins, UK)

Dorijan Kerzan

(Board Liaison, NFL, Slovenia)

# Quality and Competence Standing Committee (QCC)

The Quality and Competence Standing Committee (QCC) acts as an advisor and coordinator to relevant ENFSI entities on matters of quality and competence in a broad sense and supports the ENFSI Members to comply with international standards and best practices including achieving and maintaining accreditation.

## QCC Activities

### Annual Meeting

QCC held its annual Quality and Competence Liaison Group (QCLG) meeting in Bled, Slovenia in October 2017 and was attended by 49 delegates. The meeting was a mixture of presentations and interactive discussions with Experts Working Group (EWG) representatives and quality representatives from ENFSI members and non-members. The main topics covered were:

- Benchmark of quality management systems – training and competence Presentation & Workshop
  - Document structure presentation brainstorming
  - ISO/TC 272 & CEN/PC 419 update
  - PT/CE-s current situation, feedback from ENFSI survey, PT/CE list and next steps/presentation + panel discussion
  - Overview of ENFSI Speech and Audio Analysis EWG
  - Bring your own problem/question
  - Information from European Accreditation
  - Frequently used methods – Panel discussion
  - Education & Training activities
- General activities of the QCC
  - QM software – Panel discussion
  - Overview of Slovenian Forensic Laboratory
  - Feedback from the ENFSI Board
  - An accreditation body's perspective on forensic accreditation



## Facilitate the establishment and sharing of ENFSI technical documents

In 2017 the QCC has focussed on the ENFSI technical document structure and control. Technical documents will be categorised as Best Practice Manuals (BPMs) or Guidelines. Templates have been drafted for BPMs and Guidelines with the aim that when current technical documents are reviewed, they will be documented according to the BPM or Guidelines format. This will provide consistency across the different EWGs. The QCC has compiled a list of new BPMs to be written and existing documents to be reviewed. There are 51 technical documents in place, the majority of which are in need of a review. All BPMs quality assured by the QCC in the agreed BPM template format, are published on [www.enfsi.eu](http://www.enfsi.eu). QCC has worked closely with EWGs and QCLGs in this area. QCC documents have been uploaded in EPE.

### Best Practice Manuals

New:

- BPM for Facial Image Comparison (ENFSI-BPM-DI-01, Vs. 01 – January 2018)

Update:

- BPM for the Investigation of Fire Scenes (ENFSI-BPM-FEI-01, Vs. 02 – June 2017)

In process of updating:

- BPM for the Forensic Examination of Handwriting (ENFSI-BPM-FHX-01, Vs. 01 – November 2015)

## Facilitate the search for new Proficiency Tests and Collaborative Exercises

QCC has made available on [www.enfsi.eu](http://www.enfsi.eu) and on EPE the following two lists of PT/CE providers:

1. ENFSI EWGs providers of PT/CE and
2. Providers suggested by ENFSI members.

QCC raised awareness of the lists at the QCLG 2017 and takes the responsibility of updating the lists on at least an annual basis. The lists have been compiled from information from ENFSI members and EWGs. No evaluation has been made of the PT/CE providers by the QCC.

The satisfaction level of ENFSI members (feedback from ENFSI survey 2016) on PT/CE from ENFSI EWG and external providers is uploaded into EPE and EWG chairs are informed.

This availability of PT/CE providers can be used as a reference when sourcing PT/CE schemes.

### E&T activities

In collaboration with the R&D Steering Committee, the QCC has developed a policy and strategy for E&T activities within ENFSI including an agenda with E&T events in 2017–2018.

### Liaising with ISO TC 272, EA and EFSA 2020 Task Force

The QCC has worked in collaboration with EFSA 2020 Task Force on common goals such as establishing the needs and use for BPMs and proficiency testing.

Updates on the development of two international forensic standards have been provided to QCLG members in Oct 2017.

There is a liaison relationship established with European Accreditation and an update was provided to all QCLG in Oct 2017.

### Other

The QCC has continued to expand the scope of the benchmark exercise on quality management practices.

Due to significant manual analysis of the results of the ENFSI survey 2016 and the ongoing actions in addressing some of the feedback from the survey, the QCC with the approval of the Board, did not conduct an ENFSI Survey in 2017. The plan is to undertake one in 2018.

## QCC Members

There have been a number of changes to personnel in the QCC in 2017. A new chair person was appointed and two new members joined the QCC. The members of the QCC are: Maria Kambosos (BKA, Germany), Merike Rump (EFSI, Estonia), Sanja Krajinović (CFIIV Ivan Vucetic, Croatia), Martin Hanly (Eurofins, UK), Wim Neuteboon (The Netherlands) and Chanda Lowther-Harris (Chair, MPS, UK). The Board representative for the QCC is Dorijan Kerzan.

# Research and Development Standing Committee (RDSC)

## Organisation and membership

In May 2017 Dominique Saint-Dizier left the ENFSI Board and therefore ended also her function as the Liaison to the RDSC. She was replaced in this role by Board Member Dariusz Zuba, who had previously acted as Board Liaison for the E&T Activity.

At the end of 2017, Michael Bovens was appointed Board Member in replacement of Gabriele Juodkaite-Granskiene, who had left ENFSI. He was subsequently appointed by the Board in February 2018 as the Board Liaison for the E&T Task Force.

## RDSC Activity Groups

The activities of the RDSC are centered around five focal points: Strategy, Funding, Education and Training, Databases and Empirical R&D. The following table gives a short description and member list.

Activity Group	Members	Description
<b>Strategy</b>	All members	Advice to the Board regarding R&D needs and international developments
<b>Databases</b>	B. Nys, T. Biermann, C. Champod, T. Reinikainen, C. Vahlberg	Development of forensic databases, involvement in the MP2014 project
<b>Funding</b>	B. Nys, Ü. Lanno, T. Reinikainen, C. Vahlberg, D. Meuwly	Promotion of forensic needs and funding opportunities, outreach to R&D sponsors
<b>Education &amp; Training</b>	B. Nys, C. Champod, S. McDermott, D. Meuwly	Development and advice to the Board regarding E&T needs, collaboration with QCC
<b>Empirical R&amp;D</b>	All members	Technology watch and advice to the Board regarding R&D opportunities, outreach to R&D partners (including academic and commercial)

## E&T initiative and Collaboration between RDSC and QCC

Although a number of documents describing the policy and strategy for ENFSI in the Education and Training area had been drafted by RDSC and QCC members in early 2017, the Board had not given its final feedback by the Annual Meeting in Berlin. The E&T initiative could therefore not be implemented in 2017. The RDSC has, however, taken the initiative of setting up an internal Survey on E&T which was planned to be spread amongst the ENFSI Membership in early 2018.

## Involvement in the Direct Grant 2014 (TDPEDFS)

The RDSC has been involved in the development of the Direct Grant 2014 project "Towards the Development of Pan-European Databases in Forensic Science"<sup>1</sup> in various ways. First, the RDSC was invited by the N1 ('Overarching Database') sub-project to participate in meetings and the "Conference on Big Data in Forensic Science" which was organised by the N1 group in Lisbon in February 2017.

The RDSC Chair was also personally involved in the N2 sub-projects (firearms database, GSR distribution in Europe and GSR database) and upheld contacts with the N3 sub-project (security inks database EUSIS+).



## Involvement in the Europol Platform for Experts (EPE)

The Europol Platform for Experts portal was already in use by the RDSC since its inception and it has during the last two years grown to become a major billboard for presenting its past and future activities to the ENFSI community. Also the RDSC teleconferences, which were organised on a regular basis throughout 2017, are fully documented on this platform.

## Organisation of a One Day One Topic Seminar (OOS)

On October 17th 2017 the consortium of the FP7-sponsored GIFT-CBRN1 project organised its final conference event in Brussels. As the event was organised at the premises of the Belgian forensic institute NICC, the R&D Standing Committee took advantage of the presence of many experts in several of the forensic fields on the one hand and CBRN specialists on the other hand to organise a forensics-oriented One Day One Topic Seminar the following day. This OOS focussed on bridging the knowledge gap between specialists in CBRN fields and forensics and to build an awareness of each disciplines' possibilities and problems.

## Involvement in the Direct Grant 2016 (STEFA)

The EU has awarded ENFSI a sponsorship (Direct Grant) to develop a project entitled "Steps Towards a European Forensic Science Area"<sup>1</sup> (STEFA). The project will run from January 2018 until December 2019 with a total budget of 1.5 Mio. Euro.

After being involved in the selection of eligible projects in 2016, the RDSC is invited to participate in the STEFA kick-off meeting in Berlin in January 2018. As with the Direct Grant 2014 project, the RDSC will monitor the progress of the ten sub-projects defined in this Direct Grant Action in the years to come.

## Involvement in the organization of the EAFS 2018 conference (The Forensic Odyssey 2020)

The RDSC has played a supporting role in the organisation of the EAFS conference since the beginning. To this end, Dominique Saint-Dizier, who is involved in the Organising Committee, participates regularly in the RDSC teleconferences. The RDSC helps in practical ways, for example by publishing information on the EAFS2018 in its EPE webpages, or helping in the Editorial Board of the conference proceedings.

The RDSC is planning to organise an "R&D Session" during the conference in which important issues regarding R&D, such as Education and Training and the R&D Liaison Network, will be discussed in a round-table format.

# Expert Working Groups

**Animal, Plant &  
Soil Traces**

**1**

Irene Kuiper,  
Netherlands

**Digital Imaging**

**2**

Martin Wermuth,  
Switzerland

**Drugs**

**4**

Irene Breum Müller,  
Denmark

**DNA**

**3**

Sander Kneppers,  
Netherlands

**Documents**

**5**

Andreas Rippert,  
Switzerland

**Handwriting**

**7**

Jonathan Morris, UK

**Fingerprint**

**6**

Aldo Mattei, Italy

**Paint & Glass**

**8**

Antoine Devery,  
France

**Textile & Hair**

**9**

Jan Eric Grunwald,  
Germany

**Explosives**

**10**

Matthew Beardah,  
UK

**Fire & Explosion**

**11**

Camilla Lilleng, Norway

**Forensic Speech &  
Audio Analysis**

**14**

Dagmar Boss,  
Germany

**Firearms & GSR**

**12**

Zuzanna Brozek-Mucha,  
Poland

**Forensic Information  
Technology**

**13**

Zeno Geradts,  
Netherlands

**Road Accident  
Analysis**

**15**

Florin Rusitoru,  
Romania

**Scene of Crime**

**16**

Fernando Viegas,  
Portugal

**Marks**

**17**

Michael Braune,  
Germany

# Digital Imaging Working Group

Towards the end of the 90s the development of digital photography and digital video reached a stage indicating that in the near future it would become a serious competitor to the analogue photo and video technology, rising and possibly even replacing it sooner than later. The ENFSI leadership recognized that digital traces and digital documentation of crime scenes and evidence would play an important role in forensics and decided to create a new working group specializing in digital imaging. During the founding meeting of the Digital Imaging Working Group (DIWG) in Cambridge in 1999, Jurrien Bijhold from the NFI was elected as the first chairman. The dominant theme at the time was whether digital images were to be accepted by the prosecution and the courts to the same extent as analogue photography evidence because of the relative ease of possible digital manipulation. Also, there was a clear need to build confidence in the new technologies, before the police and forensic institutes were to undertake the very costly conversion investments. From the year 2000, annual meetings of the working group took place, considering topics such as Photography, Video (initially primarily VHS video tapes from CCTV systems), Photogrammetry and Facial Image Comparison.

Jurrien Bijhold led the working group for 13 years and was succeeded in 2013 by Christophe Lambert of the French Gendarmerie. Since 2016, the group has been headed by Martin Wermuth from the Forensic Institute Zurich (FOR).

The organization of the working group had to be constantly updated over the years. Today, the group consists of three subgroups: Imaging Technologies (Forensic Image and Video Enhancement, File Repair, Camera Identification, Image and Video Authentication), 3D (Documentation, Reconstruction and Measuring in Images) and Facial and Object Imaging Comparison.

At the moment the group consists of 51 members from several ENFSI institutes and 17 associated members. The steering committee is currently composed of 8 members. For quality assurance, proficiency tests are regularly offered for specific individual topics.





The working group published its first official document in 2018 with the Best Practice Manual on Facial Image Comparison. Two more BMPs on Forensic Image and Video Enhancement and Image and Video Authentication are in progress and will be published in 2018 and 2019, respectively. During 2014, the document "Guidelines for proficiency tests in facial image comparison within the ENFSI Digital Imaging Working Group" was produced.

In 2017, the annual meeting of the working group took place in Zurich with 45 participants. This meeting was enriched with workshops in each of the three main topics mentioned above (facial comparison, image authentication and enhancement and 3D). This way of presentations allowed exchanging deep knowledge in each field of expertise, thus also improving the value of the meeting for the Group.

The annual meetings often include invited guests and speakers. For the 2017 meeting four colleagues from Morocco participated. On the occasion of the meeting it became apparent that a new topic with great forensic potential is emerging: Virtual Reality (VR).

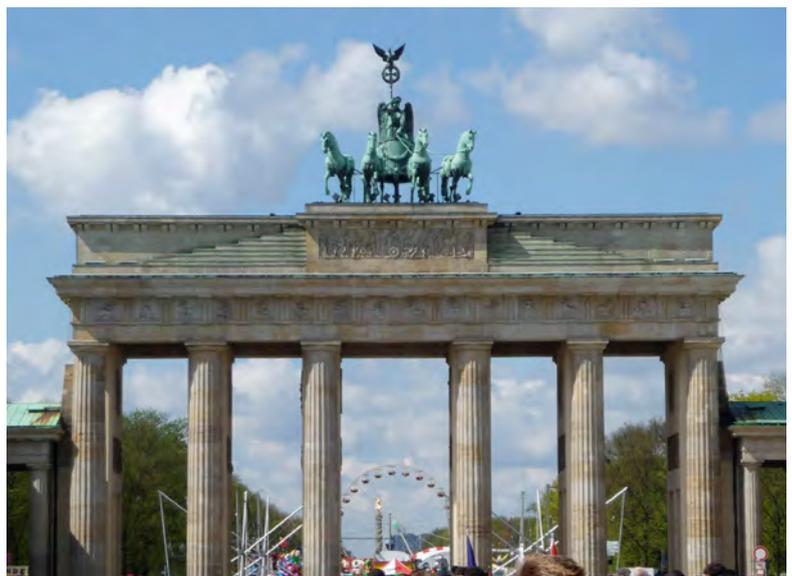
Originally developed for the game industry to make players more immersive in the game, VR is now being discovered for forensics as well. Crime scenes measured using laser scanning technology or photogrammetry are reconstructed as a 3D model. With VR glasses, even if the crime scene is no longer accessible, the investigator is able to return to the place at any time to check new hypotheses on the course of the crime or the areas visible by the witnesses, as well as the actual dimensions of an environment. Additional elements, such as trajectories, can be easily faded into the virtual environment and thus represent the actual danger to the participants realistically. It will not be long before VR is used in the courtrooms, as an additional element to establish the truth.

VR is just an example for the dynamic field of Digital Imaging. While questions like the acceptance and the use of digital evidence in court are fading away, new technologies are offering even more challenging opportunities.

# ENFSI MEET INGGS

# ENFSI Annual Meeting 2017 in Berlin

Berlin welcomed the ENFSI membership for the 29th Annual Meeting from 17th to 19th May 2017 in the facilities of the Novotel Tiergarten. 108 participants from European countries found their way to Germany's capital, experiencing a fruitful meeting and a vibrant city. The 58 representatives from ENFSI laboratories took part in the Thematic Day and made important decisions during the Business Meeting while learning more about German history in the afternoon.





After decision was made to hold ENFSI's annual meeting of the membership in Germany's capital, the organization team around Kornelia Nehse from the State Criminal Police Office started looking for an adequate venue in Berlin.

Further explorations made the organization team chose the Novotel Tiergarten which facilitated enough accommodation and conference rooms to host an event of this magnitude. The membership was informed and an event related website created.

This year's meeting offered an additional session for newcomers. The increasing number of member institutes required some first-hand general information on aim and history of the ENFSI network. This session on "Everything you always wanted to know about ENFSI but never dared to ask" was well received and gave the participants a comprehensive overview on ENFSI before attending the Thematic Day.

The Annual Meeting was inaugurated by the Senator of the Interior, Mr. Andreas Geisel and the Police President, Mr. Klaus Kandt on 17th May. Both officials pointed out the importance of international cooperation in the field of forensic science and expressed their appreciation to the respected scientists that came to Berlin to discuss the way forward for forensic science in Europe and worldwide.

Jan De Kinder welcomed all participants and thanked Kornelia Nehse and Klaus Kandt for hosting the 3 days event.

This annual meeting took place only 5 months after a serious attack in the hosting city reminding everyone of the importance of international cooperation in order to fight terrorism. With this still in mind, the chairman summarized the incident in the Brussels laboratory in August 2016 and then passed on the microphone to the speakers of the Thematic Day: Zuzana Nemethova, Didier Meuwly and Zeno Geradts.

"Societal Challenges for Forensics" was this year's theme for the presentations on "Immigration and Border Control", "Biometrics, a multidimensional world/privacy challenges" and "Growing importance of video surveillance data" followed by substantial discussion in small groups.

A visit to the Deutsche Dom with exhibition on the history of German democracy followed by an exciting jazzy dinner in a restaurant on the Gendarmenmarkt ended the day.

The Business Meeting started the next day. After the quorum had been declared Jan De Kinder welcomed the participants to ENFSI's main organ, the general assembly. Of crucial importance for the membership were the following agenda items:

- ENFSI welcomed new representatives by handing over a certificate to:
  - Jokin Alfageme García, ERTZAINZA Bizkaia
  - Stefan Becker, BKA KTI Wiesbaden
  - Olga Bergere, FSD Riga
  - Luigi Carnevale, DAC-SPS Rome
  - Cecilia Lilaas-Skari, NCIS Norway
  - Penelope Miniati, FSD Athens
  - Christin Hofmann, LKA KTI Munich.
  - Oleksandr Ruvyn as representative of the new member institute Kyiv Scientific Research Institute of Forensic Expertise of the Ministry of Justice of Ukraine received two certificates.



- For their great commitment since ENFSI's foundation Peter Pfefferli and Terje Kjeldsen became Honorary Members of the Association.
- Board elections took place as term of office came to an end for two Board Members. Dominique Saint-Dizier and Ondrej Laciak were replaced by Gabriele Juodkaite-Granskiene (new chairperson designate) from Lithuania and Dorijan Kerzan from Slovenia. Erkki Sippola former chairman designate became new ENFSI Chairman as successor of Jan De Kinder.

All former Board Members were shown much gratitude, along with long applause for their extraordinary work for the association in the last years.

- Due to strategic reasons it was decided to invite Iceland, Luxemburg and Malta to send an application for membership, making an exception regarding ENFSI's eligibility criteria.
- The Strategic Plan, a triennial concept paper for the association to outline the targets for 2017 – 2020 was agreed to by the membership. ENFSI's 3 strategies according to the plan are:
  1. Contribute to the establishment of a European Forensic Science Area 2020 through the implementation of the Action Plan.
  2. Strengthen the capability of the ENFSI organization as a resource to support the forensic science community.
  3. Consolidate the interaction with the stakeholders and partners.
- The Action Plan 2017–2018 was presented and the membership asked to send their feedback following the event.



- The EFSA 2020 Task Force introduced the membership to the achievements of this special unit and the future plans, both in cooperation with the QCC Standing Committee. Focus was mainly on the 3 actions in which ENFSI is named as coordinator by the European Commission:
  1. Improving mutual trust by encouraging continuous quality improvement of forensic procedures and processes through the development and use of Best Practice Manuals for forensic analyses.
  2. Stimulate the exchange of forensic information from databases similar to the methodology used under the Prüm Decisions 2008/615/JHA and 2008/616/JHA, focusing on the areas of weapons and ammunition, explosives and drugs.
  3. Improving mutual trust by increased use of Proficiency Tests (PT) and Collaborative Exercises (CE) by forensic service providers.

After the presentation, the members agreed on the necessity to prolong the duration of this task force.



- Richard Gill gave comprehensive information on the EU Direct Grants, informing on the status of the 2 running projects and the 10 subprojects of the envisaged Direct Grant Agreement “Steps Towards a European Forensic Science Area (STeFA)” ENFSI applied for.
- The Board and Standing Committees gave their reports on activities in the past year and explained future plans.
- The venues for the coming Annual Meetings 2018 and 2019 were chosen, Budapest was voted on to hold ENFSI’s membership meeting in 2018, followed by Rome in 2019.
- As last year the Expert Working Group honored with the ENFSI Working Group Award introduced itself to the membership. Camilla Lilleng represented the Fire & Explosion Investigation Working Group and gave the laboratory directors a deeper insight into the important work done by “ENFSI’s 17 powerhouses”.

On the second evening the membership could enjoy a bus ride through Berlin, relishing the nice weather and sightseeing tour. A stop at the Bundestag with its seat in the Reichstag building) was obligatory before heading to dinner in the Berliner Funkturm (Radio tower), where beautiful view and delicious food were competing for the attendees’ attention.

While the membership had been busy deciding on important topics, accompanying partners could enjoy a private guided tour in Berlin’s famous warehouse KaDeWe and the Königliche Porzellan Manufaktur.

Before the new Board continued its work on Friday the Business Meeting was officially closed by Erkki Sippola thanking again the organizers in Berlin for their excellent work and the membership for their valuable contributions to a successful meeting.

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#### **ACKNOWLEDGEMENT**

Mrs. Kornelia Nehse and her team from the Institute of Forensic Sciences of the State Criminal Police Office in Berlin are to be thanked for the successful organization of this important ENFSI event.

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# Joint Meeting in Tallinn



After the wonderful winter impressions everyone could gain from the Joint Meeting in Riga in 2016, the offer for 2017 aroused high expectations with all participants. Tallinn could exceedingly meet the expectations! The weather was not quite as idyllic as in Riga but the medieval old town is a wonderful place to visit in all weather conditions! The host Üllar Lanno, director of EFSI-Tallinn has considered everything when planning this 3 days stay. Conference rooms for both, the Board Meeting and Joint Meeting were well equipped and the hotel rooms comfortable and nearby. Already from this the event could only turn out to be a success.

This year's meeting was mainly focused on the implementation of EU initiative "Towards a European Forensic Science Area 2020" objectives. For this reason the EFSA 2020 Task Force held a satellite meeting in Tallinn beside to the Joint Meeting, and seized the option to join the other groups for broader discussions. The Expert Working Groups (EWG) chairs held their meeting parallel to the Board and discussed important issues that emerged during the last year, such as: Best Practice Manuals production, Proficiency Tests and Collaborative Exercises needs, Working Group Finances, Internal and External Communication issues and how to add value via the Education and Training.

During the meeting with the Board and Standing Committee Chairs, several important topics were discussed and further explored. The "Reporting of 2017 and planning for

2018" session was held, where each EWG was presented along with a PowerPoint presentation by each chair to give all participants an idea of the activities of the 17 pan-European field specific groups. The ENFSI Monopoly Program Manager gave an entertaining and informative presentation on present and potential European Commission Funding instruments with all obstacles related to the application process ahead.

Unlikely to the previous years, the Board invited all ENFSI EWG Chairs to choose out the best among themselves. To highlight the Working Group of the 2017, that should be rewarded with the ENFSI annual Best Working Group Award. This year the certificate and trophy filled with sweets was handed over to Martin Wermuth from the Digital Imaging Working Group (DIWG) who was very much surprised and very thankful for the appreciation of the work done by the whole DIWG.

Like in previous years the necessity to meet the Board for face-to-face discussions was stressed, furthermore a demand for more interaction between the parties was voiced.

Apart from the constructive discussions in a friendly atmosphere, the participants enjoyed each other's company by good food and great impressions of "Vanalinn", the beautiful old town of Tallinn and its captivating Christmas Market at Town Hall square.

# ENFSI Board Meetings 2017



The ENFSI Board changed its composition in May 2017 as the term of three members including the chairman expired at the Annual Meeting in Berlin. While the new chairperson was already decided on by electing Erkki Sippola as chairperson designate in Pontoise in 2015, successors for Dominique Saint-Dizier and Ondrej Laciak, both elected in 2014, and the chairperson designate for the upcoming 2 years had to be found.

The membership decided on having Gabriele Juodkaite Granskiene as chairperson designate and consequently successor of Erkki Sippola in 2019. Further the Board was strengthened by Dorijan Kerzan from Slovenia.

In order to perform its managerial role in the association the Board came together on a regular base: Several times by means of video conference, but preferably in face to face meetings to discuss in depth what steps to take to achieve the best outcome in ongoing tasks and further develop future strategies for the forensic community.

In December 2017 Gabriele has been appointed as judge at The Supreme Court of Lithuania, hence unfortunately after a short but work-intensive time at the Board she had to leave the ENFSI community. The Board decided to appoint Michael Bovens from FOR Zurich as interim Board Member until the decision of the membership has been reached at the next Annual Meeting.

Main issues to discuss during the last year were the application for EC Direct Grant Agreement 2016 “Steps Towards a European Forensic Science Area (STEFSA)” and ENFSI’s contribution to the Council Conclusions and Action Plan on the way forward in view of the creation of a European Forensic Science Area. Both implied considerable work and cooperation with EFSA 2020 Task Force and the European Commission.

The Board was pleased with the developments and looks forward to a challenging but promising year 2018.



# KEY PRO JECTS



# EU Direct Grants

DR. RICHARD GILL – ENFSI MONOPOLY PROGRAMME MANAGER

## EU Direct Grant Funding

The calendar year 2017 has seen the final stages of the ENFSI direct grant funding through the EU ISEC programme (General Programme on Security & Safeguarding Liberties/Specific Programme on Prevention of and Fight against Crime). The last ISEC direct grant to ENFSI (2013 fund), “Towards the Vision for European Forensic Science 2020 (TVEFS-2020)”, finished implementation on 31st May 2017. This followed a formal extension from 24 to 29 months agreed with the European Commission (EC) to facilitate the completion of the work after some unavoidable delays. The final technical and financial reports for TVEFS-2020 were prepared over the course of the summer and submitted to the EC in August 2017. These final reports have been approved by the EC and the results of the project work are available to the ENFSI community.

The 2014 EU direct grant, “Towards the Development of Pan-European Databases in Forensic Science (TDPEDFS)” started implementation on 1st January 2016 with a planned completion in 24 months. This was the first grant to ENFSI from the new 7-year EU Internal Security Fund – Police funding programme (ISF-Police). The Mid-Term Progress Report for TDPEDFS, was submitted to the EC in January 2017 and showed that most of the work was in line with the original plans set out in the signed Grant Agreement. Nevertheless, some of the work streams had already encountered delays by that time and over the course of 2017, Activity N1 experienced significant difficulties with the staff availability at LKA-Berlin. This involved the long-term absence of one team member through serious illness and one Data Analyst/Developer leaving the employment of LKA-Berlin. By mid-year it became clear that it would not be possible to complete the N1 work by the planned TDPEDFS end date (31st December 2017) and ENFSI made a formal request to the EC in June 2017 to extend the TDPEDFS implementation period with a new end date (31st May 2018). Appropriate modifications were made to the TDPEDFS budget and timetable but the new plan did not require the recruitment of any replacement staff members at LKA-Berlin. The second half of 2017 saw the N1 work moving towards completion in line with the new plans but, unfortunately, new challenges arose towards

the end of the year with the resignation of a second Data Analyst/Developer at LKA-Berlin leaving the TDPEDFS Project with a significant man-power resource problem. In the light of the short time remaining for the completion of Activity N1, the problem has been solved by gaining EC approval to re-allocate budget to sub-contract the outstanding software development work to an external provider. At the same time, a change to the Activity N4 plan was approved by the EC, to allow that database development work to be conducted through subcontracting rather than using staff at BKA-Wiesbaden. With these final TDPEDFS changes in place, the work across all five projects is now set to be delivered on schedule by the end of May 2018. TDPEDFS dissemination events will take place at the ENFSI Annual Meeting and at Europol during May 2018 when there will be opportunities for the European forensic community to hear about the project results and discuss how these outcomes can be used as the basis for sharing forensic databases between countries in the years ahead.

The ENFSI application for a second direct grant from the ISF-Police funding programme (2016) was submitted to the EC at the end of April 2017 with the theme of “Steps Towards a European Forensic Science Area (STEFA)”. The application was accepted with the award of a €1,500,000 grant for a 2-year project, starting implementation on 1st January 2018. STEFA includes 10 specific work activities that will be important stepping stones in the realisation of the EU Vision for European Forensic Science 2020 with the creation of a European Forensic Science Area. This EU vision aims to promote cooperation between police and judicial authorities across EU Member States in the field of forensic science. The work activities within STEFA will contribute to key work streams that have been specified in the relevant EU Council Decisions. STEFA will bring together teams of experts from 36 organisations in 21 countries (forensic institutes, research establishments, universities & other forensic service providers) to deliver the work. The ENFSI application for the 2016 ISF-Police funding was a fully online process using the EU Horizon 2020 portal and this represented a marked departure from previous grant applications that have centred on manual paperwork and a

web portal managed by DG-Home. These new processes have created some difficulties and limitations for ENFSI and its member organisations. Many important lessons have been learned and in the longer term, the adoption of the new approach may make future applications for ENFSI grants more efficient. One major difficulty remaining with the ISF-Police grants is the fact that the funding programme remains totally focused on organisations based in EU Member States. This has meant that those ENFSI Members not based in EU Member States have been unable to benefit from the STEFA grant in any way.

## ENFSI Direct Grant 2013

### Direct Grant Projects (2013) – 2-year programme (grant awarded € 645,649) – ISEC funding

**Programme Theme:** “Towards the Vision for European Forensic Science 2020 (TVEFS-2020)”.

**Current Status:** Grant Agreement signed/Work commenced on 1st January 2015 / Formal EC extension of implementation period until 31st May 2017

**EU Reference:** HOME/2013/ISEC/MO/ENFSI/4000005962

	Project Title	Project Leader
<b>T1</b>	Creation and shared use of an international database of ignitable liquids and substances.	Jeanet Hendrikse (NFI-The Hague, NL)
<b>T2</b>	Development and implementation of new analytical methods and databases for the detection of additives in fuels and fire debris.	Frank Schäfer (BKA-Wiesbaden, DE)
<b>T3</b>	Proficiency tests for the fingerprint domain.	Aldo Mattei (RaCIS-Rome, IT)
<b>T4</b>	SmartRank: Likelihood ratio software for searching national DNA databases with complex DNA profiles.	Titia Sijen (NFI-The Hague, NL)
<b>T5</b>	DNActivity: International cooperation in activity level interpretation of forensic DNA evidence.	Ate Kloosterman (NFI-The Hague, NL)
<b>T6</b>	The development of a statistical software package for likelihood ratio calculations.	Annabel Bolck (NFI-The Hague, NL)

## TVEFS-2020 Project – Activities and Final Achievements

# 1.

The TVEFS-2020 project has delivered results across six specific forensic areas:

A shared international database of European ignitable liquids and substances has been implemented and is available free of charge to forensic scientists worldwide. It is an extremely valuable resource regarding such products available in different European countries, so supporting forensic scientists when investigating fires. This is important because ignitable liquid products can easily move across international borders. The European database is based upon an existing national database hosted at the University of Central Florida, USA. The American database information is now supplemented with 320 products from 16 different European countries. Each entry includes product details, source/origin/date and analytical data. Further work has collected information about relevant background materials across Europe, encountered in fire debris, that can lead to false positives during analysis. In addition, the work has produced a clear working model and process

# 2.

whereby other international groups can prepare to make contributions to further expand the database.

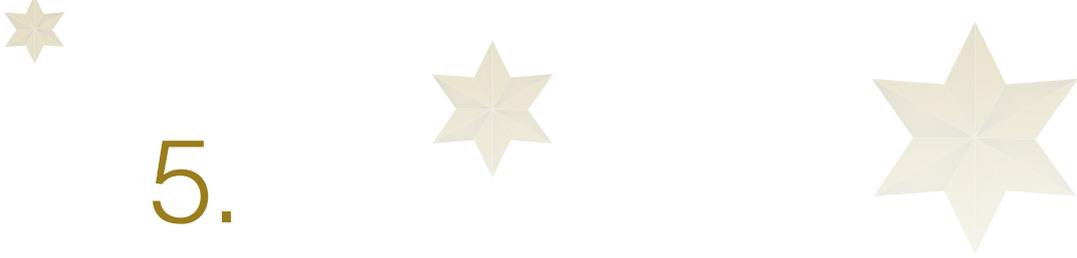
New validated analytical methods (LC-MS) have been developed for the determination of additives (corrosion inhibitors, detergents, antioxidants etc) added to fuels by manufacturers, that might be detected in fire debris during fire investigations. The analytical information has been collected into new databases (AddFuel) to provide new parameters to help establish the source of fuels used to start fires and evaluation work has been conducted to investigate the opportunities. The work has also included extensive literature research on the additives found in fuels, the development of sample preparation methods prior to analysis and the delivery of a practical training event for fire investigators. Overall, despite some limitations, it has been shown that additive analysis is an additional independent parameter that can be used for the identification and comparison of gasolines, thereby providing new forensic intelligence in casework.

# 3.

Wide-ranging information has been collected about the organisation and implementation of proficiency tests and collaborative exercises (PTs & CEs) for monitoring and improving the quality of fingerprint examination work. This has included a detailed analysis of the PT/CE activities that have been conducted by the European Fingerprint Working Group (EFPWG) since 2004 (and other experiences within specific European countries). In addition, 2 new PTs and one CE have been organised and reported. This accumulated knowledge has been used to understand the strengths and weaknesses of different approaches to organising fingerprint PT/CE work leading to a new ENFSI guideline document on how to conduct fingerprint PTs/CEs and recommendations for the ENFSI Board on the way forward. The work has also produced several other valuable deliverables: a checklist for the evaluation of the services offered by fingerprint PT/CE providers based on the ISO 17043 Standard; a template for a Memorandum of Understanding between a professional organisation responsible for a testing scheme and a PT/CE provider to provide a framework for clear responsibilities and duties; a document evaluating the costs associated with the delivery of fingerprint PTs and CEs; a survey detailing the Quality Accreditation currently achieved by ENFSI fingerprint laboratories.

# 4.

A software package (SmartRank) has been developed, tested, validated and implemented. It is a robust likelihood ratio software tool for searching national DNA databases with complex DNA profiles in order to provide more focused search results. The methodology facilitates searches of (increasingly) voluminous DNA databases, while keeping the rate of false negative and false positive errors at a minimum. SmartRank will thus enable more efficient searching of DNA databases with partial and/or complex profiles. The software is freely available to the forensic community. In addition, a SmartRank User Manual has been produced that includes an 'Ethics Chart' to ensure that the software is deployed within the boundaries of its intended use and solely as a tool to acquire intelligence data. A document (SmartRank Guidelines for Best Practice) has also been produced to facilitate the smooth implementation of the software within the operational casework environment of a forensic laboratory. The software was launched to the European forensic community at a workshop event attended by participants from 16 countries. SmartRank is already being used in operational forensic casework in Belgium and The Netherlands.



# 5.

An experimental study has been conducted to address the very complex questions related to DNA activity level that so often arise in the courts. These are questions about “how did the DNA get there?” not about “who is the donor of this DNA?”. This matter is critical in the interpretation of cases involving trace levels of DNA. Forensic DNA experts need to have the knowledge and the tools to tackle questions about the probabilities of DNA transfer, persistence, and recovery. Despite its great importance in forensic science, the systematic examination of this topic is, very much, at an early stage. Such questions are best addressed through the accumulation of large quantities of experimental data arising from well-designed experiments. The work has investigated whether DNA activity level experiments conducted in different forensic laboratories are comparable (or can be designed in ways to become comparable) such that databases of information could be set up to support forensic scientists around Europe. The experimental studies have resulted in key insights into the current and desired future sharing of DNA activity level data between laboratories. These insights have led to a guideline document for sharing data on the transfer, persistence, recovery and prevalence of DNA and the information will continue to be disseminated across the scientific community to promote the necessary long-term thinking.

# 6.

A software package (SAiLR = Software for Analysis and implementation of Likelihood Ratios) has been delivered and is available free of charge to the European forensic community. It is a user-friendly statistical software package for likelihood ratio calculations, designed to be used as a tool by forensic caseworkers in the interpretation of their forensic results, without resort to consultation with a forensic statistician. The tool allows forensic experts to use statistical models to calculate Likelihood Ratios (LRs) as measures for the strength of evidence in particular casework scenarios. SAiLR has been designed with a flexible structure such that it can be extended by authorised statisticians and software engineers with the addition of new scripts (pieces of software) for new statistical models and features. Extensive validation work has been done during the software development including tests and feedback from independent forensic scientists. The software was launched to the European forensic community at a workshop event attended by 30 forensic experts from 12 European countries.

## ENFSI Direct Grant 2014

### Direct Grant Projects (2014) – 2-year programme (grant awarded € 1,425,821) ISF-Police funding

**Programme Theme:** “Towards the Development of Pan-European Databases in Forensic Science (TDPEDFS)”.

**Current Status:** Grant Agreement signed/Work commenced on 1st January 2016.

**EU Reference:** HOME/2014/ISFP/AG/ENFSI/4000007822

	Project Title	Project Leader
<b>N1</b>	Towards Big Forensic Data (TBFD) - feasibility study & proof of concept.	Kornelia Nehse (LKA-Berlin, DE)
<b>N2</b>	Geographical Distribution of Firearms and Gunshot Residue throughout Europe: databases that help experts to report beyond the source level.	Amalia Brouwer-Stamouli (NFI-The Hague, NL)
<b>N3</b>	European Smoke and Ink Staining System Plus (EuSISS+).	Sandrine Lauper (INPS-Ecully, FR)
<b>N4</b>	Forensic Substance Database on Explosives (FoSDE).	Rasmus Schulte-Ladbeck (BKA-Wiesbaden, DE)
<b>N5</b>	Database Platform for the Combination of Various Existing Databases and Research Projects in the Field of Forensic Document Examination.	Rolf Fauser (LKA-Stuttgart, DE)

## ENFSI Direct Grant 2016

**Direct Grant Projects (2016) – 2-year programme (grant available € 1,500,000) – ISF-Police funding**

**Programme Theme:** “Steps Towards a European Forensic Science Area (STEFA)”.

**Current Status:** Grant application underway (if successful implementation is expected to start on 1st January 2018).

	Project Title	Project Leader
<b>G1</b>	Benchmarking forensic laboratories for strategic planning purposes.	Tore Olsson (NFC-Linköping, SE)
<b>G2</b>	A fitted work tool for analytical data interpretation in forensic chemistry by multivariate analysis (chemometrics).	Sami Huhtala (NBIFL-Vantaa, FI)
<b>G3</b>	Collaborative exercise covering the forensic disciplines of DNA, document examination, fingerprint examination and handwriting examination.	Jonathan Morris (SPAFS-Glasgow, UK)
<b>G4</b>	Development of specialist fingermark visualisation training courses (FV Training).	Aldo Mattei (RaCIS-Rome, IT)
<b>G5</b>	Development of a training and education concept for forensic hair and fibre experts.	Jan-Eric Grunwald (BLKA-Munich, DE)
<b>G6</b>	IT forensic tools test and validation database (Valid).	James Luck (MPS-London, UK)
<b>G7</b>	Empowering forensic genetic DNA databases for the interpretation of next generation sequencing profiles (DNA.bases).	Ingo Bastisch (BKA-Wiesbaden, DE)
<b>G8</b>	Best Practice Manual – Forensic examination of digitally captured signatures and handwritten entries.	Tomasz Dziedzic (IFR-Krakow, PL)
<b>G9</b>	Best Practice Manual – Forensic comparison of soil traces.	Stefan Uitdehaag (NFI-The Hague, NL)
<b>G10</b>	Best Practice Manual – Fingermark visualisation at the scene of crime.	Linda Koomen (NFI-The Hague, NL)

# EFSA 2020

## TASK FORCE



### Council Conclusions and Action Plan on the way forward in view of the creation of a European Forensic Science Area

Following the adoption of the Council Conclusions and Action Plan on the way forward in view of the creation of a European Forensic Science Area 1 by the Council of the European Union on 9th June 2016, the ENFSI Board decided to set up a EFSA 2020 Task Force formed by:

- Thomas Andermann, BKA Wiesbaden, Germany (Chair)
- Raimonds Apinis, SFSB Riga, Latvia
- Oscar Ruiz Barba, GCSP Madrid, Spain
- Christina Bertler Edlund, NFC Linköping, Sweden
- Sara Falconi, DAC-SPS Rome, Italy
- Üllar Lanno, EFSI Tallinn, Estonia
- Judy Van Overveld, NFI The Hague, Netherlands

After their inaugural meeting in October 2016 the members discussed mainly via Email how to proceed with the European Union's Action Plan regarding a European Forensic Science Area, in particular with the first three actions mentioned in the document.

An intermediate report was given during the ENFSI Annual Meeting in May 2017 in Berlin. Based on the ENFSI QCC survey the Task Force pointed out that ENFSI has already achieved a lot in the creation of a European Forensic Science Area. In particular, Best Practice Manuals, Proficiency Tests, Collaborative Exercises and Forensic Databases are generally organized and developed by the ENFSI Expert Working Groups and provided to the whole ENFSI membership.

For further improvement, e.g. by the development of new and existing BPMs, PTs and CEs or the creation of pan-European Forensic Databases, the ENFSI Expert Working Groups and, as these are formed by employees from ENFSI

member institutes, all ENFSI members will have to increase their efforts in creating and providing the aforementioned means.

In summer 2017, the ENFSI Board took the decision to expand and strengthen the Task Force with an additional, very experienced member, Jan De Kinder, NICC Brussels, Belgium.

The Task Force provided the Law Enforcement Working Party with valuable input for the EFSA 2020 Mid-term report to COSI.

The development and improvement of Best Practice manuals as well as their use in forensic laboratories (action 1) is well underway. The EU Member States are encouraged to review the objective for systematic translation of Best Practice manuals. The availability and the use of Proficiency Tests and Collaborative Exercises has been compiled by the ENFSI QCC and meanwhile published on [ensfi.eu](http://ensfi.eu). A huge step forward has been taken in the development and supply of forensic databases with Europol's commitment to provide a platform to host and maintain these databases for the European forensic community. In 2018 Europol intends to start with two already existing databases on car paint (European Car and Paint database) and weapons (Gunfinder). The implementation of databases, which have been developed during the EU funded project Towards the Development of Pan-European Databases in Forensic Science (TDPEDFS) is planned at a later stage.

In 2018 the Task Force intends further pursuing the action plan and improving the already achieved results.

# Action Plan for the way forward for the creation of a European Forensic Science Area (EFSA 2020)

## Action 1

Improving mutual trust by encouraging continuous quality improvement of forensic procedures and processes through the development and use of Best Practice Manuals (BPMs) for forensic analyses.

## Action 2

Stimulate the exchange of forensic information from databases similar to the methodology used under the Prüm Decisions 2008/615/JHA and 2008/616/JHA, focusing on the areas of weapons and ammunition, explosives and drugs.

## Action 3

Improving mutual trust by increased use of Proficiency Tests (PTs) and Collaborative Exercises (CEs) by forensic service providers.

## Action 4

Improving forensic awareness among law enforcement and justice communities.

## Action 5

Stimulate accreditation of forensic procedures and competence of forensic personnel by forensic service providers on a voluntary basis.

## Action 6

Stimulating full implementation of the Prüm Decisions 2008/615/JHA and 2008/616/JHA to exchange DNA-profiles and fingerprints. In addition, improving the quality of forensic data exchanged between all Member States under the Prüm Decisions.

# Forensic Governance Forum (FGF 2017) in Tampere

Improvement of forensic governance is one of the strategic goals of ENFSI. To implement this target, the ENFSI Action Plan 2017 – 2018 includes an action to organize forensic governance training.

- ENFSI therefore has established an executive training event, the Forensic Governance Forum (FGF) in order:
- to assure a unified delivery of forensic services in ENFSI organizations,
- to meet the new challenges for forensic science within Europe in the coming decades
- to prepare its managers to face new challenges in the leadership of forensic organizations

Forensic Governance training first started with two courses which were arranged by the Dutch forensic laboratory NFI in September 2013 and March 2015 in The Hague. Based on the positive results of these first two courses ENFSI decided to continue the development of this valuable interactive program. Hence, in 2017 this course format was taken up again by organizing a Forensic Governance Forum from November 12th – 17th at the Police University College in Tampere, Finland.



The first ENFSI FGF was dedicated to ENFSI Permanent Representatives. The aim was to identify the best tools to meet the ever-increasing customer needs and efficiency and effectiveness goals – not to forget increasingly important quality management and scientific solidity of forensic science.

Substantial learning impact was ensured through vivid interaction between the seven participants. Sufficient time was dedicated to the sharing of experiences and discussion of management dilemmas. Serious learning was complemented by a finely tuned social program in the surroundings of Tampere.

The course program contained the following main themes:

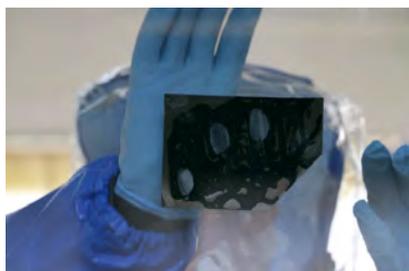
- From crime scene to court room
- Customer demand – from intelligent pre-lab assistance to after-lab knowledge support
- “Fit for purpose” service capacity versus “just in time” delivery
- Challenges and innovative approaches in forensic science
- Every theme was broken down to distinct sessions, which consisted of introductions and team works. Results of the team works were presented and written summaries included in the final material package.

The FGF 2017 was moderated by Jaana Komulainen (@Work, Finland) in a professional and comprehensive way. Other coaches were e.g. Ralph Kleuskens (Senior Advisor, PPAC, Ministry of Security and Justice, The Netherlands), Jan De Kinder (Director, NICC – The Belgian Federal Forensic Laboratory), Üllar Lanno (Director, EKEI – Estonian Forensic Science Institute, Estonia) and Erkki Sippola (Director, NBI FL – Forensic Laboratory, Finland).

The FGF 2017 was held in the Police University Academy, Tampere, Finland, which was responsible for all facilities, accommodation and social program. Since the FGF 2017 was a pilot scheme in which the whole concept of an ENFSI event was developed to be utilized in future training, also the coaches participated in the training full time.

The FGF 2017 got excellent feedback from all participants. According to the survey, the participants were unanimously satisfied with the course.

# Report of the One Day One Topic Seminar on CBRN-Forensic Awareness



On October 17th 2017 the consortium of the FP7-sponsored GIFT-CBRN<sup>1</sup> project organised its Final Conference Event in Brussels. As the event was organised at the premises of the Belgian forensic institute NICC, the R&D Standing Committee took advantage of the presence of many experts in several of the forensic fields on the one hand and CBRN specialists on the other hand to organise a forensics-oriented One Day One Topic Seminar on the following day. This OOS focused on bridging the knowledge gap between specialists in CBRN fields and forensics and to build an awareness of each disciplines' possibilities and problems. The program of the OOS meeting therefore elaborated further on the topics presented on the GIFT Final Meeting.

After words of welcome by ENFSI Chairperson Erkki Sippola and EU Project Officer Philippe Quevauviller, a general introduction on CBRN forensics and GIFT was presented. The Dutch and Swedish forensic labs presented their national situation on CBRN forensics. Finally, a roadmap and the future of CBRN forensics, as seen by the implementers of the GIFT project, were discussed. After the coffee break with poster sessions, the role of different institutions in CBRN forensics was presented, such as the Belgian Federal Orientation Laboratory and the Belgian CRU (Clandestine laboratory Response Unit). In the afternoon session, invited speakers presented their work on CBRN-forensic related issues, such as implementation of CBRN projects in non-EU countries, public/private cooperation, building and sustaining nuclear forensic capabilities and CBRN aspects in a mortuary. The forensic verification of sarin poisoning in Syria was presented as an actual example of CBRN forensics.

The OOS was attended by more than one hundred twenty participants and speakers, coming from all over the European continent and as far away as Hong Kong. A sizeable delegation of forensic specialists and police from the countries of South-Eastern Europe was also present, sponsored by a study visit activity of the P57 Project<sup>2</sup>. Most of the OOS participants (63 %) were forensic scientists, with the rest spread over police and military CBRN specialists.

<sup>1</sup> Project sponsored by the FP7 Call for Proposals FP7-SEC-2013-1, Proposal No.: 608100

<sup>2</sup> Project "P57", sponsored by Service Contract IFS/2016/374993

# EXTER NAL RELA TIONS

# International Association of Forensic Science (IFSA)

## 21st Triennial Meeting

August 21–25, 2017, Toronto, Ontario, Canada

The IAFS is a worldwide association of academics and practicing professionals representing various disciplines in forensic science, such as e. g.

- Forensic scientists
- Professionals working in law enforcement, government or private forensic laboratories dealing with, accident reconstruction, DNA, documents, drug analysis, fingerprints, firearms, toxicology, trace evidence, etc.

Developing forensic sciences as well as assisting forensic scientists and other professionals to exchange scientific and technical information are the main objectives of the IAFS that organizes conferences in this format every three years.

The IAFS 2017 started with altogether 39 pre-conference workshops on Monday and Tuesday followed by a three-day scientific program with morning plenaries and concurrent afternoon presentations, posters and panels.

The program covered a broad range of forensic sciences, thus reaches a broader audience than the EAFS conferences do. Areas represented and dealt with in separate sessions were for example forensic psychiatry, nursing, pathology, medicine, toxicology as well as jurisprudence and violence related issues.

More than 600 posters were displayed during three days and more than 120 exhibitors had booths to present their products.

The next IAFS meeting will be held in Sydney, Australia, in 2020.

The IAFS 2017 conference program is still available at: <http://iafstoronto2017.com>

Also the International Forensic Strategic Alliance (IFSA), a multilateral partnership between currently six networks of forensic laboratories across the globe (including ENFSI) plus the United Nations Office on Drugs and Crimes, met in conjunction with the IAFS 2017 conference in Toronto. The agenda included various timely topics.



It was decided that so-called Minimum Requirement Documents (MRDforensics), which are available at the IFSA website in English, will not be translated into more languages than French, Spanish, Chinese, Russian and Arabic. Electronic evidence MRD and questioned documents MRD are now in development for publication.

Concerning R&D, it was decided that different networks will increase their collaborative work to leverage resources. This could significantly reduce duplication of work. The group felt that coordination of R&D could become an important role of IFSA in the future.

IFSA members thanked Jody Wolf from the American Society of Crime Laboratory Directors (ASCLD) for her excellent work as President of IFSA. The Members voted Paul Ludik, Southern Africa Regional Forensic Science Network (SARFS), as the next President.

# Europol Meeting in Wiesbaden

In August the BKA in Wiesbaden hosted a joint meeting of forensic database experts and team leaders from EU Direct Grant 2014 activities N1 – N5 and a delegation from Europol.

This meeting was held in order to present the current status of the project “Towards the Development of Pan-European Databases in Forensic Science” (TDPEDFS) and to present databases developed and in use among the ENFSI community (e.g. EUCAP) to Europol representatives.

Europol as an EU Agency brings along a lot of experience in hosting pan-European databases and is furthermore explicitly mentioned in the EFSA 2020 Council Conclusions as responsible actor in Action 2: ‘Stimulating exchange of forensic information from databases, for example in the areas of weapons and ammunition, explosives and drugs’.

Overarching activity N1 “Towards Forensic Big Data” acts as a role model and accomplishes goals such as the development of a model and building a demonstrator to prove the possibility to integrate already existing databases

and those yet to be completed. Further it serves as a future model for the creation of new databases. N2 – N5 activities are focused on the provision of operational databases which can be used via the demonstrator.

Europol by this meeting got a first impression on which IT requirements need to be fulfilled and will have an in depth study after receiving more detailed information from the teams. These requirements need to be adapted to those from Europol IT security.

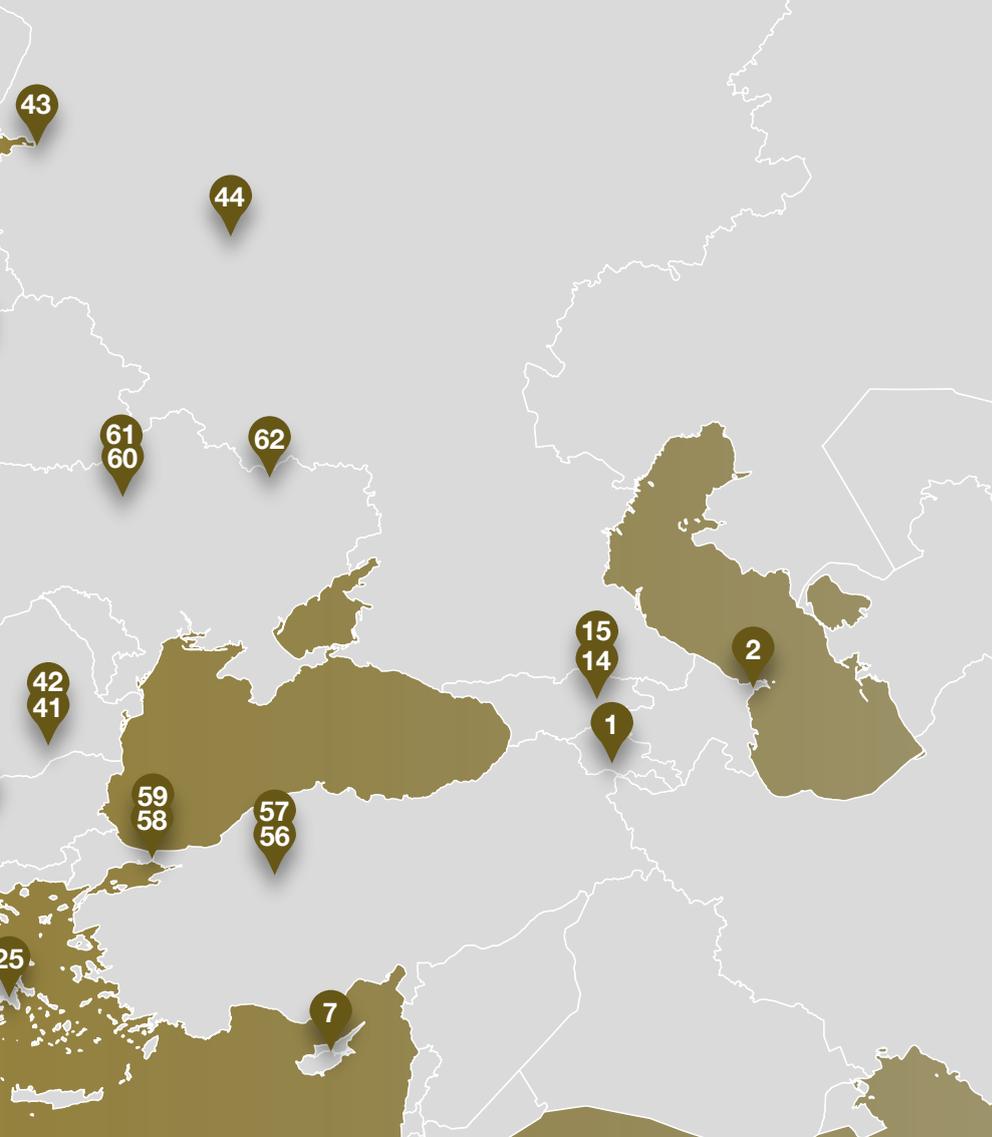
The meeting was seen by all participants as an important step towards a deepening of the collaboration between ENFSI and Europol. A common strategic plan will be set up to ensure information exchange in crucial areas in future.



# ENFSI MEMBERS



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