

EUROPEAN SECURITY RESEARCH AND INNOVATION IN SUPPORT OF EUROPEAN SECURITY POLICIES

INTERMEDIATE REPORT

SEPTEMBER 2008



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European security research and innovation in support of European security policies





ESRIF's mandate is ambitious. It is to propose a European agenda for research and innovation in the field of security capable of guiding European institutions, governments and the private sector in the coming two decades. ESRIF's task is to present by the end of 2009 a widely-shared perspective on European security research needs and priorities.

ESRIF's structure is unique. ESRIF brings together experts, nominated by their governments, from the public sector, the private sector, research establishments and societal organisations. These leading experts cover a broad range of expertise and experience. As a broadly-based public-private dialogue, charged with presenting decision-makers with practical and innovative proposals to improve European security through research and innovation, ESRIF represents a new mode in European governance.

ESRIF's purpose is to help enhance the security of European citizens. We live in a time when natural and man-made threats to the security of our increasingly complex societies appear to be growing. Security is a pre-condition of liberty, and to provide security to their citizens is a prime task of EU Member States and of the Union as a whole. However, care must be taken to ensure that our desire to enhance security does not itself erode those liberties which we seek to protect. A culture of fear would not improve European security. A culture of resilience will, and ESRIF intends to shape its recommendations accordingly.

Even though additional investments are likely to be required, both public authorities and private business will operate under budgetary restraints. To spend existing funds effectively, economies of scale must be exploited to the full; and it is also here that the European Union has a key role to play. Greater coordination of national and EU-financed research efforts will be required, as well as greater efforts at EU-wide standardisation and certification. Such initiatives to strengthen the framework for European standardisation and certification would not only enhance security but will also foster the necessary competitiveness of the European security industry. To develop a more competitive European security market introduction of a 'European Security Label' would be advisable, and ESRIF will elaborate the necessary proposals.

When completing its activities by the end of 2009, ESRIF will draft detailed recommendations for securityrelated research and innovation in Europe. Some of the intermediate findings have been outlined in this report. Security-related research and innovation must be embedded in policies that are the fruit of democratic scrutiny and public debate. I trust the report will stimulate debate in EU-Member States among public authorities (including 'blue light' professionals), the private sector, and civil society in general. Liberty and security, after all, are everybody's business.

Gijs de Vries ESRIF Chairman

September 2008

ESRIF's intermediate report at a glance

- In its first year, ESRIF assessed threats, risks and challenges in current security policy work to make ESRIF's outcome concrete and applicable.
- To refine ESRIF's understanding of the challenges and to facilitate the setting of priorities, foresight methodology was used to test if these are likely to remain relevant in the long term, and to identify new, emerging challenges.
- Current security risks were then mapped against scenarios of the future, revealing a continuum of challenges stretching over 20 years. They range from organised crime, terrorism and radicalisation to violent conflicts, natural disasters and global warming.
- The complexity and interdependence of risks requires Europe to methodically identify, develop, and deploy equally comprehensive solutions, embracing various policy instruments, research and technological systems.
- Broadly accepted moral values, legal standards and ethical guidelines within Eupope's citizenries are starting points to define potential support that technology can provide. Social sciences and humanities can contribute greatly to security research, and there is scope to strengthen their role, which ESRIF will explore in the coming months.
- The envisaged Joint Security Research and Innovation Agenda should address the whole portfolio of prevention, preparation and protection, response and recovery in a balanced way, with respect for individual freedom and the generally legally protected private sphere. While resilience is a general priority for research, more targeted measures, just as any security measure taken, naturally need guidance from security policy.
- A clear, shared vision of security is a prerequisite for the comprehensive Joint Security Research and Innovation Agenda, which should be implemented through joint encouragement and support of security research. Both require adequate governance and managerial structures.
- In order to create a common security market, a host of policy, technological and regulatory challenges will have to be met. A stable legal framework is required, both at national and European level, to underpin the European security market, in particular by setting equal conditions for all competitors.
- SRIF will elaborate proposals for an EU Security Label to promote the harmonised application of security measures and common quality levels as the criteria for market access.
- In its second year, ESRIF will propose a capability-oriented security research roadmap with specific priority areas.
- As a broadly-based, Europe-wide dialogue among stakeholders, charged with presenting decision-makers at national and EU level practical and innovative proposals to improve European security through research and innovation, ESRIF will additionally function as a test bed for a new form of Europe-wide cooperation.



The European Security Research and Innovation Forum (ESRIF), established in September 2007, is an informal and voluntary group of experts coming from the demand and supply side of security technologies and solutions as well as from societal organisations. ESRIF has 64 formal members, though more than 600 additional people have registered as contributors to ESRIF's 11 working groups. This gives ESRIF's work a broad basis.

ESRIF has been tasked with developing a 'Joint Security Research and Innovation Agenda' for Europe: a strategic roadmap for security research and related measures that will bring greater coherence and efficiency to the sector, while promoting innovation. Specifically ESRIF addresses:

- mid-term and long-term security perspectives (up to 20 years),
- European, national and regional perspectives,
- bringing the demand and supply sides together to focus on requirements for research,
- Security is a priorit for the European citizen.

- societal and technological aspects of security research,
- the promotion of innovation to lay the foundation for a European Security Market that exploits economies of scale at European level,
- S guidance for all stakeholders who prepare security-relevant research programmes in Europe.

ESRIF's formal members meet several times per year to discuss the general work direction. Detailed work is carried out by working groups (WGs) focused on specific aspects of security. They operate in parallel under the guidance of ESRIF's plenary to ensure consistency of approach and coherent results. WG leaders and rapporteurs meet frequently with ESRIF's chair and two vice-chairs.

Firstly, one working group is devoted to foresight and scenarios, providing methodological guidance as well as the long-term background that is crucial for ESRIF's work. Then, some WGs focus on security missions and challenges (i.e., security of citizens, security of infrastructures, border security, crisis management), and some work on cross-cutting technological aspects such as situation awareness and the role of space, identification of people and assets or CBRN (chemical, biological, radiological, nuclear) issues. Other WGs concentrate on policy or on contextual topics such as innovation, governance and coordination, and the human and societal dynamics of security.¹

Eleven working groups which bring together Europe's leading experts.

¹ More details regarding the formation of ESRIF and the methodological approach employed are contained in the annexes.

ESRIF's working group setup



3. Addressing security risks and challenges

The goal: a concrete, robust and coherent outcome

The first phase of our work within ESRIF was to comprehensively assess the challenges to European security, which resulted in specific working groups and their interlinkages. Part of that task, which builds upon what has already been achieved by ESRAB², was also to understand how ESRIF could convince public stakeholders – i.e. security end-users – of the benefits that will accrue to all citizens if those stakeholders base their work on optimised security products and methods. To achieve this, ESRIF's proposals will have to be concrete, robust and coherent.

Thus we first concentrated on actual policy needs as expressed in EU and national documentation and planning for the coming years. This was – and will continue to be – linked to the EU's evolving European Security Strategy.

To be robust, we evaluated the identified challenges against changes in our assumptions, for only then would they be robust in the long term and offer a degree of certainty. As for conclusiveness, we will define research goals and a set of auxiliary proposals to anchor them to their central purpose: to protect the security of citizens and society at large. Security research cannot remain abstract; it must lead to concrete applicable results. The key here is that research is exploitable and that full consideration is given to exploiting outputs.

Define threats, identify challenges, provide solutions at EU level.

Foresight for future planning and prioritised investments

To adequately prepare societies for risks, research into pragmatic and cost-effective solutions to security challenges is indispensable – not only in 20 years from now, but also in the years to come until then. However, risk constantly evolves and, without adequate foresight, can render today's research efforts outdated before they are completed. Public policy measures and private sector investments in research and development must take account of trends and allow for flexibility in the face of trend-breaks affecting European security. The term "resilience" also applies to applicability in the face of unexpected changes.

For our 'long term work', ESRIF has discussed security-relevant scenarios about possible future developments. These were based on a combination of known facts and possible alternatives of social, technical and political evolutions, in order to (1) test whether risks identified by today's security policy work might still be relevant in 20 years, and (2) identify new challenges to come that are not yet evident.

Many risks have already been identified and described in European and national analyses. But we don't need just spot actions; we need comprehensive answers to complex interconnected problems and challenges. ESRIF needs to improve our understanding of the interdependency of risks³ and potential threats, as well as vulnerabilities and the political will to address and deal with them in a comprehensive, coherent, systematic and effective way.

Our mapping of current security risks against alternative scenarios of the future in principle reveals a continuum of challenges stretching over the next two decades, though the relevance and danger of these risks will, of course, vary widely. For example, future risks might decline as social cohesion rises. ESRIF's work will therefore

Interaction between demand and solution providers to define necessary technological evolution.

² The European Security Research Advisory Board, disbanded in December 2006

³ We normally speak of 'threats' in a narrower sense: as a combination of intent and capability. But ESRIF's work also embraces natural or man-made disasters and major disruptions, giving a broader meaning to the notion. 'Risks' is handled in a more comprehensive way, combining probability of a 'threat' and magnitude of impact if it materializes, which takes account of our level of vulnerability to a threat. Measures to enhance security and related research can thus focus on various means of response.

Risk combines the probability of a threat with the vulnerability of the system and the dimension of the damage.

include an assessment of the driving forces of future risks in order to focus our recommendations on appropriate counter measures in prevention, protection and response.

The scenarios we used considered broad influences such as global politics and economy, the EU's wider neighbourhood, social and political cohesion in the EU, technological vs. societal developments and dynamics, the acceptability of security measures, and, finally, public and private roles in the civil security sector. All these will affect our future security environment and need to be taken into account when setting research priorities, namely to:

- emphasize research that helps Europe to prepare for high-probability security risks with wide-ranging impact (medium to high), both physically and/or symbolically. Consequences of climate change are an example of this kind of risk. (see below)
- determine how to deal with security-relevant incidents of low probability but high impact. Examples include dramatic acts of terrorism designed to capture the media's attention and sow panic. Security research should of course also aim to provide policy support for such cases in the knowledge that it is neither possible nor affordable to launch targeted measures for all possible incidents. The relationship between security and civil liberties remains a matter of degree and balance. In any case, a certain level of remaining risk will have to be accepted by all societies an issue that needs to be discussed openly by our democracies. ESRIF will in the first place emphasize a strategy based on resilience to address this type of problems.

Complexity and interdependence

In line with the European Security Strategy and based on an assessment of relevant policy documents, ESRIF perceives a broad spectrum of threats and risks to European security. This includes

▶ organised crime,

- ▶ corruption and money laundering,
 - ▶ sabotage,
 - ▶ radicalisation and extremism,
 - ▶ terrorist acts,
 - ▶ proliferation of weapons of mass destruction/disruption,
 - ▶ regional conflicts and state failure,
 - ▶ natural disasters and pandemics,
 - ▶ man-made disasters such as major industrial accidents,
 - ▶ unintended consequences of the introduction and use of new technologies,
 - ▶ reduced access to energy and natural resources,
 - ▶ All of which may result in humanitarian crises.

Not all of these are necessarily linked to the EU's territory, but due to their interdependences and consequences they might still affect the security of Europe's citizens. Special risks arise from the increasing complexity of modern societies and the growing interdependence of economic and technological systems, and from our increasing reliance on technology for all kinds of activity. This complexity of interdependence is not easy to comprehend. To give some examples:

Interdependence of threats requires close cooperation among national institutions and with the EU. **Certain connections are based on causal links.** E.g. global warming causes desertification, depletion of water resources, declining agricultural production and thus increased scarcity and higher prices for food. This in turn can lead to malnutrition, poverty and social unrest, violence and radicalisation, population movements, migration, trafficking, illegal border crossing and so on.

Other causal interrelations are more direct but not necessarily easier to understand or address, such as cascade effects within and across critical infrastructures. E.g. Europe's choice for increased inter-operability of electrical grids could open the door to cyber-criminals by reducing the threshold of their interference since fewer software products, protocols and standards make it easier to disrupt the system's operation.

In future, evolution of technology can potentially lead to new threats, for example, through its use by criminals or terrorists, and to additional vulnerability of critical infrastructures. Our current trend towards information that is more readily accessible and easily shared may also boost the ability of criminals to disrupt or destroy technology-based critical infrastructures. In such circumstances, the effective protection of information about critical infrastructures itself becomes critical.

Security to be embedded in infrastructure and systems, not added-on. This complexity of risk requires that Europe systematically identify, develop, and deploy solutions that embrace its full range of policy instruments, all areas of research and the technological systems designed for the enhancement of our security.

Society and perceptions of security

Security as a notion cannot be measured in absolute terms; it always has a subjective element to it, since it affects and is affected by human beings. This puts the human being at the centre of all considerations. Here is the starting point for investigating the potential support that technology can provide.

Citizens have a crucial role to play in preventing and responding to securityrelated threats and in mitigating the associated risks. Measures to preserve and enhance social resilience, e.g. against even individual radicalisation Legitimate solutions enhance security while respecting fundamental rights and liberties.

tendencies, must be an integral part of European security strategies and related research efforts. The social sciences and humanities therefore have important contributions to make to security research. In fact there appears to be considerable scope for strengthening the role these disciplines can play, which ESRIF will explore in the coming months.

Whilst an essential tool in addressing security challenges, technology cannot be developed in isolation from the human and societal dynamics of security, and vice versa: technology development might have an impact on society and behaviour of people. Whatever security measures are put in place, they must be effective and legitimate to successfully endeavour for the public's trust and acceptance; and certainly they must respect existing and changing privacy and data protection regulations. It goes without saying that both security policy and security-related research must take into account international standards of human rights, which the European Union and its Member States have pledged to uphold. Security measures that do not uphold civil liberties risk decreasing social acceptance, both in terms of the particular measure and the government that propagated it, thus leading to diminished rather than enhanced security for Europe's citizens.

Media and security

Mass media and new media such as internet blogs have a major impact on the way security and associated public policies - including those to build social resilience - are perceived. Some media, however, are also known to have played a role in processes of violent radicalisation.

Public policy makers operate under intense media scrutiny, especially when addressing the consequences of man-made or natural calamities, and communications are of course a critical component of any strategy of disaster management.

Moreover, trans-national media can add to the pressures on local authorities in a crisis situation: few elected or appointed public officials are trained to deal with the demands of the international media corps. Instant reporting via digital cameras and telecommunications turns spectators and even victims into 'information delivery' agents, which collapse the time cushion of traditional news reporting. This shift in communication between citizens and between public authorities and citizens through the internet and mobile telephony creates both opportunities and challenges for those who must manage crises. It will be a focus of ESRIF's future work.

Towards an integrative European security culture: Shared vision and governance

Our societies are vulnerable to a wide range of security challenges and incidents. Some of these are readily identified and analysed, while others are complex, obscure or impossible to anticipate. This complex mix cannot be adequately tackled if Europe's decision-makers and security stakeholders work in isolation from one another for the simple reason that security incidents and their effects do not respect man-made borders, lines of responsibility or different procedures and technological solutions. But again, this cuts both ways: Getting stakeholders together without effective decision-making rules and regulations can even diminish effectiveness.

Common threats to our well being demand a joint approach, a shared vision and a coherent and cost-effective structure of governance to shape security research and deal with all threats to our citizenry, whether manmade or natural. To be coherent, we must follow common objectives. To be cost-effective, security research must be properly coordinated across Europe to enhance EU-wide complementarity of programmes, systemic approaches and general and comprehensive interoperability, while avoiding unnecessary duplications of effort – all the while bearing in mind, that redundancy in itself is not necessarily a waste of effort in security. A proactive security research policy in Europe thus requires a spirit of cooperation, a willingness of all players to coordinate objectives and exchange information and, above all, a mechanism for achieving this.

The Joint Security Research and Innovation Agenda should address all aspects from strategy definition to implementation, with shared but distributed responsibilities, and under an effective managerial structure.

The added value of effective governance lies in particular in those areas of the crisis cycle where security research requires public investment or where it gains additional effect through such guidance. We are aware that our European societies face many threats, and there is agreement that we do not want to live in an environment of fear and over-reaction. Our primary goal should be to avoid violent radicalisation by aiming, inter alia, for peaceful and equitable international relations in the knowledge that 'absolute security' can never be assured in free and open democracies.

National efforts to be conducted as a part of a coherent, European approach.

Nonetheless, research support for prevention through early warning, surveillance and intelligence-gathering systems is essential for effective use in the field. Information acquisition, rapid processing and making it available to the respective security force with the right level of detail, this is one such challenge. Again this alone is not sufficient: targeted and general preparatory and protective measures are just as important. Research in support of these groups of measures needs guidance from security policy; if left to its own devices, research risks losing its applicability and in the end, the chance to lead to effective improvements in security.



A joint security research and innovation agenda should lead all the activities in Europe. Fail-safe procedures, emergency modes, crisis and consequence management, business continuity planning, built-in resiliency and redundancy: all are critical to mitigate the actual and perceived impact of security incidents and can be driven by security policy and research working in close cooperation with each other, which is essential.

Indeed, security research must be guided by a clear and shared vision of security policy - the prerequisite for the Joint Security Research and Innovation Agenda which requires an adequate European governance structure. The benefits will be bi-directional: for security research and for security policy – and, most of all, in the interest of European citizens. ESRIF is already providing a holistic 'test bed' for such a new form of Europe-wide cooperation: It is designed to strengthen awareness and information exchanges across all stakeholder groups in the field of security research and innovation. With a view to the 'continuum of security threats' – and by liaising with defence-related research – we are confident that this testbed will evolve with Europe's expanding security agenda.



The crisis cycle. Source: ESA project RESPOND

(http://www.respond-int.org/respondlive/public/html/what_is_respond/missionStatement.html), taken from the Barnier Report 'For a European civil protection force: europe aid'(2006)

Innovating European security

The role of public authorities in Europe's emerging field of civil security is complex, still to be defined and to a certain degree, still maturing. While the public sector indisputably defines the needs and sets the requirements for security research and technology development, not all public authorities at local, regional or even national level can draw on extensive acquisition experience as a security 'customer'. Moreover, the collective need to create a common security market for the 27 Member States poses a host of policy, technological and regulatory challenges.

A stable legal framework is required, both at national and European level, to underpin the principles governing a security market. Since this market is still highly diverse, uneven and fragmented across the EU 27, a common regulatory framework for security technologies and security research in Europe would allow industry to better focus investment regarding user needs and market requirements.

Security standards and certification: basis for an EU Security Label to develop market for security products. Investing in research is obviously not sufficient to field solutions that improve security: the entire innovation process must be considered. ESRIF looks at 'innovation' in comprehensive terms, going beyond the research cycle and even beyond the post-research pre-investment phase to include demonstration and validation of research products.

ESRIF is focusing on the broader business cycle of security that embraces goods and services, technologies, procedures, practices and other 'fieldable' research results. Given that close cooperation between the demand and supply sides is key, ESRIF is

analysing different business and investment models to ensure that solutions such as critical infrastructure protection are developed and delivered to the market on a progressive, dynamic, sustained and affordable basis.

Europe's security market needs basic criteria for decision-making regarding the acquisition and implementation of security products and services and their integration. Citizens need to be informed and reassured that security measures of public and private organisations incorporate products and services that are compliant with European technical minimum standards at the least.

A higher and shared level of confidence in security solutions would broaden their use beyond the public sector, hence ensuring private operators of economic returns for their security investments via lower insurance premiums, for example. Achieving such ends, however, demands fresh regulatory approaches and innovative incentives, coupled with new methods of verification and compliance.

ESRIF's forthcoming proposal for an 'EU Security Label' should help nudge standardisation and certification processes toward a harmonised application of security measures and quality as the criteria for market access for security products and services. This concept should be formulated in a technology-neutral, performance-oriented way that underlines conformity with the required standards.

The EU Security Label should stimulate innovative technologies that provide the best value for money in the long term, while ensuring interoperability. And by introducing a compulsory 'privacy & freedom-compliancy requirement', the Label would at the same time express respect for European civil liberties. It could become a common reference point for security providers, end-users and legislators by creating a coordinated accreditation process for test facilities and auditors, while encouraging appropriate organisations to apply.

4. Annex I: ESRIF: Background

The 64 formal members of the European Security Research and Innovation Forum were nominated and given their mandate by the 27 EU Members States and countries associated with the EU's current seven-year Framework Research Programme, as well as the European Commission and EUROPOL, FRONTEX and EDA, respectively the EU's agencies for cross-border police cooperation, external border management and defence research and market policy.

While ESRIF's formal members are responsible for its recommendations, ESRIF's additional working group (WG) contributors are volunteers chosen by any of the formal members to help round out ESRIF's expertise. All participation in ESRIF is in a personal capacity. In addition, the European Parliament has observers to ESRIF, drawn from its committees on civil liberties, industry and security and defence, who participate in its plenary meetings.

ESRIF is set up as a non-statutory expert group to allow for unconventional thinking independent of political structures or personal affiliations. ESRIF will not prescribe political decision making in any way and its recommendations are purely consultative. Given this approach, ESRIF aspires to overcome the political boundaries and limitations that a formal structure might otherwise restrict. ESRIF is the only large scale, high-level attempt of this kind in Europe.

ESRIF is 'co-owned' by its formal members who, together with its WG contributors, are able to assess the needs, qualities and impact of security solutions and technologies. They represent the demand side (national authorities, public and private end-users, the European Commission and above-mentioned EU agencies), the supply side (industry, research establishments and universities), and civil society (non-governmental organisations). Reflecting the broad continuum of security, ESRIF's constituency stems from both the security and defence worlds to ensure consistency and complementarity of research programming.

The demand side was deemed the most appropriate to lead the WGs in order to anchor ESRIF's effort to concrete needs, as defined by field practitioners, public sector authorities and decision makers and individuals from the concerned private sectors. Each WG's rapporteur is drawn from the supply side, which has the expertise to assess which technology and knowledge is the most appropriate to solve given security problems in the most effective way. The other WG participants – formal members and additional contributors from the demand, supply and civil society sides – will assure the best coverage of all areas of expertise required.

Many WGs also established temporary sub-groups to cover a particular issue or for cross-WG coordination: For example, there is a cross-WG committee focused on the longer term perspective of security research and another to integrate the ethical and societal aspects of security in all areas.

ESRIF's work approach and roadmap can be summarised as the following:

Our first year was dedicated to assessing the existing security policy decisions, strategies and plans on European and national levels, as well as recent studies and projects, e.g. from the Commission's 2004-2006 Preparatory Action for Security Research (PASR) and current and previous EU Research Framework Programmes. On this basis, together with additional expertise from contributors in the working groups, ESRIF identified mid-term threats, risks and resulting challenges. Trend studies and scenarios of possible future developments allow for robustness checks and the setting of first priorities. During our second year the above threats, risks and challenges will identify the required capabilities and in particular the capability gaps in European security policy. Finally, we will be working on a set of comprehensive recommendations for research and policy measures in the innovation domain, again indicating priority areas. All this will surface in the autumn of 2009, when ESRIF presents its mid-to-long-term strategic Joint Security Research and Innovation Agenda.



ESRIF's work approach and roadmap

Unlike its predecessors – the independent Group of Personalities (GoP) created in 2003, or the European Security Research Advisory Board (ESRAB) created in 2005 by the Commission – ESRIF was born in the context of existing European and national security research programmes and the accumulated broad experience of various stakeholder groups. That new context will now frame ESRIF's deliberations.





The context and evolution of security research in Europe: programmes, strategy groups, Commission publications, conferences.

European security research and innovation in support of European security policies

5. Annex II: List of ESRIF members

ESRIF members and some contributors from the working groups at the 4th Plenary meeting in Ispra, 20 May 2008



List of ESRIF members

ACCARDO Lucio, IT	Ministero della Difesa
BERG Frank Robert, NO	The Financial Supervisory Authority of Norway
BERGLUND Erik, EU	FRONTEX
CAMELI Antonio, IT	Ministero Degli Interni - Polizia di Stato
CENAS Narimantas, LT	Institute for Biochemistry
DE MESMAEKER Yvan, BE	ECSA European Corporate Security Association
DE VRIES Gijs, NL (Chairman)	Netherlands Institute of International Relations 'Clingendael'
DELVILLE Thierry, FR	Direction de l'administration de la police nationale
DESIMPELAERE Luc, BE	Barco Corporate Research
DOBROWOLSKI Grzegorz, PL	AGH University of Science and Technology
DOBSON Tibor, HU	National Directorate General for Disaster Management
DUBRIE Brian, UK	Home Office, Office for Security and Counter Terrorism
DURBAJLO Piotr, PL	Ministry of Interior and Administration
DURRANT Paul, UK	Department for Transport
EGGENBERGER René, CH	Eidgenössisches Department für Verteidigung, Bevölkerungsschutz und Sport
ENSTEDT Dan-Åke, SE	Saab AB
GALVÃO DA SILVA Frederico, PT	GNR - Guarda Nacional Republicana
GRAMMATICA Alvise, EU	EUROPOL
GRASSO Giancarlo, IT (Deputy Chairman)	Finmeccanica
GREVERIE Franck, FR	Thales Security Solutions & Services Division
GULTEKIN Recep	Turkish National Police
GUSTENAU Gustav, AT	Bundesministerium für Landesverteidigung
HADJITODOROV Stefan, BG	Bulgarian Academy of Sciences
HENDEN Peter, UK	Petards Group
HERTEMAN Jean-Paul, FR	Sagem Défense et Sécurité
HOLL Milan, CZ	Aeronautics Research and Test Institute
KALNINS Kaspar, LV	Riga Technical University
KLISARIC Milan, RS	Ministry of Interior
KOTZANIKOLAOU Panayotis, HE	Hellenic Authority for the Assurance of Communications Privacy and Security
KÜRTI Tamás, HU	KÜRT Corp. Information Managment
KÜTT Kristiina, EE	Ministry of Defence



LEVENTAKIS George, HE	Centre for Security Studies (KE.ME.A)
MADALENO Utimia, EU	EDA - European Defence Agency
MARGUE Tung-Laï, EU	EUROPEAN COMMISSION - DG JLS
MEDINA Manel, ES	Universidad Politécnica de Cataluna
MEY Holger, DE	EADS
MICHEL Bernd, DE	Fraunhofer Gesellschaft, Micro Materials Center
MURESAN Liviu, RO	EURISC Institute
NEKVASIL Vladimir, CZ	Academy of Sciences
NURIEL Nitzan, IL	National Security Council, Counter Terrorism Bureau
PAPADOPOULOU Vicky, CY	University of Cyprus
PHIPSON Stephen, UK	Smiths Group; Security & Resilience Industry & Suppliers Council
PISO Marius-Ioan, RO	Romanian Space Agency (ROSA)
PRANJÍC Stipan, CR	Ministry of Interior
PRINZ Johannes, AT	FREQUENTIS
RINTAKOSKI Kristiina, FI	Crisis Management Initiative
RODRIGUEZ AUGUSTIN Carmen, ES	INTA, Relaciones Institucionales y Politica Comercial
ROUJANSKY Jacques, FR	Ministère de la défense
SERWIAK Sebastian, PL	Ministry of Interior & Administration
SHALAMANOV Velizar, BG	George C. Marshall Association
SIMON Carlo, LU	Centre de Communication du Gouvernement
STIG HANSEN John-Erik, DK	National Centre for Biological Defence
STOCK Jürgen, DE (Deputy Chairman)	Bundeskriminalamt
THORELL Dan, SE	Swedish Coast Guard HQ
TOMASSON Bodvar, IS	Linuhonnun Consulting Engineers
TRAVERS Eleanor, IE	Transport Security Solutions Ltd.
UNGER Christoph, DE	Bundesamt für Bevölkerungsschutz und Katastrophenhilfe
VAN DUYVENDIJK Cees, NL	Netherlands Organisation for Applied Scientific Research
VILLANUEVA DIEZ Francisco, ES	Ministerio del Interior
WAGNER Juraj, SK	Alexander Dubček University of Trenčin
WEISSENBERG Paul, EU	EUROPEAN COMMISSION - DG ENTR
WIEDEMANN Sabine, DE	Deutsche Post AG
ZANASI Alessandro, IT	ZANASI Alessandro Srl. & University of Bologna

6. Annex III: Coordination of ESRIF working groups

Security of the citizens:	VAN DUYVENDIJK Cees (SUCHIER Jean-Marc, VAN VEEN Hendrik-Jan)
Security of critical infrastructures:	TRAVERS Eleanor (MEY Holger, HOFER Florian)
Border security:	BERGLUND Erik (BARONTINI Giovanni)
Crisis management:	UNGER Christoph (PRINZ Johannes, PASTUSZKA Hans-Martin)
Foresight and scenarios:	RINTAKOSKI Kristiina (ERICSSON Anders)
CBRN:	STIG HANSEN John-Erik (BUSKER Ruud, BUCHWALDT-NISSEN Jacob)
Situation awareness:	MADALENO Utimia (COMPARINI Massimo)
Identification of people and assets:	DELVILLE Thierry (WALSH Martin, DELARUE Henri)
Innovation issues:	SIEBER Alois (DESIMPELAERE Luc, JANSSENS Myriam)
Governance and coordination:	ACCARDO Lucio (TONINI Pietro)
Human and societal dynamics of security:	MURESAN Liviu, McCARTHY Sadhbh (SUNDELIUS Bengt, CASTENFORS Kerstin)

