How to Effectively
Network/Communicate
in International R&D projects

2015

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The necessary condition for the successful international R&D collaboration between EU and Eastern Europe and Central Asia (EECA) countries is the potentially attractive knowledge and know-how for the EU counterparts. But this knowledge could be exploited only with the capacity to share it. This capacity is very much related to the capacities for networking on different levels of project participants (researchers, stakeholders, policy makers, project partners in EECA countries etc) interactions. The lack of networking skills could stay this R&D potential undiscovered.

In broad sense Networking is relationship building among people with similar interests and goals. It involves actively getting to know people – developing an ever-increasing list of connections. Networking is about sharing information, ideas, resources, opportunities.

"How to Effectively Network/Communicate in International R&D projects" guide is designed so that the target audience – EECA countries' participants and stakeholders in international R&D projects – with lack of networking skills – could significantly improve them following the practical recommendations and examples of good practice.

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Table of content

Introduction to Guide 2nd edition

What is "networking" about? Are networking and communication different issues? How about "social interaction", is this also a part of the networking process, or is this a synonym of networking? How can networking work? How should the individual differences of stakeholders be integrated into their respective workplans and overall cooperation activities? How to asses if our networking skills are sufficient, or should be upgraded? How to make a quick diagnostic of our networking potential, i.e. our willingness and ability to share knowledge and experience on one hand, and to learn from others' experience, on the other hand? How to encourage networking and knowledge sharing? How to create networking culture? How to translate the term "networking", after all?

These questions have been discussed during the review of the FP7-funded projects, ISTOK-SOYUZ, SCUBE-ICT and EXTEND, all aiming to reinforce the cooperation potential between EECA (Eastern Europe and Central Asia) and EU ICT specialists. We would like to thank the reviewers for raising the question of networking (April, 2010) and for requesting reflection and discussion about networking, which led to the development of the Networking Guide.

It became clear during the Guide development that it's not easy to give the answers to those questions. The term of "networking" is pretty recent, and the systematic approach to networking has not been developed yet in Eastern Europe and Central Asian countries. Thus, the Networking Guide in its first edition is an attempt to provide some answers to some of the questions concerning networking, and to guide those who would like to learn how to network better and communicate in the international R&D projects.

"... the networking guide How to Effectively Network / Communicate in International R&D Projects, published in English and Russian, is an excellent and useful guide that merits promotion well beyond the EECA"

" The networking guide How to Effectively Network / Communicate in International R&D Projects should be promoted well beyond the three EECA clustering projects. The document is well thought-out and captures the essence of the difficulties in cooperation and appropriate suggestions guidelines for overcoming these difficulties for prospective participants in international research cooperation."

From ISTOK-SOYUZ Final Technical review report – (June 2011)

The Networking Guide has been widely used by researchers not only from Russia, but also from other countries of EECA, EU and worldwide. E-versions of the Guide are posted at many web-sites of FP7 [1] projects, and also at the web-sites of R&D organisations and programmes. The Guide is used for educational purposes at universities and for trainings on the participation in international research projects; the Guide is also recommended for professionals in the technology transfer area.

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[1]   See, for instance

> The guide "How to Effectively Network/Communicate in International R&D projects", developed with participation of RTTN experts was included into the Enterprise Europe Network library "Help your clients".
>
> *Jose PUIGPELAT*
> *Head of Unit, EUROPEAN COMMISSION, Executive Agency for Small and Medium-sized Enterprises*

> A culture of innovation based on open networking and information sharing – attributes that characterize innovation hubs like Silicon Valley – has yet to fully develop in Russia. ...To improve networking savvy, RTTN developed a guide entitled "How to Effectively Network/Communicate in International R&D projects."
>
> *David Schwartz,*
> *from article "Guidebook designed to improve international technology networking",*
> *Tech Transfer Central[2]*

> "I have been involved in so many international R&D projects and it comes as an excellent tool to crystallize what I have firmly between in effective communication. Excellent resource, thank you!"
>
> *Sze Tiam Lin,*
> *IPI, Singapore*

The present Guide, developed under the project BILAT-RUS-Advanced, advances further the first edition.

Part 1 of the Guide is an updated and extended version of the first edition. It is designed so that the target audience – with lack of networking skills – could significantly improve their networking skills following the practical recommendations. Two additional networking skills and relevant "how to" recommendations have been added – "Organising efficient brainstorming meetings" and "Using social media".

Part 2 is a new one; it contains the findings of the BILAT-RUS-Advanced project. It considers various tools for establishing and supporting knowledge networks, for which the networking skills are absolutely essential and integrated into these tools.

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[2]   Tech Transfer Central is designed to be a one-stop destination supplying information, news, products, and services for technology transfer and intellectual property professionals. The site is owned and operated by 2Market Information Inc., which also publishes Technology Transfer Tactics, the world's most widely read and respected independent publication for tech transfer professionals.

BILAT-RUS-Advanced

The BILAT-RUS-Advanced project (2012–2015), titled: "Advancement of the bilateral Partnership in scientific Research and Innovation with the Russian Federation" (Project Number 311836) was funded by the EC under the FP7-INCO – FP7 Specific Programme 'Capacities' – Horizontal actions and measures in support of international cooperation.

The BILAT-RUS-Advanced project aims at enhancing the bilateral S&T partnership between the Russian Federation and the EU Member States, Candidate Countries and other Associated Countries.

Background

The overall strategic objective of the project BILAT-RUS-Advanced is to facilitate the science-, technology- and innovation cooperation between Russia and the EU. European competitiveness shall be supported through strategic partnerships with Russia on a bilaterallevel and on the basis of mutual interest and benefit.

Objectives

- to support the coordination of framework and instruments towards a sustainable STI dialogue between the EU Member States, the EU Commission and the Russian Federation.
- to endorse innovation and research cooperation by promoting and supporting cooperation opportunities.
- to pave the way for sustainable cooperation and for a sustainable support system for FP7 and Horizon 2020.
- to foster innovation and pave the way for sustainable EU-Russian cooperation towards the utilization of R&D results.

Activities

- Support of the political dialogue in close contact with main stakeholders in Russia and the EU;
- Promoting the Framework Programme (FP7 and the follow-up Horizon 2020 programme) to the best Russian scientists and organisations and increasing joint project activities;
- Assuring coherence and consistency across the priority fields of cooperation, with special regard to innovation;
- Optimisation of the framework for STI cooperation and horizontal issues;
- Planning, organisation and implementation of the EU-Russian Year of Science 2014.

Participants

	Country, Name	Short name
	Germany	
1	International Bureau of the Federal Ministry of Education and Research at the Project Management Agency c/o German Aerospace Center (Coordinator)	DLR
2	Zenit Centre for Innovation and Technology in NRW (Zentrum für Innovation und Technik in NRW)	Zenit
	Russia	
3	State University Higher School of Economics	HSE
4	State Technological University 'Moscow Institute of Steel and Alloys'	MISIS
5	Centre for Study of International S&T and Educational Programmes	ICISTE
6	Institution of the Russian Academy of Sciences, A.N. Bach Institute of Biochemistry of RAS	INBI RAS
7	Foundation for Assistance to Small Innovative Enterprises	FASIE
8	National Nuclear Research University	MEPhI
9	Russian Technology Transfer Network	RTTN
10	Tomsk Polytechnic University	TPU
11	Voronezh State University	VSU
	Austria	
12	Austrian Research Promotion Agency	FFG
13	Centre for Social Innovation	ZSI
	France	
14	Inno TSD	Inno
15	European Science Foundation	ESF
	Greece	
16	Help-Forward (FORTH)	

How to read this Guide?

The Part 1 of the "How to Effectively Network/Communicate in International R&D projects" guide is designed so that the target audience – with lack of networking skills – could significantly improve their networking skills following the practical recommendations.

Chapter 1.1 "What is networking" provides highlights on the meaning of networking culture. It is the first step for those who are interested in improving their networking skills. It also includes tips on how to take advantages of the networking for researchers on the EU-wide level.

Chapter 1.2 "Networking/communication gaps" gives an overview on the most important gaps in terms of communication and networking, such as lack of trust between partners, stereotypes, wrong expectations, fears for punishment for honest communication or language barriers.

Chapter 1.3 is the most detailed and thus the longest part of the Part 1. It gives examples of good practices and provides tips on how to improve the networking skills. This includes understanding the difference in culture, efficiently promoting competencies of organizations and people, participating proactively in the events, making good presentations, communicating efficiently, using web collaboration tools and services, planning an event or a brainstorming meeting, undertaking efficient interviews etc.

The Part 2 of Guide – Develop Successful Networking in International R&D projects – based on the BILAT-RUS-Advanced project findings.

There is evidence that the Framework Programmes have a major influence on networking, both in strengthening existing networks and creating new ones. Consortia shaped under the FP are clear examples of international R&D cooperation, since they involve partners from different nationalities which invest their resources in R&D activities, in order to obtain appropriable results. The integration between collaborating R&D organisations has increased over time. The networks have shown themselves to be highly durable with cooperation, both between individual researchers and between research institutions, continuing after the initial joint projects. All this indicates a move towards a more integrated European Research Area.

In order to identify the "evolution of the EU – Russian STI cooperation: FP7 and other programmes and their impact on innovation and scientific excellence", an online survey and following after the telephone interviews have been conducted.

The Chapter 2.1 – Impact of the international R&D cooperation – analyses the results of the survey mostly under the networking point of view and represents the recommendations for the further improvement of the networking in International R&D projects.

The objective of the "Integration of Russian innovation actors into European Networks" BILAT-RUS-Advanced project' task was to provide relevant support for the integration of Russian innovation actors (like public and private funding agencies, technology transfer centres, technology platforms, innovation networks) in European networks.

Chapter 2.2 – Integration of Russian innovation actors into European Networks – briefly analyses their potential role in European innovation structures.

Within the BILAT-RUS-Advanced project the following initiatives/networks were identified as possible cooperation platforms to support Russian innovation actors' integration in European networks (due to the fact that they have similar/comparable

focuses, structures and activities both in Europe and in Russia which might facilitate cooperation) and the relevant workshops organized:

- Facilitating Cooperation between Russian and European **Technology Platforms** (20 May 2014, Moscow);

- Bridging Russian **Innovation Clusters** to European Cluster Networks (1 October 2014, Bonn);

- State-of-The-Art **Competence Centers** Programmes in Europe: Opportunities for EU-Russia Science and Technology Collaboration (28 May 2015, Moscow).

Based on the results of the workshops Chapter 2.2 contains the recommendations on improving the networking potential.

Intermediary institutions play important role in R&D cooperation. Generally they execute the following functions:

- demand articulation: articulating R&D needs and corresponding demands in terms of technology, knowledge, funding, and policy;

- network formation: facilitation of linkages between relevant actors (scanning, scoping, filtering, and matchmaking of possible cooperation partners);

- innovation process management: enhancing alignment and learning of the multi-actor network, which involves facilitating learning and cooperation in the innovation process.

When it comes to the topic of internationalization of EU R&D actors the key intermediaries are National Contact Points (NCPs) for European Research Programs, Enterprise Europe Network (EEN), Technology Transfer Offices and Networks to name a few.

The Chapter 2.3 **"The role of intermediary institutions in Internationalization"** outlines mostly the role of NCPs and EEN centers in international networking with concrete success stories.

The first key to effective communication and networking with the different target audiences in international R&D projects is an integrated dissemination strategy.

The Chapter 2.4 **"Communication & dissemination strategies in international R&D projects"** describes the relevant strategies development and implementation based on BILAT-RUS-Advanced experience.

Improve Your
Networking Skills
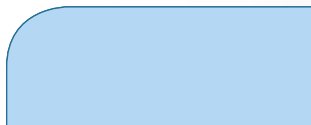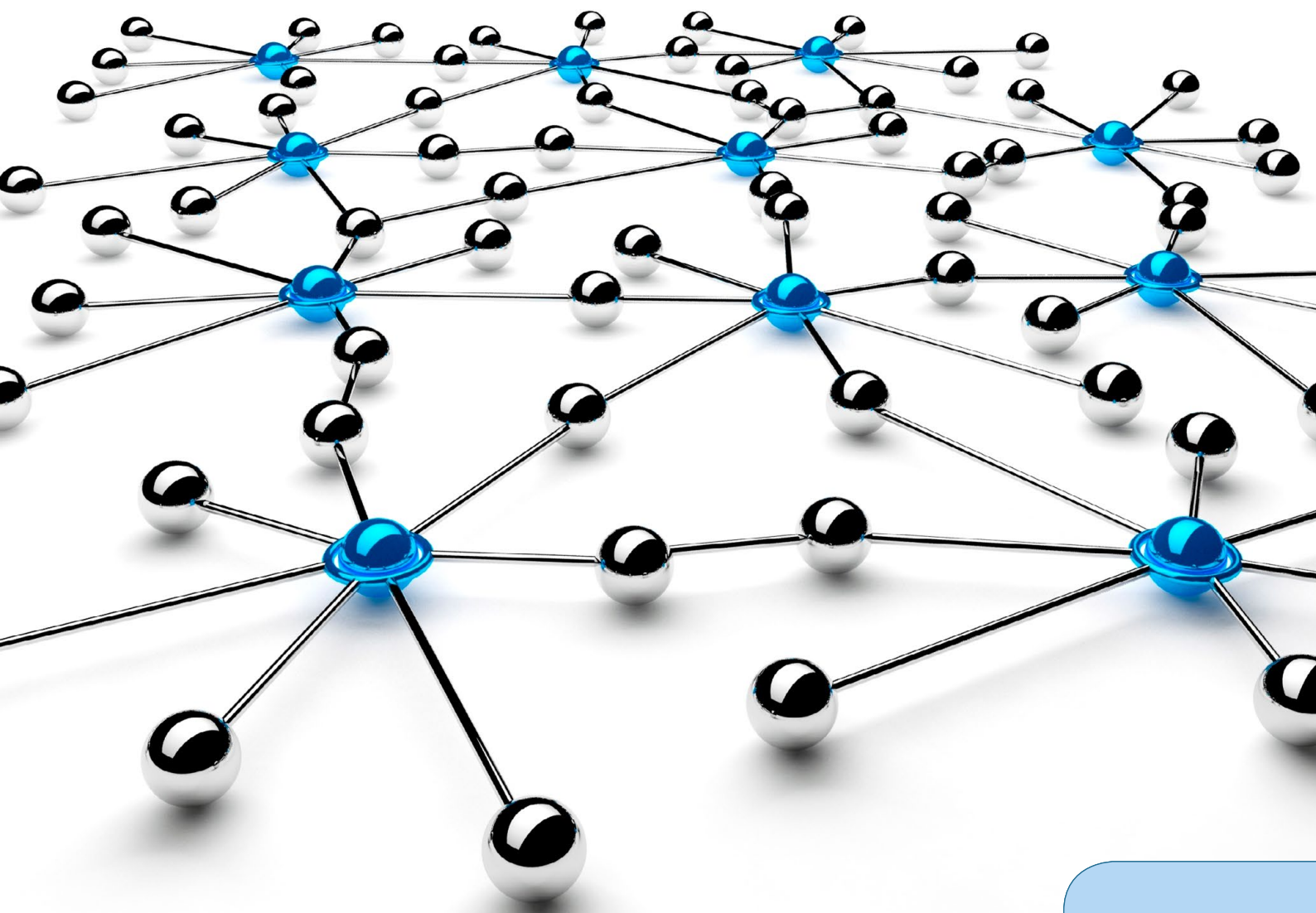
1.1 What is networking

In broad sense Networking is relationship building among people with similar interests and goals. It involves actively getting to know people – developing an ever-increasing list of connections. Networking is about sharing information, ideas, resources, opportunities.

Depending on goals/interests and social circles there are big variety of different types of networking:

- Personal networking for career advancement

- Business networking is considered as a marketing method by which business opportunities are created through networks of like-minded business people

- Research/knowledge networking, etc

It has become apparent that a vast amount of knowledge exists within the structure of the network itself, and by creating the proper conditions for information to be shared and built upon, we can find new solutions.

The reason for creating **a networking culture** is obvious once you look at the current and future direction of research and innovation. Technology and the challenges that must be solved have become so complex that many, perhaps even most, companies can no longer rely solely on their own internal innovative geniuses, no matter how brilliant those people may be.

What is culture?
Most of the numerous "culture" definitions have a common core to what culture is made up of:
- **Material objects:** words or objects that carry a particular meaninglike clothing or furniture, etc.
- **Ideas, values, attitudes, and beliefs:** the essence of a culture
- **Expected patterns of behavior:** family social culture,law, etc.
- **A collective phenomenon:** shared by at least two or more people who live in the same social environment

Innovation is increasingly about having groups of people come together to leverage their diverse talents and expertise to solve multi-faceted challenges that cross multiple disciplines. To make this happen within your organization, and beyond as you move toward open innovation, requires a networking culture that is designed, supported, and modeled by the organization's leaders.

Even organizations that are not ready to fully embrace **open innovation** are finding that employees' mindsets about networking must be stretched as more companies deploy internal R&D functions outside the corporate headquarters and around the world.

Another key motivation for setting up networking initiatives is based on the simple fact that the knowledge of any organisation is inside the heads of the employees. Discovering, managing and distributing this knowledge has always been a challenge, and now, more than ever, the ability to leverage an organization's collective knowledge and experience through virtual and face-to-face networks and communities is critical to research.

Furthermore, establishing the ability to bring knowledge and potential new innovation insights in from external sources demands a strong networking culture supported and modeled from the top.

With the rise of social tools, we've been publicly reclaiming ourselves – publishing blogs, joining social networks, and connecting and sharing information with each other on a global scale. As a result, a shift in values is underway, where privacy, gatekeeping, and the preference for information are being replaced with new expectations of publicity, openness and transparency.

At the organizational level, knowledge is often separated by department. These barriers no longer make sense. In order to take advantage of hidden insights and innovative ideas, there needs to be a way to understand who's who and how to get the information flowing through the proper channels. By creating transparent and open channels, a social learning environment is created, where managers become leaders and facilitators and everyone else become participants.

Connecting with colleagues around the globe via technologies such as web conferencing, social networks, online forums, blogs and wikis is transforming the way we work. Not just technical challenges, but human ones. Collaboration can be difficult enough when we are working face-to-face with others, but putting us thousands of miles apart, in multiple time zones, and in diverse cultural groups needs well developed networking skills.

In his bestseller "Where In the World Is My Team?" Terry Brake introduced six performance zones (six Cs) for global team success: Cooperation, Convergence, Coordination, Capability, Communication, and Cultural Intelligence.

The Six Cs of Global Collaboration

1. **Cooperation: the** ability to develop and maintain trusting relationships across geographies, time zones, and cultures.

2. **Convergence: the** ability to maintain a clear purpose, direction, and shared set of priorities.

3. **Coordination: the** ability to align work through clearly defined roles and responsibilities, shared tools, processes, and methods.

4. **Capability: the** ability to leverage the knowledge, skills, and experiences of all members, and increase the capabilities of the team as a whole.

5. **Communication: the** ability to generate shared verbal and written understandings across distances via technology.

6. **Cultural Intelligence: the** ability to develop and maintain a global virtual workplace inclusive of value and style differences.
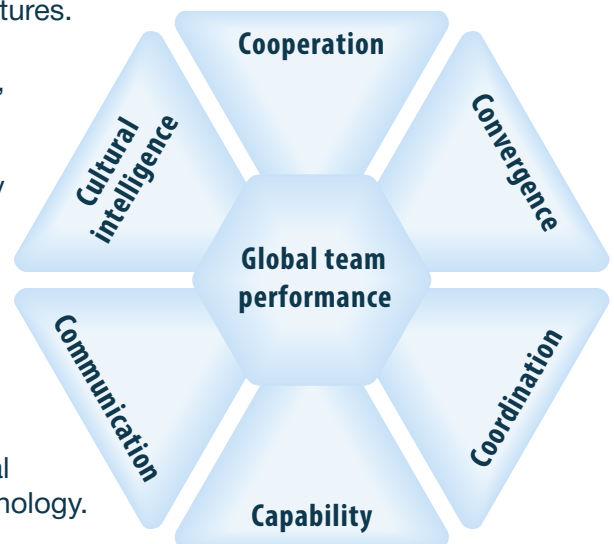
Research Networking culture in the framework of EU Framework Programs (FP7, Horizon 2020) is considered as one of the most important aspects of being part of the global research map and of joining a trans-national and thus a multi-cultural project team/consortia. It is now more than ever a 'necessary' step towards successful participation in European research projects.

Organisations with a higher networking level are usually invited more often to join wining proposals and can find more easily competent partners for their own projects, compared to organisations with lower networking culture. To take advantages of the networking for researchers on EU-level one can follow the tips (partly provided in [2]):

1. Using Contacts from Existing Projects

This is among the best methods open to those already involved in European funded research. Once you are in, you will have the chance to demonstrate your capabilities and to be a partner in future initiatives. For example events such as focus groups or coordination workshops are organised for participants in projects by technical areas to discuss mutual issues and this is an ideal forum to forge new alliances and generate ideas for a new project.

2. Using Your Own Research / Business Contacts

You may use your existing business / research contacts to examine the possibility of setting up a research project and / or join consortia that are related to your contacts.

3. Participating in Relevant Research Events

Conferences, consultation workshops, etc. are key places for networking among participants. Face-to-face meetings are extremely valuable. Info-days (e.g. on Horizon 2020 calls for proposals) may have a considerably lower networking potential, but are nevertheless valuable. In general, such events offer a good opportunity to meet representatives of the EU, key persons from organisations which have been participating in EU funded programmes and to promote your competencies ('sell yourself') to them.

4. Participating in Relevant European Technology Platforms (ETPs)

The European Technology Platforms (ETPs) are initiatives that bring together stakeholders, led by industry, to define medium to long-term research and technological development objectives and lay down markers for achieving them. Each ETP is covering a specific research – technology area. ETPs gather major players operating in the targeted area and can be found on the internet.

ETPs have a strategy, mobilisation and dissemination function. Their main activities encompass:

- developing industry-focused strategic research and innovation agendas including technology roadmaps and implementation plans;

- encouraging industry participation in Horizon 2020, the EU's framework programme for research and innovation, and cooperating with networks in Member States;

- fostering networking opportunities with other ETPs and other partners along the value chain to address cross-sectoral challenges and promote the move towards more open models of innovation;

- identifying opportunities for international cooperation;

- acting as one of the channels of external advice for the programming and implementation of Horizon 2020; notably, ETPs have been a key driving force behind the launch of high profile public-private partnerships under the programme.

You can visit the above web-address, identify those ETPs that are of interest for you and visit their websites. This will allow you to identify and contact experienced organisations in the specific areas of your interest, be informed about relevant events and join the Platform (see more Chapter 2.2 of this Guide).

5. Participating in Relevant European Industrial or Trade Associations

In some areas such groupings play key roles in formulating the ideas for the program in cooperation with the Commission.

6. Using CORDIS Partner Service

On this online database   you can record the type of project you wish to join. This is one of the largest databases of partner information. This database includes partner profiles (you can upload your own), partnership requests, project proposals and partners offering collaboration. However this database although large, is horizontal (containing profiles of organisations interested potentially in all programmes and themes of Horizon 2020) and allows search only by key words, programme and country. Therefore it is not so useful when performing searches for specific type of organisations and expertise /experience.

7. National Contact Points

The NCP's   are there to support you when applying for Horizon 2020 funding. There is a NCP for each area (including Marie Curie Actions) and they can offer you advice and guidance, verify your project idea to ensure it fits the call theme, and also help you find partners.

8. **Net4Society** – features partner search   requests in the socio-economic sciences and humanities

9. Nanosciences and nanotechnologies, Materials and new Production technologies Partner search:

The NMP Team partner search facility   has been established by the network on NMP NCPs in order to offer best support to its clients. This web service is strictly focused on the open calls for proposals of the key enabling technologies.

10. Fit for Health

This service   includes partner search activities and advice and support for researchers looking to participate in health-oriented projects.

11. LinkedIn

There are several partner finding groups on LinkedIn   such as **'Find a Horizon 2020 partner'** and **'EU Projects Partner search'**.

12. Previously awarded bids

Project details are published on CORDIS   after the negotiation and the signature of the grant agreement between the European Commission and the beneficiaries. All proposals funded under FP7 are available to view on line and have the PI listed. You could email the PI from a relevant project and outline your idea to see if they are interested in collaborating. This is an extremely effective way to identify experienced partners. In CORDIS there are online searchable databases that contain synopses of all current and previous projects by technical area. They also provide a list of partners / contractors per project. So it is possible for example to find all previous projects in a specific area for a specific organisation. Or it is possible to identify past and current projects by setting key words and identifying the participants (partners / contractors), etc.

13. ICT Idealist Partner Search

Active partner search is provided by ICT Idealist Partner Search   Ideal-ist is an international ICT (Information and Communication Technologies) network, with more than 65 ICT national partners from EU and Non-EU Countries, such as Associated States, Eastern European Partner Countries (EEPC) and Mediterranean Partner Countries (MPC) and emerging countries like China, Brazil, India, and South Africa.

Ideal-ist offers:

- high expertise in proposal writing and project management : A network of over 65 National Contact Points (NCPs) in the ICT theme and organisations appointed by them are supporting proposers;

- long-standing experience in EU Framework programmes (Ideal-ist was established 1996);

- a unique quality labeled partner search tool to connect newcomers and experienced researchers;

- an international Quality team to support proposer e.g. to better focus proposals;

- Ideal-ist information services: Newsletter, press releases, Work Programm information;

- Brokerage events to pre-schedule meetings at big events.

You may contact the respective NCP and ask them to inform you about relevant partner searches. When a partner search is published, you will receive it automatically, and can view searches online. You can check if the profile of your organisation is close to the one requested. If this is the case, contact the organisation that made the partner search (we suggest both by e-mail and phone if available), send your organisation profile, describe your organisation's competencies in respect to those requested in the partner search and ask them to participate. The quality of the partner searches results is (on average) higher than CORDIS but you have to act fast as consortia are formed very quickly.

In context of the international R&D projects we define the networking culture of the different groups of the projects participants (including researchers, stakeholders, project partners in EECA countries etc) as the ability to

• share their personal and institutional knowledge,

• learn, apply and to share new knowledge gained through interactions with others.

This ability becomes apparent through the set of specific networking skills. People are given time and means to network. Frequent opportunities are provided to help individuals polish their personal networking skills.

1.2 Networking/communication gaps

The lack of **networking skills** could be considered as a strong barrier for effective networking. Not everyone is a natural networker. But almost everyone can become good at it with proper training in such networking skills as proactive participation in event, brainstorming, writing effective emails, etc.

When we look at collaborative research project with multicultural and geographically-dispersed teams, involving EECA researchers, one needs to take into account also other barriers connected with legacy culture of the former closed centralised "soviet system". For instance representatives of foreign companies describe breakdowns in cooperation with Russian researchers in terms of communication problems and perceive those problems as a result of interpersonal misunderstandings and the soviet mentality of scientists.Just to illustrate this typical problem of preconceptions one Russian scientist made the following comment [3] on the situation: *"Russian scientists have a lot of negative experience of dealing with foreign (commercial) partners. The main problems are that foreigners do not treat us seriously. They come to exploit our intellectual resources. Therefore, there is nothing strange that Russian people do everything to make this process more difficult, apart from the 'normal' difficulties related to Russian legislation and the hierarchical system within the institutes of the Russian Academy of Sciences."*

As a result of the investigation [3] based on the interviews with Russian and foreign audiences the most frequent reasons for the communication problems that arise between Russian researches and their foreign partners have been formulated:

• Lack of trust between partners;

• Stereotypes;

• Wrong expectations;

• Fear of punishment for honest (open) communication.

• Language barrier.

These reasons are also relevant to those EECA organizations (outside Russia) where senior researchers were formed in the USSR and have common soviet heritage. Some of these reasons (for instance stereotypes) could be applied also to the EU researches.

Below we briefly analyse each of these reasons / communication problems.

Lack of trust between partners

The concept of trust may be framed as an expectation of partner's reliability with regard to his obligations, predictability of behavior, and fairness in actions and negotiations while faced with the possibility to behave opportunistically. Trust-building and transparency are nourished by a consistent and continual portrayal of truthfulness, sincerity and commitment. **Building trust** is a critical step in the creation and development of multicultural and/or geographically-dispersed teams.

The success of communication strongly depends on the quality of communication between the partners and their "intimacy" level. Communication depends on how much knowledge the partners are willing to make accessible to each other. The fear of the risk

of losing critical information or know-how due to accidental leakage is particularly high for scientific institutions in EECA (due to IPR problems), and, thus, they are bound to be more protective. Transparency reflects the level of partners' openness and accessibility and is negatively correlated with the degree of protectiveness that each of them elevates vis-à-vis the other. The more transparent the partners are – the more mutual learning and trust is possible.

Once trust between the parties has been established, it must be maintained. Regular communication is needed to keep the relationship alive and trust at a constant level; otherwise, trust spontaneously decays over time, and one needs to reestablish it when the next interaction takes place.

Stereotypes

There are still many stereotypes on both the EECA and EU sides. Stereotypes are over-generalizations that help people to make sense of what goes on around them, but they often interfere with objectivity because they rely on selective perceptions and portions of information which correspond with already-existing beliefs. Stereotypes of the partners can be based on their perception of ethnic, professional, cultural differences as well as on the previous negative experience. They make reality concrete – often incorrectly – and rationalize cultural prejudice.

As people from different cultural groups take on the challenge of working together, cultural values sometimes conflict. There are typical cultural differences, which affect the process of international cooperation and should not be ignored. Partners from different countries often misunderstand each other, especially on the initial phase of the project (and even more important during the consortium building for the coming call) and react in ways that can hinder what are otherwise promising partnerships.

Our perception of other cultures is often formed not on facts, but on cultural references, stereotypes, old myths, and other people's opinions subconsciously gathered during our lives. The more we work with other people, the more we understand that we have misconceptions of other cultures and try to correct them.

Similar is the case of defining characteristics according to "disciplines": we expect a different attitude from a computer scientist than from a psychologist, a humanities scientist, an accountant, a business analyst, a statistician. The problem is: how to cope with this?

• With respect to the country of origin e.g. Germans, Greeks, Portuguese?

• With respect to the profession: consultants, academics, software developers?

• With respect to the position in the hierarchy and seniority: undergraduate students, recently promoted and ambitious junior managers, EU projects' veterans, etc.

For instance in the area of Information and Communications Technologies, people involved in the research, come from different countries, cultures, educational systems, working environments and may also come from different domains and a cross-over of different disciplines. This is normal – in all professions related with other people that also involve heavy communication, this excessive demand for communication, team working, meetings, coordination, etc, may become an important lasting factor.

We should always bear in mind that the main asset one can bring to this adventurous journey that are European research projects is **openness** – in all aspects: although, bear in mind, in the communication with others, in the recognition of (own) faults. Other qualities like dignity, integrity, fairness are very difficult and also dangerous to approach with definitions – at the end you might find yourself on the wrong side. However, openness and the capability to build bridges with people is one that is critical and finds itself at the core of the trans-European collaboration.

The evolution of FP6, FP7 and the current state of Horizon 2020, is a story of people that despite the fact that they do not share the same culture, were educated in different contexts and in differentbackgrounds, but through communication, they succeeded in developing tangible results together.

There is no single 'best' way to do this – but getting to know one another well, and thus better understanding cultural and linguistic differences as well as different expectations is essential.

Wrong Expectations

Expectations are the driving force in the projects. One of the greatest areas that lead to communication breakdowns and projects' failure is the difference between what participants feel is reasonable to expect from anyone, and what they actually do receive, or think that they have received. If mutually satisfying goals are not established and objectives are not clearly defined, then much of the "gray area" as to what is reasonable for each side is left.

Different parties of cooperation have different explicit or implicit expectations directed towards a project. Expectation mismatch often leads to the situation when partners fail to understand the thinking that is behind the actions of the other side. Essentially, this boils down quite simply to ineffective communication. Therefore, to be successful the project partners should identify, prioritize and manage different expectations of all parties involved. It could be done in different ways.

Important role for the expectations management belongs to the project kick-off meeting[3]. A kick-off meeting has four basic functions:

a) Publicly state the beginning of the project;

b) Outline the project goals as well as the individual roles and responsibilities of team members;

c) **Clarify the expectations of all parties**;

d) Create a commitment by all those who influence the project's outcome.

In terms of length, the kick-off meeting may last from a few hours to 1–3 days,

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[3]   This event is an important element of EU (Western) project/networking culture, which not common in EECA practice.

depending on the scope and characteristics of each project. At least the 'core team' should attend the kick off, but quite often it also involves most of the team. The ideal number of attendees, however, should not exceed 15 people. Generally speaking, this is a gathering of the project team, executive management and stakeholders who need to officially recognize the commencement of the project. Project managers know that the kick-off meeting can be understood as a perfect ice-breaker situation where all attendees also gain a common understanding of the project's objectives and priorities.

Although the format of a kick-off meeting varies depending on the size and complexity of each project, it usually consists of several sessions each one focused on a different key topic. For example, some common sessions are the following:

- **Project Framework** This session includes determining what the project statement is (its scope, definition and objectives), and who are the stakeholders.The general schedule and activities are also discussed. The project manager usually goes over the project charter, including the project background, description, milestones and timeline, etc, with the objective of aligning the project with the reality.

- **Team Charter** This session obeys to the purpose of clarifying who the project manager and key project members are, and who does what on the team. Generally, the project manager introduces the organization chart along with the roles and responsibilities of each project team member. It is crucial to clearly explain what is expected of all the concerned parties.

- **Risk Analysis** This session involves a thorough assessment of all the risks that the project team members might face in order to accomplish the project goals. It involves identifying those factors that could jeopardize the success of the project and develop ways to overcome them, as well as a corrective or preventive action plan if needed.

- **Team building** It is always a good idea that the kick-off meeting ends with some kind of team-building activity or exercise aimed at teaching some rules for efficient teamwork. This task is best handled by an experienced facilitator and is usually a combination of physical and mental agility with an emphasis on teamwork.

Given that the start of a project is an important event, notification of the kick-off meeting's occurrence should be formal and in writing. It is a common practice for one or more designated attendees to take notes during the meeting and then write a short document or 'minutes of meeting' with a summary of all topics and issues discussed during the meeting as well as the conclusions reached. This document should be distributed to all meeting participants.

Kick-off meetings play an especially important role as a starting point in networking with the stakeholders. They had a "complicity effect" that facilitated the involvement of the stakeholders from the beginning of the project.

Another example of how to avoid wrong expectations is to involve stakeholders in all phases of the project. This is extremely important for two reasons:

- Firstly, experience shows that their involvement in the project significantly increases the chances of success by building in a self-correcting feedback loop;

- Secondly, involving them in the project builds confidence in project results and will greatly ease its acceptance by the projects' target audience.

Direct contacts with identified stakeholders also help significantly for:

- creation of synergy between the project and national initiatives undertaken by these countries

- undertaking of joint pilot project actions (planned under the project, such as networking and brokerage events...) that will help to achieve project objectives.

Fear of Punishment for Honest (open) Communication

Fear of making mistakes, of delivering bad news and of expressing opinions openly is one of the main communication barriers, because efficient communication means that both good and bad news should be transmitted in the right format and at the right time.

According to recent studies, making mistakes and failure are number 2 and 3 from the list of people's most common fears in Western society. At the same time, businesspeople have reported that making mistakes is a fact of everyday life in business, and that they find mistakes to be one of the driving forces of progress, whilemostscientists admitted that they would prefer to try to correct their mistake before communicating about it to a business partner.

However, it is important to know that in the business world bad news is as important as good news. Bad news has very high value for the business community as information necessary for risk-management. That is why it is important for the project manager to apply risk management. The negative effect of bad news can be reduced by explaining the reasons and communicating sensitively. Half the battle in communicating successfully is recognizing that the entire process is sensitive and susceptible to breakdowns. One can also notice a similar effect in the research community.

Language Barrier

Language differences are an obvious impediment to effective communication and to building trust. Both EU and EECA partners know that the language barrier is one of the main reasons for misunderstandings. Vocabulary, syntax, idioms, slang and dialects all cause difficulty, but the person struggling with a different language is at least aware when he/she is in difficulty. A more pronounced problem occurs when he/she thinks he/she understands. The person clings to the meaning of a word or phrase in the new language, regardless of connotation or context. The infinite variations are so impossible to cope with that they are brushed aside.

As a result, the presence of high anxiety or stress is common in cross-cultural experiences because of the uncertainties involved.The native of one country may be uncomfortable when speaking with a person from another (foreign) country because he or she cannot maintain the normal flow of conversation and non-verbal interaction to sustain communication.The other person may experience a similar discomfort, with the added tension of having to cope with the alien pace, climate and culture he or sheis enclosed within. Additionally, language barriers increase the cost of sharing information in situations when professional translation is needed.

To facilitate communication between the EU and Russia in the context of the Seventh Framework ProgrammeISTOK-RU projectdeveloped a harmonized bilingual taxonomy of ICT.

Unfortunately, there is no accepted ICT taxonomy in Europe. There are taxonomies used by national governments, there are several ICT classifications based on world-wide classification codes such as Universal Decimal Codes and ACM classification, and there are classifications and lists of terms used in EU Information Society Initiatives. The task of finding the basis for the taxonomy is not an obvious one for the European Union. This is partly due to the variety of approachesof ICT decomposition used in Europe.

The problem on the Russian side turned out to be even more compelling. Unlike Europe, Russia does not have ICT classification / taxonomy at governmentallevel that could be used as a reference point in taxonomy development. Still, there are several approaches to ICT classification supported by different organizations, most notably ministries (Ministry of Education and Science,Ministry of Communications) and the Russian Foundation for Fundamental Research.

The goal of the ISTOK-RU project was to develop a limited taxonomy that is well-suited for FP7 communication and notan all-purpose taxonomy of ICT. This assumptionled to the following conclusion: the taxonomy should be close to the terms and topics that appear in the EC's specification of ICT in FP7 domain. Guided by this reasoning, the ISTOK-RU team selected the most detailed specification of ICT available – the ICT Work Programme (ICT WP) of the Seventh Framework Programme. Later on this taxonomy was used by ISTOK-SOYUZ project and EECA ICT cluster projects as a base for the competence platform allowing ICT researchers to position their competences.Nowadays this competence platform is the base of EECA-2-HORIZON project which in turn"builds upon the invaluable legacy in EU-EECA cooperation in ICT that was created by the PICTURE project (FP7-ICT CSA, on-going) and its preceding EECA-ICT cluster that was formed by joining forces of FP7-ICT CSAs, namely: ISTOK-SOYUZ, SCUBE-ICT and EXTEND (completed in 2011)".

1.3 Networking/communication skills in international R&D projects and how to improve them: tips and good practice

Based on the analysis of existing gaps for effective communication/networking between different target groups, the next list of the most important skills have been elaborated upon for the purposeof a more detailed guide/tips development on "how to be more effective in networking" in international R&D projects, such as FP7 and Horizon 2020 projects. They include two sub-groups of skills:

- Basic networking skills, necessary for all players in the networking and communication process

- More advanced networking and organisational skills, necessary for those players who are involved in support of the networking and communication process – such as consulting companies oriented on R&D and innovation, National contact points, Innovation intermediaries, Open innovation accelerators, innovation networks participants, etc.

Basic networking/communication skills include:

- Understanding the difference in culture

- Promoting competencies of the researchers, teams, and organisations

- Participating proactively in the events

- Making good presentations

- Writing effective emails, providing feedback

- Using the web collaboration tools/services efficiently

- Using social media.

More advanced networking/communication skills include:

- Planning an event

- Running/facilitating effective meetings.

- Making effective interviews, using questioning techniques

- Organising efficient brainstorming meetings

- Following up the meetings and decisions (incl. writing meeting notes)

- Writing the reports

- Negotiating with mass-media (press-releases, press-conferences, interviews, success stories, etc)

- Organising efficient brokerage events

The importance/priorities of these skills are different for the concrete stakeholders'. This fact should be taken into account in the process of assessment of their capability to network and further training to overcome the barriers. These networking skills are some of the important skills needed to succeed in the project and in the research cooperation nowadays – of course, in addition to being excellent in research itself.

We talk to people face to face, and we listen when people talk to us. We write emails and reports, and we read the documents that are sent to us. Communication, therefore, is a process that involves at least two people – a sender and a receiver. For it to be successful, the receiver must at least understand the message in the way that the sender intended.

This sounds quite simple. But have you ever been in a situation where this hasn't happened? Misunderstanding and confusion often occur, and they can cause enormous problems.

If you want to be a good networker, you need to be effective at all points in the communication process and you must be comfortable with the different channels/tools of communication. When you communicate well, you can be very successful. On the other hand, poor communication leads to the failure of your participation in the project. So are you communicating effectively?

The next Chapter will allow you to understand this. Use it for your self-assessment, regularly ask yourselfrelevant questions, such as:

- When I write emails, or other documents, do I give all of the background information and detail I can to make sure that my message is understood?

- Do I consider cultural barriers when planning my communications?

- Do I respect the deadlines for feedback?

- Do I hesitate to ask for clarification?

- When I attend the event, do I use it at maximum level of efficiency?

- Do I clearly present the competencies of my organizations or team, so the other potential partners clearly understand the added value of our future contribution to the project?

- Is my presentation clear enough to be understood and used after my speech?
…

By reading the Chapter below, you will see if you are an excellent networker, or a capable networker who needs to improve some minor elements, or if you are a beginner who needs to keep working on your networking/communication skills.

1.3.1 Understanding the difference in culture

Culture is more often a source of conflict than of synergy. Cultural differences are a nuisance at best and often a disaster."

Prof. Geert Hofstede, Maastricht University

Traditional projects, as national projects, may be affected by personality conflicts. Cultural differences among project team members may create additional misunderstandings throughout the project life cycle. The impact of cultural factors such as language barriers, time differences, and socio-economic, political, and religious diversity may result in a normative pattern prescribing a range of permissible actions so as to encourage self-interest.

As science and business increasingly cooperates and competes at international levels, project management is also acquiring a multinational focus.Growing numbers of R&D projects are now being developed and implemented across borders-involving public and private-sector partners from various national, cultural, technical and professional backgrounds.While such multinational projects are able to combine the best in expertise, problem-solving and implementation, they also bring together many diverging attitudes to working, interacting with superiors or subordinates, time-keeping and communicating-which can cause misunderstandings and clashes between project partners and stakeholders. Hence it is critical that organizations involved in international projects take into consideration "cultural risks" which, if not consciously recognized, can lead to ineffectiveness.

Five dimensions of culture

One of the leading and broadly accepted studies of cross-cultural management has been conducted by Geert Hofstede [4]. His approach proposes a set of cultural dimensions along which dominant value systems can be ordered. Hofstede collected data, studying the **values of people in different cultures**, from over 50 countries around the world[4]. The results were categorized under five dimensions of culture which are summarized below. These value systems affect human thinking, feeling, and acting, and the behavior of organizations and institutions in predictable ways.

What is culture?

Most of the numerous "culture" definitions have a common core to what culture is made up of:

- **Material objects:** words or objects that carry a particular meaninglike clothing or furniture, etc.
- **Ideas, values, attitudes, and beliefs:** the essence of a culture
- **Expected patterns of behavior:** family social culture,law, etc.
- **A collective phenomenon:** shared by atleast two or more people wholive in the same social environment

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[4]   The survey sample all worked in local subsidiaries of a multinational corporation, IBM. Since the only difference within the sample was nationality, this made its differences stand out clearly.

The set of dimensions reflect basic problems that any society has to cope with but for which solutions differ. The dimensions can be grouped into several categories:

- **Relations between people.** Two main cultural differences have been identified. Hofstede distinguishes between *individualism and collectivism*.

- **Motivational orientation.** Societies choose ways to cope with the inherent uncertainty of living. In this category Hofstede identifies three dimensions: *masculinity versus femininity, amount of uncertainty avoidance, and power distance*.

- **Attitudes toward time.** Hofstede distinguishes between *a long-term versus a short-term orientation*.

In what follows we provide a brief description of these dimensions and consider some cultural problems that might arise when managing an international project. So the five dimensions are:

Power Distance Index (PDI) that is the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally. A high PD score indicates that society accepts an unequal distribution of power and people understand "their place" in the system. Low PD means that power is shared and well dispersed. It also means that society members view themselves as equals. Power and inequality, of course, are extremely fundamental facts of any society and anybody with some international experience will be aware that all societies are unequal, but some are more unequal than others'. Just for example to compare PDI for different countries: Russia – 93, Greece – 60, UK – 35.

Individualism (IDV) on the one side versus its opposite, collectivism, that is the degree to which individuals are integrated into groups. On the individualist side we find societies in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side, we find societies in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts and grandparents) which continue protecting them in exchange for unquestioning loyalty. The word 'collectivism' in this sense has no political meaning: it refers to the group, not to the state. Again, the issue addressed by this dimension is an extremely fundamental one, regarding all societies in the world.

National differences in Individualism are calculated in an Individualism Index (IDV). The highest IDV scores were found in the United States, Australia, and Great Britain. The lowest IDV scores were found in Guatemala, Ecuador, and Panama. Cultural patterns at work reflect cultural patterns in the wider society. Project managers share the cultures of their society and of their organization with their project teams.

For instance, the ability to communicate "bad news" and to manage performance are considered key skills for a successful project manager in individualist countries. However, in managing international projects involving partners from collectivist societies, one has to bear in mind that discussing a person's performance or abilities openly with him or her is likely to clash head-on with the society's harmony norm and may be felt by the subordinate as an unacceptable loss of face. Such societies have more subtle, indirect ways of communicating feedback, such as through the withdrawal of a normal favor or verbally via a mutually trusted intermediary.

Masculinity (MAS) versus its opposite, femininity, refers to the distribution of roles between the genders which is another fundamental issue for any society to which a range of solutions are found. Masculinity stands for a society in which gender roles are clearly distinct. Men are supposed to be assertive, tough, and focused on material success. Women are supposed to be more modest, tender, and concerned with the quality of life. Femininity stands for a society in which gender roles overlap. However, Hofstede's data revealed that the importance respondents attached to such "feminine" versus "masculine" work varied not only across countries but also across occupations.

The list of countries in order of MAS (high gender roles distinction at work) shows Japan at the top. German-speaking countries (Austria, Switzerland, and Germany) scored high; the Anglo countries (Ireland, Great Britain, the United States, Australia, New Zealand, and Canada) all scored above average. The feminine side (low gender roles distinction at work) includes other Latin countries (France, Spain, etc.). At the extreme "feminine" pole were the Nordic countries including Sweden, Norway. Low MAS countries are characterized by cooperation at work and a good relationship with the boss, belief in group decisions, promotion by merit, lower job stress, and preference for smaller companies. High MAS countries are characterized by challenge and recognition in jobs, belief in individual decisions, higher job stress, and preference for large corporations.

Uncertainty Avoidance Index (UAI) deals with a society's tolerance for uncertainty and ambiguity; it ultimately refers to man's search for Truth. It indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Unstructured situations are new, unknown, surprising, different from usual. Uncertainty avoiding cultures try to minimize the possibility of such situations by strict laws and rules, safety and security measures, and on the philosophical and religious level by a belief in absolute Truth; 'there can only be one Truth and we have it'. People in uncertainty avoiding countries are also more emotional, and motivated by inner nervous energy. The opposite type, uncertainty accepting cultures, are more tolerant of opinions different from what they are used to; they try to have as few rules as possible, and on the philosophical and religious level they allow many currents to flow side by side. People within these cultures are not expected by their environment to express emotions.

Hofstede's research, which used questionnaires provided to the worldwide employees of IBM, did not include some regions, including EECA countries. However, Hofstede hypothesized that Russian managers would be characterized by high power distance, high uncertainty avoidance, medium range individualism, and low masculinity (low gender roles distinction at work). This should be taken into account when discussing a project with people from Russia, for example, which is scored at 95 on the UAI scale (very formal business conduct with lots of rules, need and expect structure, differences are avoided), you should investigate the various options and then present a limited number of choices, be clear and concise about your expectations and parameters, plan and communicate often and early, provide detailed plans and focus on the tactical aspects of a job or project.

Long Term Orientation (LTO) – This refers to how much society values long-standing – as opposed to short term – traditions and values. This is the fifth dimension that Hofstede added in the 1990s after finding that Asian countries with a strong link to Confucian philosophy acted differently from western cultures. In countries with a high LTO score, delivering on social obligations and avoiding "loss of face" are considered very important.

According to Hofstede's analysis, people in the United States and United Kingdom have low LTO scores. This suggests that you can pretty much expect anything in this culture in terms of creative expression and novel ideas. The model implies that people in the US and UK don't value tradition as much as many others, and are therefore likely to be willing to help you execute the most innovative plans as long as they get to participate fully.

In the table below you can find typical characteristics of the countries/people on each cultural dimension axe (High-Low index value), and some recommendations (relevant to these dimensions) on how to deal with them in the framework of international R&D projects.

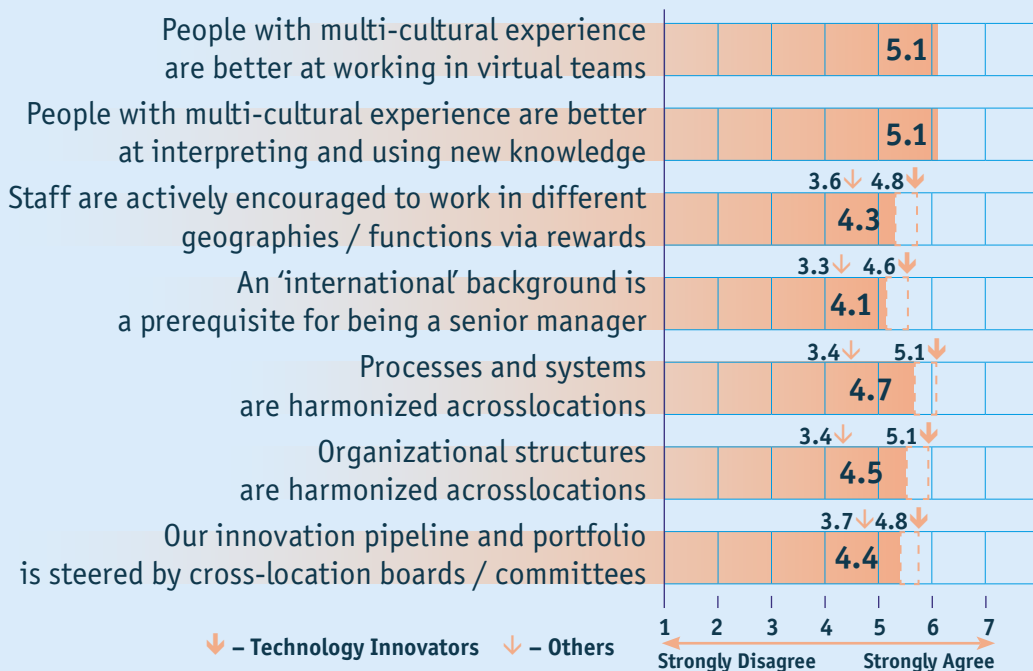|	Characteristics	Recommendations
Power Distance Index (PDI)		
High PDI	• Centralized organizations with strong hierarchies. • Large gaps in authority, and respect.	• Acknowledge a leader's power. • Be aware that you may need to go to the top for answers and "stamps" for decisions.
Low PDI	• Organizations whereleaders and employees are considered almost as equals.	• Use team work. • Involve as many people as possible in decision making.
Individualism (IDV)		
High IDV	• High valuation on people's time and their need for freedom. • Respect for privacy.	• Don't ask for too much personal information. • Encourage debate and expression of own ideas.
Low IDV	• People take more responsibility for each other's well being. • Importance of harmony inside group.	• Respect age and wisdom. • Respect traditions and introduce change slowly. • Try to avoid discussing a person's performance or abilities openly with him or her.
Masculinity (MAS)		
High MAS	• Men are masculine and women are feminine. • There is a well defined distinction between men's work and women's work.	• Be aware that people may expect male and female roles to be distinct. • Avoid discussing emotions or making emotionally-based decisions or arguments.
Low MAS	• A woman can do anything a man can do. • Powerful and successful women are respected.	• Ensure job design and practices are not discriminatory to either gender. • Treat men and women equally.
Uncertainty Avoidance Index (UAI)		
High UAI	• Very formal business conduct withlots of rules. Need and expect structure. • Differences are avoided.	• Be clear and concise about your expectations and parameters. • Plan and communicate often and early, provide detailed plans and focus on the tactical aspects of a job or project.
Low UAI	• Informal business attitude. • More concern withlong term strategy than what is happening on a daily basis. • Accepting of change and risk.	• Do not impose rules or structure. • Minimize your emotional response by being calm and contemplating situations before speaking.
Long Term Orientation (LTO)		
High LTO	• Family is the basis of society. • Parents and men have more authority than young people and women. • High value placed on education and training.	• Show respect for traditions.Do not display extravagance or act frivolously. • Rewardloyalty and commitment. • Avoid doing anything that would cause another to "lose face".
Low LTO	• Promotion of equality. • High creativity, individualism. • Treat others as you wouldlike to be treated.	• Expect tolive by the same standards and rules you create. • Be respectful of others. • Do not hesitate to introduce necessary changes.

International projects that use effective cross-cultural teams can provide a source of experience and innovative thinking to enhance the competitive position of their organisations, and to resolve potential communication barriers. Multi-cultural projects are becoming the norm. More and more projects are being executed successfully using multicultural teams. To achieve project goals and avoid potential risks, project managers should be culturally sensitive and promote creativity and motivation through flexible leadership.

With the endorsement of Professor Geert Hofstede, on-line hofstede centre   opened in the beginning of 2012. The hofstede Centre offers a range of cultural tools based on Hofstede's research. You can read about the cultures of 100 countries based on Hofstede's Model on National Culture by selecting one country and comparing it to one or two other countries. This free country comparison tool visualizes cultural differences in an interactive bar chart. Related to the country comparison tool, the Culture Compass™ allows you to get your personal score on Hofstede's model on national culture. Your score will be compared to a country of your choice, and you will receive a PDF – report with textual feedback on potential cultural pitfalls and how to increase your effectiveness in dealing with those being born and raised in your country of interest.

The free web-app Culture & Strategy provides an interactive introduction into the exciting field of organisational culture. Click yourself through the dimensions and explore the model.

Related to the app Culture & Strategy, the OCS Light scans the culture of your organisation. You get a descriptive report of your organisation's culture including its scores on Hofstede's Model on Organisational Culture. Is your culture open or closed? Do you score employee or work oriented?

Most companies firmly believe that people with multi-cultural experience perform better in virtual teams and have a greater ability to absorb, interpret and utilise new knowledge.

	Technology Innovators	Others	Value
People with multi-cultural experience are better at working in virtual teams			5.1
People with multi-cultural experience are better at interpreting and using new knowledge			5.1
Staff are actively encouraged to work in different geographies / functions via rewards	3.6	4.8	4.3
An 'international' background is a prerequisite for being a senior manager	3.3	4.6	4.1
Processes and systems are harmonized acrosslocations	3.4	5.1	4.7
Organizational structures are harmonized acrosslocations	3.4	5.1	4.5
Our innovation pipeline and portfolio is steered by cross-location boards / committees	3.7	4.8	4.4

↓ – Technology Innovators   ↓ – Others

1 2 3 4 5 6 7
Strongly Disagree   Strongly Agree

From: Innovation: Is Global the Way Forward? A joint study by Booz & Company and INSEAD, Survey Results, 2006[5].

[5] The survey was completed by 186 companies, from 19 countries, and 17 sectors, with a combined R&D spend in 2004 of more than U.S. $76 billion.

1.3.2 Promoting competencies of the researchers, teams, and organisations

There are two main strategies to be successful in FP7, Horizon 2020 and other R&D programs – to focus on preparing your own proposal (and find the right project partners) or to enter research consortia. In both cases you should demonstrate your competencies relevant to the project.

You should **ensure that the consortium consists** of people and organisations that possess the **competencies your project needs** and include representatives of different stakeholders (research, business, users, associations, etc.). *Reliability, financial stability, relevant competence, experience* and *commitment* are very important characteristics of the ideal partner. However, you should be ready to select a partner who possesses only some of the above characteristics.

In any case, you should avoid selecting organisations and people just because you know them or you trust them. You really need partners **with the desired competencies** that can do the job required. Even experienced proposal writers can fall into this trap and jeopardize their investment of time in a proposal by including organisations for 'political' reasons as opposed to their competencies.

In terms of writing a good proposal, it should be transparent so that each partner has a clear role at work package and task level. Make it easier for evaluators by illustrating partners' competencies and mapping them to the research roadmap required to advance the state-of-the-art. This also helps during proposal development as it highlights each of the partner's roles to each other.

What is competence?

It is easiest to define competence as "the ability to perform activities to the standards required in employment using an appropriate mix of knowledge, skill and attitude". All three aspects must be present if someone is to be effective in the workplace/project. Therefore to become competent you need to increase not only your knowledge, but also your understanding of how that knowledge can be applied, your skill in applying it, and the underlying professionalism to apply it safely and appropriately.

There are also definitions of generic skills (such as communication) and behaviors (such as attention to detail or team-working), which sit alongside the more specific technical aspects to form an overall picture of competence for a role. The complete bundle of descriptions makes a competence framework.

Building competence frameworks can be a complex process requiring much analysis and verification. It is best if they are benchmarked against similar roles in other organisations or sectors to ensure completeness and consistency. In many areas, this work has already been done and there are a large number of existing 'recognised' frameworks that you can draw from to provide the basis for your personal competence profile. You may be familiar with some of these such as UK-SPEC, OSCEng and SFIA, but there are many others, usually sector or role specific frameworks that you can use. In the table below you can find an example of standard competencies for physicists:

Example of standard competencies for Chartered[6] Physicists

Chartered Physicist

The competencies are to be attained are as follows. These need to be interpreted within the context of your career and will differ in detail for physicists in research, teaching, engineering, etc. It is recognised that the degree of emphasis on specific competencies will vary between different occupations.

1) General and Specialist Knowledge in Relation to the Practice of Physical Science

You should have the ability to:

a. maintain a sound theoretical approach to the introduction of new and advancing theories

b. apply a lateral approach to problem solving, and to evaluate data critically, drawing logical conclusions

c. exploit emerging theories, so as to enhance current practice and knowledge

d. demonstrate an interest in broader developments within the Physical Sciences, and make a contribution to your profession outside your direct work environment

2) Theoretical and Practical Methods in the Analysis and Solution of Problems

You should have the ability to:

a. identify potential projects and problems

b. conduct appropriate research and appraise possible solutions

c. plan and implement solutions

d. evaluate solutions and make improvements

3) Technical and Managerial Skills

You should have the ability to:

a. plan and prepare a project to effective implementation

b. create and carry out an action plan to make effective use of all resources (such as people, time, finance) and demonstrate foresight in carrying out tasks

c. develop the capabilities of staff / people for whom you are responsible, e.g. students or assistants, to meet the demands of changing technical and managerial requirements

d. plan and implement a quality control and assurance framework

e. exert appropriate influence and effective leadership qualities

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6   The source: , The Professional Development Partnership (PDP) is made up of the professional development teams from *IMechE*, *Institution of Engineering and Technology*, *IOP* and *RAeS* with aim to bring a unified approach for professional development to their members, organisations and the industry as a whole.

5) Professional Conduct

You should have the ability to:

a. behave towards peers with integrity and honesty

b. observe rules and regulations relating to your professional practice

c. be aware of and sensitive to health, safety and environmental issues

d. show sensitivity and, where appropriate, observe confidentiality in verbal and written communications

e. carry out the continuing professional development necessary to ensure competence in your future career

Many frameworks exist that are relevant to engineering and technology professionals, including the more universal capabilities such as management, inter-personal skills and professional behaviors. There are also many sector specific ones, such as the Safety Critical Systems framework, the Management Standards, Skills Framework for the Information Age (SFIA).

Competence frameworks for organisations

The use of competence frameworks to support all functions related to the recruitment, development and management of human resources is now truly embedded in recognised good practice. Having a competence framework tailored to and integrated within your business processes, can co-ordinate and support these activities such that you are constantly aware of the available talent within your organisation, can plan, track and monitor the effectiveness of performance management, succession and career planning, recruitment, project team deployment, and learning and development; and can more effectively meet the demands of regulatory compliance.

Your choice of framework is entirely yours. Many, larger organisations create their own, although usually starting from an existing, benchmarked standard, which is subsequently adapted and tailored. Even this can require a significant investment of resources, but the benefits soon justify the initial outlay, and creating a culture where competence is considered a key measure will encourage all staff to contribute to maintaining and developing the standards.

Where possible we would always recommend using an existing framework to represent your competencies if one is available. In the framework of different programs and even projects there are special tools developed for organisation's /person's presentation. Usually it refers to the partners' search for the project or different competitions. Below you can find some examples:

The EECA ICT Competence Platform   is an online competencies framework offered through the **EU – EECA Gateway for ICT research and innovation** portal. It is conceived to promote ICT competences and to provide information about potential partners – ICT experts and organizations of the EECA region and Europe.

The tool offers the opportunity for ICT researchers to:

• Identify ICT information sources

• Compile available ICT knowledge and expertise

• Promote ICT research competencies

• Identify regional key players to form future collaborations via a search engine mechanism

Through the Competence Platform, the users would be able to promote themselves and to find adequate answers to the following questions:

• Which activities and competencies exist in EECA countries in the ICT R&D&I area?

• Who are the suitable contact persons and/or organizations for a specific technology?

• What pieces of information, documents, and projects are already available on a certain ICT topic? .

The ISTOK-SOYUZ project organized an internal call for a proposal in five targeted project countries of Eastern Europe and Central Asia (Armenia, Belarus, Kazakhstan, Russia and Ukraine). The aim of the call was to select at least 15 teams with strongest ICT R&D collaboration potential from the five targeted countries, and to provide them with personalized hands-on support in order to increase number of ICT partnerships under FP7.

The proposals were examined by the Call Committeeusingthe following key selection criteria/competencies:

• motivation forparticipation in the 5 and/or 6 ICT FP7 Calls and availability of the applicant's competencies concerning the subjects of the. 5 and/or 6 ICT FP7 Calls

• readiness for international cooperation - knowledge of ICT international market as a part of their own business – ICT technologies, knowledge about EU teams – leaders in the same science-technical sphere and working relations with such teams.

• interest to join the existing European consortiums with high science-technical levelICT R&D competences

• need of a relevant partner (-s) and/or coordinator for an international consortium (for those teams which may suggest their own ideas for collective solution of the EC problems in ICT sphere).

• needs of hands-on support which might be provided by the ISTOK-SOYUZ project.

The ISTOK-SOYUZ internal call was announced on 15th of April, 2009 with the deadline on 15 June, 2009. In April-May a wide information campaign was ran in the EECA target countries. The information about the ISTOK-SOYUZ project and the internal call was presented for more then 2 000 ICT specialists in the target countries. As a result, 45 applications were submitted for the call (28 from Russia, 7 from Ukraine, 6 from Belarus and 4 from Kazakhstan). The call evaluation committee examined applicants and selected 16 teams as winners. Hands-on support for these teams was given by ISTOK-SOYUZ experts. They helped winners to submit 8 proposals for the 5th ICT Call.

1.3.3 Participating proactively in the events

Events – scientific conferences, courses, meetings and symposia – are essential for every scientist; from delegates discussing hot issues and opinions, through to networking and collaboration; events provide a platform for learning and advancement.

There are some key factors to success for participation in scientific events.

- **Good preparation**, well in advance of the event, means that you are well informed and well equipped to deal with the demands of the situation. Big events usually have their own websites with extended ICT services which help you not only to learn about an events agenda and activities but even to create your own participation plan. With so many presentations and posters it could be a bit overwhelming deciding which to go to. The event website offers a tool where you can search and browse all the abstracts by key words or presenters. Even more, it will plan an itinerary for you based on your interests! It's like have your own personal assistant! Once you have found the ones you would like to go to, read a little background information about key people in your field. Google them and prepare thoughtful questions.

Prepare in advance promotional materials about you and your organisation, including business cards, leaflets, project ideas etc, short presentations

- **A positive approach** means that during the event you are outgoing and proactive in searching for partnership building opportunities, rather than waiting for the potential partners to find you. Now that you have picked out key scientists and colleagues that will make great contacts seek them out and strike up a conversation! Think of a few questions and go from there. If your conversation goes well, it may be appropriate to ask for the person's email address in case you have future questions.

- **Active listening.** The role of listener is an important role during the event, no matter if it is a personal contact or speaker's presentation. But active listening is the skill you need to develop by yourself. It helps you ensure that you hear the other person, and that the other person knows you are hearing what they are saying. It takes a lot of concentration and determination to be an active listener. There are few tips to follow:

- Pay attention.

Give the speaker your undivided attention and acknowledge the message. Recognize that what is not said also speaks loudly. Look at the speaker directly, put aside distracting thoughts, avoid being distracted by environmental factors, refrain from side conversations whenlistening in a group setting.

- Provide feedback.

To understand what is being said may require you to reflect upon it and ask questions – "What I'm hearing is…" and "Soundslike you are saying…" are great ways to reflect back. Ask questions to clarify certain points: "What do you mean when you say…" "Is this what you mean?" Summarize the speaker's comments periodically.

- Defer judgment.

Interrupting is a waste of time. It frustrates the speaker andlimits full understanding of the message. Allow the speaker to finish and don't interrupt with counter-arguments.

- Respond Appropriately.

Activelistening is a model for respect and understanding. You are gaining information and perspective. You add nothing by attacking the speaker or otherwise putting him or her down. Be open and honest in your response, treat the other person as he or she would want to be treated.

- **Follow up contacts**

There are many face to face contacts at science events. Keeping records of contacts provides the opportunity to follow-up and possibly generate new projects. Don't forget to connect with people you met after the event by email with personalized note: "It was a pleasure to meet you in xxxx. Hope your stay went well…" – and a reference to a specific thing that you talked about and agreed.

In annexes 2,3 you can find:

1) an example of the short guide for the EECA countries representatives' participation in ICT 2010 event prepared and distributed by ISTOK-SOYUZ project before the event.

2) Template for the report on the participation in ICT 2010.

1.3.4 Making good presentations

Effective oral communication is an important – but often overlooked – skill in scientific and academic endeavors. There are very few people having a natural talent for delivering outstanding presentations. On the other hand, practice can carry most of the rest of us into the 'very good' level of presentation skills.

Questions to think about when preparing a presentation
1. The type of talk you will be expected to give:
- will this be a brokerage event, a seminar discussion, or a more formal presentation?
- different talks have different purposes; the intent of a conference presentation is not the same as of a brokerage event. When in doubt, ask for guidance from your host.

2. The composition of the audience :
- will you be speaking to a general audience or specialists?
- how many people are expected to attend?
- is thislikely to be a friendly audience? An interactive audience?

3. The time allotted for the talk :
- thelonger the talk, the more freedom you will have to explore the topic
- a short talk needs to be very clear and to address the topic directly
- is question time included?

4. Expectations for information content:
- is there a specific purpose for having you give a talk? Clarify the expectations beforehand and plan to address them during the presentation.
- will you be presenting novel concepts to this audience, or building upon their prior knowledge? Either way, make sure you cover the basics clearly, and early in the talk, to avoidlosing the audience.

The principles below for use when formulating a talk should be applied whenever you are faced with making a public presentation.

Place yourself in your audience's position.
- Your audience is most interested in the ideas you present that can be applied to their own work. Try to ask yourself what kind of a talk you would expect based on the title of the event, if you were in the audience.

A presentation must *summarize*.
- You may have as little as 10–20 minutes to give your presentation. It probably took you weeks, months or even years to fulfill the project upon which your presentation is based. Because your work took so much of your time, it is entirely understandable if you are ego-involved with your work. There's nothing wrong with being proud of your work; in fact, if you're not proud of your work, something is wrong. However, don't let your pride lead you into thinking that your audience must absorb each and every detail of your work. If you try to present too many details in a short period of time, your audience will quickly tire. Try to stress concepts, methods, approaches, and conclusions, and use details to illustrate these ideas. Try to approach your presentation as a marketing effort: a good summary should convince your audience of the merit of your ideas and motivate them to further explore the details presented. Don't assume the audience will be familiar with basic concepts that form the foundation of your talk. Outline these concepts briefly but clearly early in the talk to avoid confusion.

If your presentation is well-structured, a reporter with no technical knowledge of your subject could report what you say.
- One good way to measure the structure of your presentation is to ask yourself how a technically unknowledgeable reporter would report what you say. What headline would the reporter choose? If he/she wrote a one-paragraph summary, what would he/she say? If he/she wrote several paragraphs, would he/she say the most important things? If your presentation is well-structured, he/she would.

Your audience's interest level will be highest at the beginning and the end of your presentation. Therefore, a good introduction and a good summary of conclusions are of paramount importance.
- There's a time-honored formula for giving a good talk:
  - Tell them what you're going to tell them.
  - Tell them.
  - Tell them what you told them.
- Your audience's attention will be high at the beginning of your talk. No matter how good your presentation is, your audience's attention will diminish somewhat during the body of your talk. However, when you say the magic words "in conclusion," their attention will rise again. Use this knowledge to make your big points at the beginning and end of your talk, and keep things moving in the middle.

Use slides to visually reinforce your spoken words.
- At any given point in time, your audience will have two senses with which to absorb your presentation: sight and sound. Don't overemphasize the importance of the spoken word; give equal importance to visual aids. One good criterion for measuring the quality of your slides is to go through them in sequence and ask whether your major themes are apparent with no spoken words. Similarly, a good criterion for measuring the quality of your spoken words is to try your talk with no slides. If your spoken words and slides are both strong individually, then all that remains is to be sure they are properly coordinated.

Have a good reason for showing each and every slide you use.
- For each slide you use, ask yourself "Why am I showing this slide?" Having done so, ask yourself whether the slide achieves your objective in the best possible manner. For example, if your reason for showing a table of results is to illustrate several key values, you may find that you have to point out these values, in order to distinguish them from values of little or no interest in the table. If so, you would be much better off if you designed a slide that shows only the important values and reinforces the spoken words you would use to describe the significance of the results.

Space your slides evenly over time.
- For a typical presentation, the average time per slide should be 1–3 minutes. If you flip slides too frequently, there's not enough time for ideas to sink in. This can be extremely frustrating for your audience. On the other hand, if you talk about a single slide for more than several minutes, you strain the attention span of the audience. Practice the timing of your presentation. If you find that you spend more than several minutes on a single slide, consider making several more detailed slides.

Practice your presentation, but don't read it or memorize it.
- Practice is essential; however, if you practice too much, or read or memorize your presentation, all spontaneity is lost, and your presentation will be boring. A presentation is not a speech or an oration, but rather, a talk with your audience. Practice your presentation to the point at which you can give it without notes.

Question and answer sessions often follow a final summary and are very productive if managed properly.
- You should encourage questions from the audience if time or format permits, but be prepared to answer them. If you do not know the correct answer to a question, don't try to fake it. You should refer the question to someone who can answer it correctly or make a note to yourself to obtain the answer later. When you do, contact the person or persons who asked it as soon as possible. This makes an excellent door opener for follow up calls.

For some events organizers urge you to use special PowerPoint template.

For instance during the brokerage event Project Idea presenters are given a 5–7 minute (!) timeslot. Below you can find an example:

1.3.5 Writing effective emails, feedback

As email is the prevalent form of communication for many project participants and stakeholders, it gets a lot of attention: how to handle your email, how to empty your inbox, email etiquette, and more. But perhaps not enough time is spent learning about how to communicate with email. And more specifically, how to communicate clearly and concisely, two crucial aspects of communication that are often overlooked.

How many times have you received a rambling and incoherent email? How many times have you hit "Delete" because you have no idea what the person wants and no time to sort through the long message? Do people respond to your emails in the way you want them too? Or do they seem to ignore them, or miss important information? And are you sure that you're making the best possible impression with your emails?

The truth is that people don't have time for long emails, and they don't have time to try to find out exactly what you want. You have to tell them, in as short an email as possible.

Misunderstandings are also a problem, because of the nature of email. People are often ambiguous, and their messages are interpreted differently than they intended, leading to a waste of time and energy.

When you compose an email message, there are some simple rules that you can follow to ensure that your emails make a positive impression, and get you the response you want. Communicate clearly and concisely with the following rules.

1. Respond in time

If you want to appear professional and courteous, make yourself available to your online correspondents. Even if your reply is, "Sorry, I'm too busy to reply you now," at least your correspondent won't be waiting in vain for your reply.

If you want to get help over e-mail, you can help yourself and respond more quickly by formulating specific, focused questions: "Is this a good source?" or "Am I using too much information in this paragraph?" If you send a whole paper with a general request to "tell me what I need to change," the recipient will probably save that for the next time.

For a message that needs an action, you might want to include the deadline to action, such as "Please reply by November 7".

2. Write a meaningful subject line

Email subject line need to do exactly the same thing as a newspaper headline: it grabs your attention, and it tells you what the article is about, so that you can decide if you want to read further. Use a few well-chosen words, so that the recipient knows at a glance what the email is about.

If your message is one of a regular series of emails, such as a weekly project report, include the date in the subject line.

Remember that everyone tries to reduce the amount of "spam" email messages they receive. If you make appropriate use of the subject line, you increase the chances that your email will be read, rather than mistaken for spam and deleted without so much as a glance.

Recipients scan the subject line in order to decide whether to open, forward, file, or trash a message. Remember -- your message is not the only one in your recipient's mailbox. Before you hit "send," take a moment to write a subject line that accurately describes the content.

Subject: [Blank]
- Of course, just as it would be ridiculous to publish a newspaper without headlines, never leave the subject line blank. Emails with blank subject lines are usually spam! If you don't put a subject line on your e-mail, you are sending the message that your name in the "From" line is all your recipient should need in order to make it a top priority. That could come across as arrogant, or at the very least, thoughtless. Take advantage of the opportunity to get your recipient thinking about your message even before opening it.

Subject: "Important! Read Immediately!!"
- What is important to you may not be important to your reader. Rather than brashly announcing that the secret contents of your message are important, write an informative headline that actually communicates at least the core of what you feel is so important: "Urgent: Deadline for submitting the proposal is one day."

Subject: "Quick question."
- If the question is quick, why not just ask it in the subject line? This subject line is hardly useful.

Subject: "Follow-up about Friday"
- Fractionally better – provided that the recipient remembers why a follow-up was necessary.

Subject: "That files you requested."
- If you're confident your recipient will recognize your e-mail address, and really is expecting a file from you, then this would be fine. But keep in mind that many e-mail providers get scads of virus-laden spam with vague titles like this. The more specific you are, the more likely your recipient's spam-blocker will let your message through.

Subject: "10 confirmed for Friday... will we need a larger room?"
- Upon reading this revised, informative subject line, the recipient immediately starts thinking about the size of the room, not about whether it will be worth it to open the e-mail.

3. Focus on a clear message, helping the reader to prioritize

One of the advantages of email compared with traditional letters is that it doesn't cost any more to send several emails than it does to send one. So, if you need to communicate with someone about a number of different things, consider writing a separate email on each subject.

That way, your correspondent can reply to each one individually and in the appropriate time frame. One topic might only require a short reply that he or she can send straight away. Another topic might require more research. By writing separate messages, you should get clearer answers, while helping other people manage their inboxes better.

Often recipients only read partway through a long message, hit "reply" as soon as they have something to contribute, and forget to keep reading. This is part of human nature.

If your e-mail contains multiple messages – perhaps because they relate to the same project – in order to avoid the risk that your reader will reply only to the first item that grabs his or her fancy, you could number your points to ensure they are all read (adding an introductory line that states how many parts there are to the message). If the points are substantial enough, and the topics are of interest to different sets of people, split a longer message up into separate parts so the various stakeholders can delete, respond, file, or forward each item individually.

What do you want your reader to do after reading your message? Answer a simple "yes" or "no" question? Invest time and effort to help you solve a problem? Listen to you and give advice where appropriate? Just file your report in case the information becomes important later?

Will your message require more than one response? Maybe you are submitting a report on a project that's winding down, while at the same time asking for an immediate response to a question about an upcoming project. Consider starting off by saying "I am submitting the report for Project X, and I have a question about Project Y."

4. Avoid attachments

Instead of attaching that huge PDF or Word file, can you just paste the key information into the body of the e-mail message? Can you post the whole thing on your company intranet so that those people who want it can go get it themselves?

To: All Employees
From: John Martin
Subject: A helpful book everyone should read

Hello, everyone. I've attached a PDF that I think you'll all find very useful. This is the third time I sent the file – the version I sent yesterday had a typo on page 207, so I've sent the whole thing again. Since some of you noted that the large file size makes it a bit awkward, I've also attached each chapter as a separate document. Let me know what you think!

Attachments:
Big Honking File.pdf (356MB)
BHF Cover.pdf (25MB)
BHF Chapter 1.pdf (35MB)
BHF Chapter 2.pdf (27MB)
[...]

Okay, how many of us would delete the above message immediately, without looking at *any* of those attachments?

To: Irina Professional
From: Morris Ponsybil
Subject: E-mail tips – a subject for the workshop?

Irina, I came across a guide that has lots of tips on professional communications. Has anyone volunteered to present at the project workshop next month? Let me know if you'd like me to run a little seminar (20 minutes?) on using e-mail effectively.
Below, I'll paste the table of contents from the guide. Let me know if you want me send you the whole thing as a PDF.

E-mail works best when you just copy and paste the most relevant text into the body of the e-mail. Try to reduce the number of steps your recipient will need to take in order to act on your message.

5. Give to the attachments meaningful names

If your recipient actually needs to view the full file in order to edit or archive it, then of course sending an attachment is appropriate.

In this case you should use appropriate file name (-s) which tells you what the file is about

Bad example:	Good example:
Attachments:	Attachments:
Chapter 1.pdf (35MB)	E-mail tips.pdf (3MB)
Chapter 2.pdf (27MB)	Web collaboration tools.pdf (5MB)

6. Proofread

If you are sending a message that will be read by someone higher up on the chain of command, or if you're about to mass-mail dozens of people, take the time to make your message look professional before you hit "send".

While your spell checker won't catch every mistake, at the very least it will catch a few typos. In case you are not sure with your English show a draft to a more experienced colleague in order to see whether the sense is the same as you wanted to express.

Revise for conciseness. As you review, also see if there is a way you can shorten the email, remove words or sentences or even paragraphs. Leave nothing but the essential message you're trying to communicate.

Use Simple English. When the writing is too formal or uses irrelevant technical lingo, it is difficult to understand. Plus, you come off sounding like a legal document or spammer. Neither is good. Write like you talk, using conversational English. Be authentic and realistic.

7. Minimize questions

Ask questions that matter, and limit the number of questions you ask in an email (one or two max). The more questions (especially open-ended ones) asked in one message, the less likely all your questions will be answered.

Also, ask specific questions instead of general open-ended ones. Be reasonable and thoughtful when asking. Don't expect the recipient to solve all our project problems. For example, "How can I become successful with my application?" is too broad. Break them down into specifics and ask the one question that really matters.

You can send additional questions in separate emails. The key is in keeping the line of communication open by not overwhelming the receiver.

8. Identify yourself clearly

Add a good signature to your email. That is, one that includes your name, title, organization, email address, web site, and phone. This is especially true if you're asking people to do something- why making it hard for them to verify your credibility or to pick up the phone and call you?

If you are following up on a face-to-face contact, you might appear too timid if you assume your recipient doesn't remember you; but you can drop casual hints to jog their memory: "I enjoyed talking with you about the project during coffee break."

9. Be careful about Replying To All

If you are not professional in emailing, make sure you know the difference between replying to one person and replying to everyone on the initial message. Suffice to say you will send many emails which you would not want to be seen by everyone. It can be extremely embarrassing to send a personal message for everyone to see – it does happen. Following this tip will save a lot of potential problems.

1.3.6 Using web collaboration tools/services

Working practices are evolving from traditional proximity or geographical collocation paradigm to virtual collocation paradigm where experts (professionals) have to work together whatever the geographical location of everyone involved. Connecting with colleagues around the globe via collaborative software technologies such as web conferencing, social networks, online forums, blogs and wikis is transforming the way we work.

Collaborative software[7] helps facilitate the action-oriented team working together over geographic distances by providing tools that help communication, collaboration and the process of problem solving by providing the team with a common means for **communicating ideas and brainstorming**. Additionally, collaborative software should **support project management** functions, such as task assignments, time-management with deadlines and shared calendars. The artifacts, the tangible evidence of the problem solving process, including the final outcome of the collaborative effort, require documentation, archiving and promotion for potential reuse. This should also include the artifacts of the process itself, such as project plans and schedules noting deadlines and deliverables.

Collaborative software should support the individuals that make up the team and the interactions between them during the group decision making process. Today's teams are composed of members from around the globe with many using their second or third language in communicating with the group. This provides cultural as well as linguistic challenges for any software that supports the collaborative effort. The software should also support team membership, roles and responsibilities. Additionally, collaborative support systems may offer the ability to support such systems as budgets and physical resources.

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7   *http://project-management.com/*

Brainstorming is considered to be a tenant of collaboration, with the rapid exchange of ideas facilitating the group decision making process. Collaborative software provides areas that support multi-user editing with virtual whiteboards and chat or other forms of communication. Better solutions record the process and provide revision history. An emerging category of computer software, a collaboration platform is a unified electronic platform that supports synchronous and asynchronous communication through a variety of devices and channels.

Collaborative software (also referred to as **groupware, workgroup support systems** or simply **group support systems**) is software designed to help people involved in a common task achieve their goals.

Collaborative software concept addresses "how collaborative activities and their coordination can be supported by means of computer systems."

Software systems such as email, calendaring, text chat, wiki, and bookmarking belong to this category. Whereas the more general term social software applies to systems used outside the workplace, for example, online dating services and social networks like Twitter or Facebook, the use of **collaborative software** in the workspace creates a collaborative working environment (CWE). A collaborative working environment supports people in both their individual and cooperative work thus giving birth to a new class of professionals, e-professionals, who can work together irrespective of their geographical location.

Being an e-professional is not a profession of its own, but it exists in combination with a business profession such as consultant, engineer, scientist etc. An e-professional is not working in isolation but actively collaborating with other e-professionals within virtual workspaces.

Collaborative software technologies enable an e-professional being part of groups and communities as well as knowledge networks, and being involved in distributed cooperation processes that have not been possible before. The concept of an e-professional is strongly connected with the FP7 consortium work in the framework of project implementation, so the necessary e-skills are the integral part of networking skills required for effective project implementation.

An e-professional:

- Is linked to a normal organisation by employment, but may also act in a self-employed way. The work is often performed at mobile workplace.

- **Is involved in many different projects within groups, communities, projects, and with external partners in different organisations.** Often these projects are constructed around highly complex and creative tasks that require a high coordination effort. The problems to be solved appear suddenly and require access to information/knowledge not known before. Thus, tasks and processes can not be anticipated or planned beforehand. They are of different lengths and complexity levels, involving different support tools.

- Requires the availability of the workplace in different situations, locations and places and the ad hoc availability of a cooperation environment.

- Requires support for the ad hoc identification of other e-professionals based on similar interest and complementary knowledge. Tasks can be solved only gathering and relying on information from different sources (data and people).

- Requires the dynamic ad hoc creation of collaboration with different people and groups

Nowadays there are numerous ICT products supporting the e-professional work. One can classify them into the next groups :

- Hosted Web Collaboration Environments

- Web Collaboration Software (Groupware)

- Online Classrooms & E-Learning Environments: Hosted

- Online Classrooms & E-Learning Environments: Software

- Scheduling Services

- Unique & Hard-to-Classify Services

Hosted Web Collaboration Environments (SaaS)

These web sites host private workspaces for online collaboration and virtual teams. They offer a variety of business-oriented communication tools and better security than sites designed for public communities. Most are oriented primarily toward asynchronous communication, but some also offer real-time conferencing and instant messaging as well

Few examples of them:

Central Desktop
Easy-to-use group workspace with highly intuitive user interface. Features discussion forums (can be dropped in anywhere), file libraries, calendars, projects and task tracking, etc. Some wiki-like features, as well. Integrated live web conferencing is optional. 30 Day Risk-Free Trial version is available.

Comindwork
Web-based project management service automating task/work flow, ticketing and tracking bugs, wiki features for co-editing, document management, team memory, etc. Flexible dashboard and permissions. Monthly plans based on number of active projects and data storage requirements. Also available for custom installation on your own site. Free for small teams

FacilitatePro – Web Meeting Software
An environment for collaborative group work, including brainstorming, prioritizing, evaluating, surveying, decision making and action planning tools that transform meetings into powerful opportunities to unleash creativity, solve complex problems, and take decisive action. FacilitatePro can be used in meeting rooms to improve group productivity or to support a teleconference, video conference or web conference.

Google Apps for Work
Free service offering web-based creation and editing of word documents, spreadsheets, and web pages ("Google Sites"). You can use it privately, or share access with any group you specify. Also offers email (Gmail) and shared calendars. Note: you must have control of a web domain to create an account.

Genius Project
> This is highly flexible and configurable portfolio and powerful project management software allowing tailored feature sets for a wide array of project teams and project types. It improves project selection, planning, staffing, execution and tracking with easy-to-use and powerful project management capabilities.

Web Collaboration Software

These software packages designed to support collaborative work and intranets can be installed on your own server, behind a firewall. A few examples of them are:

Agora-project
> This is a free collaborative workspace complete and intuitive. Several languages are available: configurable for the whole site and for each user. Many modules are integrated into the workspace: personal and group calendars, file sharing, instant messaging, email, private forums.

activeCollab
> Web-based collaboration and project management software with easy-to-understand workspace. It improves and streamlines internal communication of project team by delegating tasks, sharing unlimited number of files, post messages, email notifications, establish milestones, assign tasks, insert tags, discussing important topics, and much more.

Online Classrooms & E-Learning: Hosted

These hosted services vary widely. They have little in common except their educational orientation and some type of forum facilities.

A few examples of them are:

Skillsoft
> Provider of enterprise e-learning targeted to business and IT professionals. Live or on-demand classrooms, interactive business skill simulations, certification preparation in many areas.

JESS
> Hosted service for online course development and delivery. Multi-leveled administrator tools and instructor tools including assessment, threaded discussion, cross-course content, online study groups. Customizable for individual school programs or multinational corporations.

Online Classrooms & E-Learning: Software

These software products for online learning feature some form of asynchronous forum or message board facilities for group discussion.

Few examples of them:

TopClass
> A flexible learning platform for developing and delivering Web-based training, including discussion forums.

Web Training Toolbox
A collection of tools for developing interactive training, including forum and chat functions.

Moodle
Free, open-source course management system with a wide variety of function modules, available in dozens of languages. This is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environments.

Scheduling Services

Few examples of them are:

Doodle
Free service for arranging group activities. Not limited to scheduling dates – for example, you can poll participants about their preferences for activities, food, or anything else.

B2Match
B2Match is the world's leading brokerage event software. Since 2008, B2Match has been on a mission to make business networking more effective and less time-consuming. During the past years over 100.000 participants have attended over 1000 events in more than 20 countries. B2Match platform enables event organizers to: set up an event website with all the useful information; invite participants to book B2B meetings; monitor and manage their participants activities; easily conduct a brokerage event.

Selecting the collaborative software for the project

Different frameworks could be established based on a projects needs and requirements in order to find the best software. But the best framework is the one in which the characteristics are so well defined that they cover all the aspects of collaboration activities and management of the overall project.

The challenge in determining which software to use is having a good understanding of the requirements and tools needed for project development. There are many dynamics that make project management challenging – coordination, collaboration, sharing of knowledge and effectiveness to facilitate the process. Choosing the right collaborative software is essential to complementing these issues. According to a survey conducted in 2008 to find out what project managers' expectations and uses of project management software are, the features most important to project managers with project management software were:

• Ability to plan sequence activities using CPM/PDM/PERT or Gantt Chart method,

• Produce project master schedules based on project/task breakdown structures, with subordinate details,

• Critical path calculation.

One of the biggest problems in implementing collaborative software of a project is to achieve a high level of adoption from its members. Without clear commitment from project management any groupware implementation risks failure.

1.3.7 Planning an event

There are good events and there are bad events. You leave bad events wondering why you were even present. Effective ones leave you energized and feeling that you've really accomplished something.

So what makes an event effective?

1. They achieve the event's objective.

2. They take up a minimum amount of time.

3. They leave participants feeling that a sensible process has been followed.

If you structure your event's planning, execution, and follow up around these three basic criteria, the result will be an effective event.

Articulating a clear goal for your event helps in so many ways. If you can explain in a written plan why and what you're doing, your chances for success increase significantly. Your events will be more effective, cost and time efficient, and satisfying for those attending.

1. Goals
List a few over-arching goals for this meeting or event. Why is it a worthwhile expenditure of project time and money? What does your project/organisation hope to accomplish? Think about goals such as motivating, educating, planning, communicating, and accomplishing tasks.

2. Target audience
Who do you hope attends this meeting or event? What will make this meeting or event worthwhile from their perspective? Do you know how to reach your target audience?

3. Competing Meetings or Events
Check calendars and determine if there are other meetings, events, or activities that would draw away your intended audience.

4. Location and Facilities Analysis
Where do you propose to hold this meeting? If internally, do you have sufficient space and equipment? If you have a choice of locations, list the pros and cons of each in your plan. Put telephone, address, email and other details for your contacts at these facilities.

5. Activities Timeline
Develop a timeline for all the activities that need to be completed to hold a successful meeting or event. For each activity, determine the deadline by which it needs to be done and identify who will be the main person responsible for the activity. Examples of activities include things such as developing budgets; arranging, catering; setting up audio, visual or other technology; printing materials; booking and preparing speakers, etc.

6. Publicity and Promotion
Describe your plans for getting the word out about the meeting or event; or for notifying prospective attendees. This can be as simple as sending an inter project memo to as complex as designing and running an advertising campaign.

7. Develop a Budget

Use a spreadsheet and develop a budget for your event. It's helpful to sit down with a blank sheet of paper and think through every aspect of your event, then plan your budget. Add a contingency budget (often 10 percent more) for unexpected or unanticipated expenses.

Once you have a carefully crafted plan in place, you can make the best decisions for the meeting. Your meeting or event will have a greater chance of success and of achieving the goals you identified at the outset. On top of all that, you will experience less stress as the meeting planner. You will be able to think proactively about how to make the meeting run well and not be reactively responding to a series of problems or challenges.

So, when planning an event you need to consider a number of primary factors. They are:

Date .... when the event will be held
Venue .... where will the event be held e.g. hotel, conference centre etc.
Budget .... draft budget – including expected expenditure (and income)
Speakers/moderators .... who is going to speak/run the event
Invitees .... who are you targeting to attend the event
Sponsors .... can you obtain sponsors for the event and who are they
Timeline .... plan timeline for the event including responsibilities for each item
Materials .... what information is required to give to attendees
Collation .... collation of all material required for the event
Advertising .... how are you going to advertise the event? And in what forms e.g. email, newspaper, web
Media .... invite media to attend event (if appropriate) or advertising of the event

Planning big events (conferences, info days etc)

Event committee/organizing group. Timeline for event

Depending upon the type of event, look to plan the event at least 6–9 months before the actual date happens to allow for success. If the event you plan to organize is big enough, a good idea is to establish a special event committee or organizing group. At the initial meeting of the event committee/organizing group you will need to set up a number of objectives and form a timeline for the event. It's important to plan the event with plenty of time to allow for all aspects of the event to happen without too many problems. Keep everyone involved in the loop so as all aware of what is happening and what every person is dealing with – to make sure everything is done correctly and within the time frame set. The "dates" on the timeline do not have to be set in concrete, but need to be flexible enough to make sure everything is covered. You should hold a meeting every two weeks with the committee/organizing group, just to check that everything is happening as it should be and everyone understands at what stage of the timeline the event is at.

Events Activity List

The Events Activity List is a good tool to use when organising functions or trying to structure a timeline in accordance to the different but interrelated groups of tasks. This means nothing is forgotten and it is also a double check from the timeline document. This list should include:

Location

Details of location including room name, street address, postal address and phone, fax, email details.

Speakers

Once you have confirmed speakers' availability put all contact details here. Keep them in the loop regarding the event and send them a copy of the timeline for the day of the event(s). It's important that they are aware of their role and what is expected of them by the project. They need to supply you with their requirements for the event. What AV requirements do they have, are they bringing their presentation on disk or laptop? Do they need a data projector etc? What papers/material do they have for the folder(s)? Make them aware that you need this information at least a month (2 weeks) before the event. Do they need accommodation, local flights? Is anyone accompanying them?

Invitations

You have to decide what kind of invitation you want i.e. printed invitation, electronic email flyer, booklet etc. 2–3 weeks ahead of the event you should arrange follow up calls i.e. someone to ring every single person who has not replied about their attendance to the event. It is time consuming but done properly it can usually increase the number of participants significantly as not everyone replies to invitations.

AV/Computer needs

Once know what speakers require, need to make sure the venue can supply all electronic needs e.g. data projector, screen, microphone, sound system, special equipment for translation etc. They will have given you pricing on this when you first approached them. Some venues allow you to bring in your own equipment or equipment that you have hired specifically for the event as well.

Publicity

How are you going to advertise the event/function? Is it by paper, electronically by email or by web? Do you need to invite the press? Decide how you want to advertise your event but make sure that you find out costs before hand. Depending upon the event you can start advertising the event 3–4 months before it happens. Some advertisers may charge, therefore the project/organisation need to make sure there is money in the budget to cover these costs.

Materials

Folders with event materials need to be designed, printed and compiled 1–2 weeks before the event. Always make 15–20 extra just in case any late arrivals or attendees – better too many than too little. You may need to give a folder to the media people as well. You will have received all information from speakers well in advance and allowed 1–2 weeks for printing of contents of folders as well. Collation of folders can take 2–3 days depending upon what is going in them. Nowadays it is possible also to put the huge amount of useful information onto a CD or flesh. Think about what is necessary for participants to have in paper form (e.g. copies of presentations etc) and what could be put into CD for further usage.

You also need to make name badges before the event. Name badges usually consist of persons name and organization (it is not necessary to put titles).

Visibility

> Usually the project or organisers have their own banners that can be used to put in foyer or in rooms for each event.

Catering

> Get quotes from different venues – look at cost and what they are offering. Is the food what you want? Can you change any menu supplied? You need to look at these sorts of things. You may have people with special dietary needs – these people need to be catered for, but they should be telling you this before the event (not on the day). Once decided on venue, look through menus and decide what you want to use for the event.

1.3.8 Running/facilitating an effective meeting

The definition of facilitate is "to make easy" or "ease a process". What a facilitator does is plan, guide and manage a group event to ensure that the group's objectives are met effectively, with clear thinking and good participation.

Effective meeting facilitation is a process of guiding participants through a meeting to achieve stated objectives. An effective facilitator thinks through and manages the meeting objectives, processes, and group dynamics of participants. An effective facilitator encourages all members of a group to participate, draws out ideas and knowledge from different members, and creates buy-ins from the group. He/she enables participants to offer their best ideas and make decisions with commitment and enthusiasm.

Here are 10 tips to successful facilitation:

1. Understand your audience. Find out more about your audience before facilitating a meeting or workshop. Try to understand their concerns and interests in the topic by sending them a proposed agenda or a **short** pre-meeting questionnaire. Doing so will help participants feel more included and create a more positive atmosphere for the meeting. In addition, a benefit to understanding your audience will enable you to discover more useful discussions than the one you had planned.

2. Clearly articulate your purpose and intended outcomes. Your role as a facilitator is to manage discussions of the group and lay the foundation for what outcomes they should expect. Doing so will help your audience anticipate how they can participate in the discussions, take ownership for the meeting and its outcomes, and benefit from this experience.

3. Create a positive atmosphere during the meeting. Create a relaxed and safe environment where all meeting participants feel comfortable to speak up and share their ideas. You can create this safe environment by asking the group to agree on some ground rules for participation, such as speak one at a time, respecting different views, and agreeing on a maximum number of points that each person can make to any one discussion. If all participants agree to these ground rules, they will have shared ownership and shared responsibility to ensure that these ground rules are followed.

4. Show respect for your audience. Recognize each participant's strengths and ideas, and respect their opinions. Value diversity and be sensitive to the different needs and interests of participants. Understand that these differences might be due to years of service with your company, education, profession, gender, or age.

5. Be flexible. Identify possible resistances from your audience, understand their expectations and manage them. Be aware that things can go wrong during a meeting. Be prepared to modify the meeting agenda as appropriate and continue with your facilitation while keeping the purpose of the meeting in mind. Adjust meeting activities to suit your participants and adapt your personal style to the group.

6. Practice active listening. As a facilitator, you listen to what the participants are saying and try to make sense of it. You clarify goals, acronyms, and definitions to ensure a clear understanding for all participants. To foster a sense of trust and openness among the participants, you want to pause from time to time and summarize the discussions, draw conclusions, and identify the next steps. As the facilitator, you are in a unique position to listen to all points of view and integrate ideas.

7. Handle conflicts with assertiveness and sensitivity. If conflicts occur, listen to both parties and paraphrase what they say. Listen to their underlying emotions (e.g., "you seem to feel frustrated, can you tell us more about…") and promote an atmosphere of collaboration instead of defensiveness. Show participants that differences in opinions are valued and respected. Gently guide your participants back to the purpose of the meeting.

8. Manage time effectively. As a facilitator, you need to move the group and cover critical points on the meeting agenda. Prioritize the issues to be discussed on two dimensions: *importance* versus *urgency*. Focus on issues that are of high importance and high urgency first, and then move on to issues that are important but less urgent. To avoid interruptions from dominant participants, assign them to perform specific tasks (e.g., scribing or taking notes for their small group) while still engaging other participants in the room.

9. Produce insightful documents. A key delivery of facilitation is a complete document of the group's insights. With the help of note takers who record the group's input and decisions during the meeting, you can keep track of all the group-generated data and produce a comprehensive report complete with charts and tables. This document can then be shared with all meeting participants.

10. Maintain integrity, professionalism, and authenticity. As a facilitator, you maintain personal integrity and behave confidently and honestly. You model authenticity for the group by showing enthusiasm and openly admitting mistakes and lack of knowledge. You keep your ego out of the discussion as your focus is on the group and on ensuring group success.

Difference between moderator and facilitator

In the meetings, conferences and events "industry" the terms Moderator, Facilitator and even Conference Chairman very often are used in the same context. But are they really the same? And does it really matter to the attendees? The difference between the two can have a profound impact on whether you can meet your event objectives and expectations. Understanding the differences is important also as each requires a different set of skills.

Moderator:

Moderation of meetings, events and networks focuses on keeping the information and communication flow clear and accessible to all who participate. In this sense, **the moderator is an information manager**. In an online environment, s/he monitors the communication flow, makes summaries and digests, approves participants' requests and posts, and even maintains the online environment. The moderator is often quite invisible for those who participate in meetings, events and communities, but nevertheless indispensable!

Facilitator:

On the contrary, the facilitator of meetings, events and networks is much more visible and active. S/he **steers the communication flow and keeps it on track**. In this way, facilitation focuses on including all participants in the discussion, even the ones who areless comfortable with speaking and contributing, ensuring all voices are heard and discussion is vibrant, interesting and useful to those who participate. The facilitator makes it clear to all when milestones as part of the meeting, event, or network/community activity, have been achieved and then moves on to the next milestone. Having good communication skills, the facilitator enables a comfortable and inclusive environment of openness and trust for those who participate.

1.3.9 Making an effective interview, using questioning techniques

A face-to-face interview is the method most widely used in the research of any topic and based on a direct meeting between interviewer and interviewee. By personal communication it is possible not only to obtain much more information, but also to use visual materials (cards, pictures, packages, logos, etc.) to encourage response. A face-to-face interview should not bore a respondent and ensures full and accurate data.

The main advantage of face-to-face or direct interviews is that the researcher can adapt the questions as necessary, clarify doubt and ensure that the responses are properly understood, by repeating or rephrasing the questions. The researcher can also pick up nonverbal cues from the respondent. Any discomfort, stress and problems that the respondent experiences can be detected through frowns, nervous tapping and other body language, unconsciously exhibited by any person.

This would be impossible to detect in a telephone interview. So face-to-face helps the interviewee to get the desired results and help them to view the expressions of the person to whom they are interviewing. By reading the facial expression of the respondent the interviewer can easily understand what the respondent wants to tell them about any thing.

The main disadvantages of face-to-face interviews are the geographical limitations they may impose on the surveys and the vast resources needed if such surveys need to be done nationally or internationally. Another drawback is that respondents might feel uneasy about the anonymity of their responses when they interact during face-to-face interviews.

Below you will find some recommendations on preparing and conducting face-to-face interviews.

Draft your questions before the meeting

Depending on the purpose of your interview, you need to ensure:

• you have suitable questions and topics prepared;

• your questions and topics will gather the information or data you need;

• phrase your questions in a way the interviewee will understand;

• you have prompts prepared just in case the interviewee doesn't understand what you mean – but try not to make these too leading; and

• you try to use alternatives to 'why' when phrasing questions such as 'what', 'what reason's and 'what made you'.

Before you go to conduct your interview there are some things you should consider.

Brief your interviewee.

• Make sure they understand why you want to interview them and what you will use their information/views for.

• Let them know how long the interview should take.

• Agree a time and place for the interview – consider a location that is comfortable or familiar to the interviewee.

• Ensure the interviewee has confidence in you.

At your interview

Break the ice with a little friendly chat if you don't know them already, to help make them comfortable.

Then recap with the interviewee:

• why you are interviewing them;

• the purpose of the interview and how you will use their information/views;

• how long it will take;

• explain the confidentiality of the interview; and

• smile – make your interviewee feel comfortable with the situation.

If they are looking uncomfortable look at them in a friendly understanding way, so they remember you're just a person they're having a conversation with, then:

    • ask how they feel about the topic;

    • reassure them that their answers are valid and confidential; and

    • consider if there's a more comfortable way you can word your approach or redirect your questions if need be.

Speak clearly

Let the interviewee know you're listening – reactive listening. Use words and sounds to show this:

- OK

- Oh right

- Really?

Avoid approving phrases that could lead their future answers, like:

- Yes

- That's right

- Absolutely

- You're not wrong

Avoid asking 'why?' For example use these instead:

- What reasons…

- What made you…

If you want to find out more about an issue or explore an answer, use phrases and techniques that ask for more information. Such as:

- 'Tell me more about that'

- 'I'm listening, please go on'

- 'Can you explain that to me?'

- 'You mentioned xxx, what's that about?'

- Counting to four (pausing to the count of four to give interviewee chance to add more)

At the end of the interview and afterwards

- Re-assure the interviewee – recap what the information will be used for.

- Give your contact details to the interviewee so if they have any worries or questions they can contact you.

- Thank them for their time.

- Write up interview notes (if necessary) as soon after the interview a possible, to ensure you remember all the detail.

The telephone interviews with experts in the field of international cooperation in Russia and Europe were implemented by the BILAT-RUS-Advanced project consortium as one of the concrete inputs for the analysis of the evolution of EU-Russia STI cooperation.

The telephone interviews aimed to deepen the results of an online survey, which has been implemented during the project as well. Both, the online survey and the telephone interviews feed the updated Networking Guidelines with regard to the experiences in international collaboration of European and Russian researchers. The participation to the online survey was satisfying with 90 responses; the response rate was 14%. Regarding the telephone interviews, in total 12 experts have been willing to answer to the questions, which have been identical to all interviewees.

This twofold inquiry revealed interesting insights on the topic of international collaboration, as regards networking in general, the quality of research results, funding schemes and eventual barriers for an efficient cooperation. To wrap up the results, all experts have been very pleased with their projects results.

1.3.10 Organising efficient brainstorming meetings

Brainstorming is a popular tool that helps you generate creative solutions to a problem. It is particularly useful when you want to break established patterns of thinking, so that you can develop new ways of looking at things.

Used with your team, it helps you bring the diverse experience of all team members into play during problem solving. This increases the richness of ideas explored, meaning that you can find better solutions to the problems you face. It can also help you get buy in from team members for the solution chosen – after all, they were involved in developing that solution. What's more, because brainstorming is fun, it helps team members bond with one-another as they solve problems in a positive, distraction-free environment.

Any brainstorming session starts with the issue for which you will seek ideas. The issue will normally be in the form of a goal. It may be the solution to a problem, for example:

"We need to enter into Horizon 2020 project in 2 coming years"

The issue is what you will brainstorm about. It should describe a need, a goal or a problem.

Since the initial period of the brainstorm session comprises open ideation, the issue should leave room for creativity and wild ideas. Even if those wild ideas are not used, they will inspire less wild and more workable ideas.

Once you have determined the issue, the next step is to review the issue and **decide by what criteria you should judge the ideas generated during the session**. The criteria should reflect the intended implementation of the ideas and the needs of your organisation. For example, if you are brainstorming new product ideas, criteria are likely to include:

• strong profit potential

• low cost to develop and produce product

• good fit with existing product line

• speed of bringing to market

Ideas will be evaluated by each criterion, so it is important to choose criteria that allow ranking on a sliding scale. For example, "can we launch this product by the end of the year?" is a poor criterion as it takes a yes or no answer. On the other hand: "ease of launching product by end of the year;" or "speed of bringing to market (ideally before end of year)" are better criteria.

An ideal brainstorming team should comprise one **moderator** and eight to twelve **brainstormers**. If you wish to brainstorm with larger groups, we recommend breaking the groups up into smaller teams of 8–12 brainstormers and running simultaneous sessions. Where possible, brainstormers should come from as wide a range of disciplines as possible.

If you are running a brainstorm session via a web application (e-brainstorming) it is possible to have many more participants. Electronic brainstorming eliminates many of the problems of standard brainstorming, such as production blocking and evaluation apprehension. An additional advantage of this method is that all ideas can be archived electronically in their original form, and then retrieved later for further thought and discussion. Electronic brainstorming also enables much larger groups to brainstorm on a topic than would normally be productive in a traditional brainstorming session.

The moderator manages the brainstorming session itself. He/she starts and stops the session at the appropriate time and manages the evaluation. *The moderator does not participate in generating of ideas.* A moderator should be an enthusiastic person with a sense of humor and the ability to control the brainstorming session.

Preparations for a brainstorming session are minimal. You need to prepare a space for the session as well as invite the brainstormers. When informing the brainstormers, bear in mind that a brainstorming session should take about 15 minutes of introduction, 30–40 minutes for ideation, 30 minutes for evaluation and discussion and 15 minutes for conclusions. So, plan for a minimum of 90 minutes.

It is often effective to **inform the brainstormers** of the issue to be brainstormed with as little advance warning as possible. This will have them entering the session with fresh minds. It is important to stress, at the invitation stage, that certain things will not be tolerated during the brainstorming session:

1. No bringing prepared ideas into the meeting! All ideas must be spontaneous.

2. No mobile phones or leaving the meeting for any reason

3. No late arrivals! A brainstorm session cannot start until all are present.

Finally, if meetings in your organisation are generally formal, remind participants that brainstorming should be a relaxed affair.

The brainstorming session can be held in any space that is reasonably comfortable, prevents disruption and has a means of writing ideas where everyone can see them. The only requirement is a whiteboard, flip-chart or computer and beamer that will allow the moderator to write ideas as they are suggested. Coffee, water and other drinks are nice touches that help relax participants.

The brainstorming session comprises several components.

1) The introduction should begin with your introducing the issue and explaining its importance. You should also write the issue at the top of the whiteboard or whatever writing space you use.

You should explain that once the session has begun, everyone is expected to shout out ideas while you (or the moderator) write them on the whiteboard. Point out that all ideas, no matter how crazy, undoable or irrelevant they may be, must be heard and will be written down. Remind participants that sometimes ideas that seem crazy at first are, on reflection, brilliant.

Finally explain that when someone:

• criticises an idea...

• says that an idea will not work...

• says that an idea has already been tried...

• criticises someone on the basis of her ideas...

• or says anything that is less than positive about ideas or people in the session...

he/she is highly damaging the quality of the session. It is the worst thing that can happen to a brainstorming session. Ensure everyone understands this.

2) Ideation. The moderator should keep track of the time and write down ideas as they are generated. The first ideas proposed will almost inevitably be obvious ideas. Once people run out of obvious ideas, they will begin stretching their minds more. This is when you begin to see more creative ideas come up. Once time is up, inform the brainstormers and compliment their ideas and their participation. Inform them that the next step is the evaluation.

Ideation is what most people envision when they think about brainstorming. In fact, it is only one part of the brainstorming process.

3) Evaluation

The first step of the evaluation is simply to choose ideas which are potential solutions for the issue. Ask the brainstormers to review their ideas for a couple of minutes and consider which are good solutions and which are not. Then ask them which ideas they believe have the most potential. Mark those ideas. You may also cross out ideas which are clearly unworkable. Continue until you have between three and eight strong ideas. If you as the moderator see that the brainstormers have missed ideas that have potential, you may add those ideas.

Once this has been completed, select the first chosen idea. Then go through each of the criteria and rate how well the idea meets the criterion on a scale of zero to five, where zero indicates the idea does not meet the criterion at all and five indicates it meets the criterion completely. There are two acceptable approaches to calculating the scores:

1) Discuss the scores as a group and reach consensus for each score. Write those scores on the whiteboard.

2) Have each brainstormer write her own evaluation scores for each idea. The moderator can then take a survey of all scores, calculate the average value for each idea and write it on the whiteboard.

Continue in this fashion until all ideas have been evaluated and have a score. The higher the score, the better the idea in terms of meeting the criteria you set for the brainstorming session.

When you are done, you will have a list of ideas each with a score reflecting how well it meets the criteria. **Generally the top three to five ideas will be the most suitable.**

At the end of the evaluation, the moderator should discuss the top ideas with the brainstormers and note any additional feedback regarding the issue, the ideas and the overall brainstorming session. Any relevant comments should be noted.

Once this is done the organiser of the session should conclude by explaining the next steps that will be taken with the ideas. It goes without saying that the moderator should thank the brainstormers and compliment them on the quality of their ideas.

Then a **final report of the brainstorming session** should be written. It should include:

1) The issue.

2) The evaluation criteria.

3) The top ranking ideas and their scores indicated as a fraction of the total possible score or as a percentage.

4) Any relevant comments raised by the brainstormers at the conclusion of the session.

5) Follow up plans.

6) Names of the brainstormers.

7) List of all ideas raised.

It is worth noting that a brainstorming report is an excellent tool for selling ideas to top management, clients or others. It not only provides ideas, it also provides arguments on why the ideas can be expected to work.

1.3.11 Organising efficient brokerage events[8]

There was once a time when face-to-face meetings were the only way for people to hold discussions and communicate ideas to one another. With the advent of technology, new, easier methods of communication are available, such as virtual meetings by way of Skype, Google Hangouts, Facetime, etc. While virtual meetings may be more convenient than scheduling meetings in-person, they create a barrier between attendees, making it harder to truly focus and engage.

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[8]   The information below on brokerage events was collected with the support of *https://www.b2match.com*

Pro-active tools for promotion of R&D&I projects and partner search works more effective than traditional methods such as presentations on thematic conferences and fairs or placing projects proposals into databases and catalogues. The main pro-active face-to-face meetings tools widely used are Brokerage Events (BE). Participation in BE has great networking potential. Face-to-face bilateral meetings are of real value to participants as a means of building trust for future agreements and prevent mismatches at an early stage.

Brokerage Events

A brokerage event includes a series of pre-arranged face-to-face bilateral meetings (up to 30 minutes) between participants organized at a single venue. Based on partnership profiles published on the event web-site, participants request meetings before the event. Schedules for each participant are drawn up showing time and place for each meeting. Special IT tool can be used for development and validation of partnership profiles, as well as for searching of interesting profiles published by other participants and requesting the meeting.

Key factors for successful participation:

1. Focus on specific technological areas / specific calls for proposals for research projects. Link to other thematic events, including fairs, conferences, etc. increases the probability to find relevant potential partners among other participants.

2. Identification of potential participants with relevant project / competences / demands and inviting them to visit the event

Most brokerage events have its own web-site and / or use special online tools (often integrated with the relevant IT platform like EEN database) for promoting and managing the event. It also allows participants to register, produce profiles, see event catalogues and request meetings all online.

3. Co-operation profiles and event catalogue for matchmaking

The main feature of BE are co-operation profiles which participants are required to produce indicating the nature of their business, technology or R&D competences and what they are looking for. These co-operation profiles are inserted into an event catalogue which is accessible by event participants via event web-site. They must be very clear and include as much technical detail as possible – the profiles quality is key success factor. Profiles becomes accessible for other participants only after validation by BE organizer.

4. Pre-arranged meetings

Meetings are arranged prior to the event. Based on profiles in the event catalogue, meetings can be requested with fellow participants, usually up until 1 week before the event. Depending on the event, meeting requests may have to be actively accepted or rejected by participants. Meeting schedules indicating time and place of each meeting are then sent out a few days prior to the event. As a result, any participant knows who will be meetings counterparts and can make necessary preparations. Also, at the event special time is reserved for additional meetings out of schedule, if required.

How much do they cost?

Some events are offered free of charge, but on other occasions a fee (usually 50–200 euros) may be charged to help cover the costs of organizing the event. In many cases brokerage events take place within thematic fairs / conferences. Sometimes participation in the brokerage events themselves is free, but participants have to pay for entry to the fair (as a rule, with discount).

For Participants?	For Event organizers?
• Start networking weeks before the event • Promote your collaboration wishes to event visitors before the event • Meet **several** promising business partners of your choice in **one day and one location** (no need to travel to spreadlocations)	• Higher client satisfaction due to the possibility to arrange also B2B meetings • Higher number of participants – Published profiles acts as an appetizer for others to sign-up too • Reduced administrative workload - Alot of micro-management is done by the matchmaking tool

Matchmaking Decision List – Go or No Go?

The following checklist highlights the **most relevant measures** for a successful Brokerage Event.

It is intended to allow a quick if all relevant measures have been taken into account and can also be fulfilled.

• If you can tick most of the listed points, it is most likely that the event is successful.

• If you can't tick a suitable amount of points consider twice carrying out the foreseen event

Timelines and most relevant activities

Main Stages	Goal	Things to consider?
Concept & Development *6–12 month lead time*	**Continue?** Go/NoGo decision	**Timing / Sector/ Type of Event** ❑ Resources of organizers ❑ Similar competing events (time, region)? ❑ Event type (Conference, Fair, B2B only) **Clients** ❑ Critical mass of regional participants willing to go international? ❑ Target group? (business, technology, research) **Identifying and selecting regional partners** ❑ Involvement of committed & reliable regional stakeholders? ❑ Type of promised resources (Mailings, Phone calls, etc.)? **Identifying and selecting foreign partners** ❑ High participation of reliable foreign Partners ❑ Other foreign stakeholders involved? **Go or No-go decision** ❑ Does most points speak for the event?
Event preparation	**Make the event visible**	❑ Set up a project plan (timeline, milestones, resources, etc.) ❑ Prepare a professional website ❑ Prepare professional promotion package

Recruiting participants *3–6 month*	**High number of participants**	❑ Identify and activate all relevant promotion channels ❑ Pre-registration of regional companies before starting the promotion ❑ Continuous checks of quality and content of profiles?
Matching process *3–4 weeks*	**Maximize high quality meetings**	❑ 2–3 mailings to initiate the booking process ❑ Direct contacts (phone calls) ❑ Confirmation of participation (reduce no-shows) ❑ Meeting suggestions for participants
Event	**Perfect meetings?**	❑ Resources on-site ❑ No-show handling ❑ On-site registration? ❑ On-site matchmaking? ❑ Info desk promoting other services
Event Feedback	**Outcome?**	❑ Meeting feedback

An example of Brokerage Event success story see in 2.3 – The role of intermediary institutions in Internationalization.

1.3.12 Follow up the meetings and decisions (writing meeting notes)

Actions and planning before and during the meeting play a big role in helping you achieve expected, positive, and constructive outcomes. Your actions following the meeting are just as crucial. After the meeting is over, take some time to debrief, and determine what went well and what could have been done better. Finally, prepare the meeting summary. This will be forwarded to all participants and other stakeholders. It is a record of what was accomplished and who is responsible for what as the team moves forward. This is a very crucial part of effective meetings that often gets overlooked. You need a written record of what transpired, along with a list of actions that named individuals have agreed to perform. Make sure someone is assigned to take notes during the meeting.

Why Meeting Minutes Matter?

Meeting minutes are important. They capture the essential information of a meeting – decisions and assigned actions. They keep attendees on track by reminding them of their role in a project and clearly define what happened in the meeting. How many times have your colleagues been confused or in disagreement about what happened in a meeting? With minutes to refer to, everyone is clear.

What most people don't know is that meeting minutes shouldn't be an exact recording of everything that happened during a session. Minutes are meant to record basic information such as the actions assigned and decisions made. Then, they can be saved and used for reference or background material for future meetings relating to the same topic.

The following recommendations will help you take useful and concise meeting minutes.

Before the Meeting

If you are recording the minutes, make sure you aren't a major participant in the meeting. You can't perform both tasks well. Create a template for recording your meeting minutes and make sure you leave some blank space to record your notes. Include the following information:

• Date and time of the meeting

• The purpose of the meeting

• The meeting lead or chair's name

• Assigned action items

• Decisions made

Example of Minutes Format

Name of Organization/Project: Purpose of Meeting: Date/Time: Place: Present (thelist of attendees with their roles in Organization/Project): Chair:			
Topic	Discussion	Decision/Action	Person Responsible
1.			
2.			
3.			
…			
Call or email (insert your name and contact) with additions or corrections to these minutes			

Before the meeting, gather as much information from the host as you can. Ask for a list of attendees, as well as some information on the purpose of the meeting. This way you won't need to scramble to understand what's going on while you're recording notes.

Decide how you want to record your notes. If you aren't comfortable relying on your pen and notepad, try using a tape recorder or, if you're a fast typist, take a laptop to the meeting.

During the Meeting

As people enter the room, check off their names on your attendee list. Ask the meeting lead to introduce you to meeting attendees you aren't familiar with. This will be helpful later when you are recording assigned tasks or decisions.

Don't try to record notes verbatim – it's not necessary. Minutes are meant to give an outline of what happened in the meeting, not a record of who said what. Focus on understanding what's being discussed and on recording what's been assigned or decided on.

Record action items and decisions in your template as they happen – don't wait until after the meeting to pull them out of your notes or you could make a mistake. If you don't understand exactly what decision has been made or what action has been assigned, ask the meeting lead to clarify.

After the Meeting

Review the notes and add additional comments, or clarify what you didn't understand right after the meeting. Do this while the information is fresh in everyone's mind. Type your notes out in the template you created before the meeting – this will make the notes easier for everyone to read and use.

> Number the pages as you go so you aren't confused later. Remember, though, that the minute taker is responsible for providing good flow. Don't force yourself to write the minutes in the actual chronological order of the discussion – it may not work.
>
> **Focus** on action items, not discussion. The purpose of minutes is to define decisions made and to record what actions are to be taken, by whom and when.
>
> **Be objective.** Write in the same tense throughout and avoid using people's names except for motions or seconds. This is a business document, not about who said what.
>
> **Avoid** personal observations. The fewer adjectives or adverbs you use, the better. Dull writing is the key to appropriate minutes.
>
> If you need to refer to other documents, **attach** them in an appendix or indicate where they may be found. Don't rewrite their intent or try to summarize them.

When you finish typing the minutes, ask the meeting lead to **review** the document for errors. **Send the final copy** of the minutes to attendees right away. Keep a copy of the notes (and the template) for yourself in case someone wants to review them later.

1.3.13 Writing the reports

The recommendations below are of general character and should be taken into account in any report writing. Nevertheless some programs may have special requirements which are obligatory. For instance FP7 project' coordinator and consortia members should follow the special reporting requirements – can be found in the Guidance Notes on Project Reporting . This document is the guidance note to help the coordinators and consortia to prepare the periodic and final reports requested in Article II.4 of the Grant Agreement. This is a contractual obligation.

Effective reporting (including Deliverables[9], Periodic project reports and Final project report) is one of the main success factors for FP7 project implementation and serves also as one of the main communication tools between different project' parties.

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[9]   **Deliverable** is a term used in project management to describe a tangible or intangible object produced as a result of the project. A deliverable (something that can be **delivered**) **could be a report**, a document, a product or any other building block of the project. A deliverable differs from a **project milestone** in that a milestone is a measurement of progress toward an outcome whereas the deliverable is the result of the process. For a typical project, a milestone might be the completion of a product design while the deliverable might be the technical diagram of the product.

Things to consider[10] while writing the report :

Who will be reading/analysing your report?
Who already has an opinion on the subject matter?
What are you writing about?
What are your objectives?
What does your audience already know?
What are your key points?
What are your findings, recommendations, solutions?
What has made you think this way?
Where is the evidence coming from? Is it relevant and reliable?
Where does it back up your argument?
When does your report need to be completed by?
Why do you think what you do?
How have you analysed your question?
How will you reach your conclusion?
Why have you reached this conclusion?
How will you present your findings?

So, your team has investigated the problem, performed an analysis and must communicate its recommendations by writing a project report. How should you go about composing this report? How can you make sure that the report you submit is read, digested, and understood? Readers would probably find what they need in half the time if everyone simply followed the same format. This is why a standard format – often called the Business Report Format – has been developed over the years. One of the most important reasons to follow a standard Business Report Format is that people reading your report don't usually have a lot of time. Very few, if any, will read every word of your report from start to finish.

- Your reader needs to *get to the point* of your report quickly, and a properly organized report should facilitate this.

- Your reader should be able to follow your document's structure from the top down. *Almost no one will want to read your report through from first page to last in a linear fashion.* Your reader should be able to proceed "top down", by selecting only parts of your report to read in detail while still understanding the purpose and context of other parts to which he/she gives less attention.

- Your reader should be able to choose the level of technical detail he/she wishes to read. A properly organized report will give him/her the option of avoiding technical detail should he/she desire.

Following a standard format also helps you organize all the relevant information. The content of a report can be overwhelming, especially when you have a lot of data. This format ensures that your information follows logical steps that readers will be able to follow and understand more easily. You won't forget anything either, because the format provides you with the appropriate structure.

The document structure we recommend for project reports consists of the following, arranged in the order indicated:

- Title page

- Summary

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10   From *http://www.mindgenius.com/*

- Table of Contents

- Glossary

- Methodology

- Introduction section

- Main body – Analysis section, optionally divided into subsections

- Conclusions and Recommendations section

- References section

- Appendices

Title Page
Include at least the report name, author name, and date. For the FP7 reporting there is a special template to use.

Executive Summary
Keep this to a maximum of one page. Summarize the problem you're trying to solve, list the most important information or results, and detail any action steps that you recommend.

For many people, this is the only page they'll have time to read. It's therefore a good idea to write it as though it's a separate report, all on its own. Use bullets and numbered lists to highlight important points. Although the Summary is a key part of the orientation section, write it after most of the report has been written. Put the Summary first; write it last.

Table of Contents
Table of contents is essential for a larger document and is a part of the orientation process. The readers use the Table of Contents as a way of quickly finding out what the document contains and how it is put together.

Glossary
The glossary is a list of symbols, abbreviations, acronyms and definitions and is useful if the audience reading the body of the report is likely to be unfamiliar with the ones you use in the report.

Methodology
Describe the methods you used in your research to reach your conclusions. For example, did you talk with focus groups, conduct interviews, search the company archives, or use outside resources like consulting or research firms? Include the details of your research process, and explain why you used the sources you did.

Introduction
The Introduction should present the position before the work began. The reader should be given a clear picture of the problems and why the report is required. It tells readers why they need to read this report, and give a very brief overview of what you're going to cover in the main body of the report.

Main Body – Analysis section
This is the 'heart' of your report. Present your research, and make your case – and remember to put the most important information first.

Conclusion
Analyze the results of your research, and bring everything together. Many people will read this section, so keep it short and simple.

Recommendations
List the actions you think readers should take to solve the problem you're addressing. Ideally, use bullets or numbered points for this list.

This is another highly read section, so be very clear about your opinion. You've done the research, so tell people what needs to happen next. If you suggest major changes, then create a strategy to implement these larger changes on a step-by-step basis.

References section
Sources of information must be included in reports. How extensive this inclusion is varies greatly with each report. Use the same judgment as for other sections:

• What do the readers want or need to know?

• How much detail is required?

Appendices
Appendices contain supporting information that if presented in the body of the report would distract the reader. Details are included in the Appendices; e.g., questionnaires, full lists of participants, summarised data, detailed methods. Appendices are usually numbered, "Appendix 1", or designated by a letter, "Appendix A". Only include one topic per Appendix.

Here are some additional suggestions for writing effective, well-organized reports:

• **Understand your objectives** – Before you begin writing, make sure you clearly understand why you're writing the report – and who will read it.

• **Use a relaxed style** – If possible, keep your writing style fairly informal and easy to read. Be professional, but always keep your readers in mind. If you write the way you speak, they'll probably have an easier time understanding what you're trying to tell them.

• **Keep it concise** – Remember, people typically don't have much time. Aim to keep your sentences short and clear.

• **Use sources and data** – Use statistics, and quote sources whenever you can. People tend to trust numbers more than opinions.

• **Organize your text with clear headings** – Break up your text with headings and subheadings. This makes reading easier, and it allows people to find the information that's most relevant to them.

• **Start with the most important information** – In every section of your report, put the most important information first. Again, remember that most people don't have lots of time. Tell them what they need to know as quickly as possible.

• **Do at least two drafts** – the first draft of your report will get across your meaning. In the second draft, you can refine and polish the way you've expressed it.

1.3.14 Negotiating with mass-media

This section of the networking guide is mainly oriented on FP7, Horizon 2020 R&D projects and contains appropriate recommendations[11]. Nevertheless these recommendations are applicable also to any scientific project when it comes to the negotiation with general public with the help of mass media.

With a view to enhancing the impact of research funded by the EU, and to foster dialogue and debate, the Seventh Framework Programme (FP7) grant agreement requires project participants to communicate and engage with actors beyond the research community.

The relevant clauses in the grant agreement are shown here[12].

> **General Conditions, II.2, Organisation of the consortium and role of coordinator**
> 4. Beneficiaries shall fulfill the following obligations as a consortium:
> [...]
> d) engage, whenever appropriate, with actors beyond the research community and with the public in order to foster dialogue and debate on the research agenda, on research results and on related scientific issues with policy makers and civil society; create synergies with education at alllevels and conduct activities promoting the socioeconomic impact of the research.

Plans for these outreach activities should already be outlined at proposal stage and detailed in the projects communication strategy. When it comes to the communications via the 'mass media' – TV, radio and the written press, the strategy should include:

• Defining key messages;

• Establishing target audiences;

• Selecting the appropriate modes of communication;

• Tailoring information to the intended outlets;

• Building good relationships with the media

Define your message

The first step in any communications exercise is to define the message or messages to be transmitted. An evident objective is to focus on positive achievements and the benefits they bring. This requires clear agreement and careful coordination among all parties who may act as spokespersons or information sources for a particular project or network. Inconsistent facts, figures, emphases and viewpoints are to be avoided at all costs.

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[11]   See more detailed recommendations on the issue on EU portal
http://ec.europa.eu/research/science-society/science-communication/index_en.htm

[12]   *http://ec.europa.eu/research/social-sciences/pdf/communicating-research_en.pdf*

Target your audience

Reconciling the communications goals of the consortium and those of the EU entails addressing a very broad range of recipients. Scientific, technical, business, institutional and governmental audiences are all prime targets. But, because FP7 is supported by public funds, there is an equal responsibility to show citizens that these monies are being spent to good effect. Fulfilling the societal objectives of spreading education and generating an enthusiasm for science also implies a need to reach the public at large, using all available means.

Select your tools

Peer-reviewed publications, specialist websites and scientific congresses typically form the principal information channels of the research community. By contrast, 60% of the general public obtains its knowledge of science from TV. Popular newspapers, magazines, radio and – to a growing extent – the Internet also play major roles in informing public awareness and opinion.

Between these two extremes come the business-to-business tools, including: technical, financial and industrial publications; broadcasts; and trade fairs and seminars. All need to be considered in the preparation of a well-balanced communications mix.

Local community-related activities may form yet another route to limited but often strategically important audiences.

Media relations are an indirect form of communication. The direct recipients of a submitted press release, or the attendees at a press conference, are the journalists or editors involved with particular programmes or publications. Your ultimate goal, however, is to reach their viewers, listeners or readers. It is therefore essential to ensure that all messages fulfill the criteria necessary to achieve ready acceptance by editors and journalists to maximise the chance of exposure to the actual target audience. Editors exercise independent control over the content and style of the stories they exploit. You cannot oblige them to use all of the material you supply, nor to reproduce the information exactly as you present it. Consequently, you must do everything possible to make your message interesting, timely, comprehensible and unambiguous – and present it in a manner that makes its transfer to the screen, air or printed page as easy as possible.

Produce an effective press release/success stories

A press **release/success story** is information that is communicated proactively to the media – including TV, radio and electronic publications, as well as the printed press – from which they select the elements they consider to be of interest to their public. They will edit (or expand upon) your story to produce a broadcast item or text that they consider to be most appropriate. See example of success story in Annex 3.

The **press-release heading** is the first element that addresses the journalist. A good heading is a short heading – two lines is a maximum length. Ideally, it should include an active verb, and employ vocabulary that is in common use and will appeal to readers' curiosity or imagination.

Viewers, listeners and readers – and journalists! – are in a hurry. They need to be able to obtain an overview of a message almost at a glance. So, **provide an introductory**

paragraph of two or three sentences to present the content in a nutshell, and to indicate its significance. This should answer the six basic questions – who?, what?, why?, when?, where? and how? – or as many of them as are relevant in the context.

Paragraphs should be arranged in order of declining importance. A good test is to check to what extent, starting from the end of the text, paragraphs can be progressively removed without affecting the essence of the message. This equates to the simplest form of editing for a journalist seeking to fill a limited page space when working under deadline pressure.

An attractive (and good quality) photo greatly increases the probability that a press release will be selected for publication, particularly if it includes a human element or illustrates a striking application (space vehicle, prominent building, healthy plant growth, etc.)

Avoid the use of extensive technical explanations and historical detail in a press release. This information may nevertheless be useful to journalists intending to write more extended stories. Where appropriate, add it as 'Notes to editors' at the end of the text – or even supply a separate background article, clearly labeled as such.

When news is also announced directly, at a press conference for example, the press release should be distributed at the place where the event takes place. It can be handed out individually, or with other documents in a complete press pack. This should not preclude a follow-up distribution, as not all of the invited journalists will necessarily attend the event.

Recommendation:

Make use of events: if you are participating in an event such as a conference or exhibition organised by a third party, take advantage of the fact that journalists are likely to be present. Bring your press releases to hand out.

Organise a successful press event

Press conferences are appropriate to mark a major event or announce important news, where the ability to see results at first-hand, or to question the personalities involved, will bring added value for journalists. Another justification is to give a general briefing about a topic of current or emerging interest. This may not necessarily produce a great deal of immediate press coverage, but will provide journalists with a contextual framework for future announcements. Press conferences can take various forms. They can be open to all journalists, addressed to a targeted panel in line with the subject and geographical area, or reserved for a limited circle of journalists seen as opinion leaders.

This is not the type of operation that should be repeated too often; otherwise it becomes a drain on budgets and dulls the interest of the press. It is vital to weigh the value, and not to abuse the method to announce details that could easily be communicated in writing.

Ensure that the **invitation for journalists** includes all the facts that journalists need to know – who, what, why, when, where, how – and include any additional information that will help convince them to attend.

Prepare a **press kit** a full set of material for the journalists. This should include press release(s) covering the main message(s) being communicated, relevant background material, such as specially prepared press fact sheets, relevant publications and possibly brochures as well as handout versions of the presentation slides. Also include CVs of relevant people and a contact sheet to simplify journalistic follow up.

Prepare suitable illustrations – graphics, diagrams and/or photographs. These can be provided on a CD, or a suitable website address supplied to enable the journalist to download them.

Presentations (see also 6.9) should be prepared in detail with regard to both their contents and length. As with any form of media message, keep the contents simple and the messages clear. Do not go deeply into scientific detail; a media presentation is not a sector-specific scientific.

Make sure that journalists are collected and accompanied during facility visits, with competent people on hand to answer questions – and to ensure their safety. Have available a suitable area for TV or radio journalists to record specific interviews.

Recommendation:

Mail/email press kits to journalists who were on your invitationlist but did not attend the event. This could well have been due to circumstances beyond their control.

Build good relationships with journalists

Do not wait for journalists to contact you. Go to them and anticipate their needs by drawing their attention to key events and particularly interesting developments. When journalists are looking for information, they want to obtain it quickly – perhaps for the next day's article or programme. Respond as rapidly as possible, and never leave a question unanswered. If you are unable to react in time, take the trouble to call or email explaining the reason.

Prepare print project' publications

Media coverage can have a high impact, but its effect is transitory and its content is to some extent beyond your control. Printed publications play a complementary role, giving a more permanent record of your messages, precisely as you wish to present them and in a form that can be filed for future reference. Another advantage is that they can be distributed to audiences of your own choice.

Select type of publication

The first step is to determine which type(s) of publication best meets the perceived needs. From this follows the allocation of the budget and the assignment of human resources who are able to carry out the work. The following indicate just some of the main types that could be considered:

A **'flagship' brochure** reflects the status of a project and serves as a prestigious calling card for presentation to influential readers – European policy-makers, national and local authorities, potential partners, investors, industrial end-users, technology licensees, media representatives…

Produced early in the lifetime of a project or network, a brochure can:

- Provide an overview of the consortium, and highlight the reputation/strengths of individual partners;

- Review the background and technological rationale for undertaking the initiative;

- Indicate the targeted results, and emphasise the scale of breakthrough/ innovation expected to be achieved;

- Explain the provision being made for education, knowledge sharing and exploitation of the findings;

- Predict the likely long-term impact in terms of European competitiveness, employment, environmental gain and quality-of-life enhancement;

- Attract interest in association with, and contribution to, an initiative from parties recognising a potential for profitable participation in the fruits of the eventual discoveries; and/or

- Help SME partners, who may not be able to afford such an exercise alone.

A periodic newsletter offers the means to report unfolding developments during the course of a project. Depending on the choice of content, it can be circulated internally to inform individuals within partner organisations, and externally to your target audiences.

Typical candidate stories that could be considered for inclusion are:

- Suitably edited versions of project press releases;

- Announcements of progress by single partners or workgroup collaborators;

- Reports on conferences and meetings;

- News of milestone achievements;

- Personnel announcements; and

- Information about forthcoming events.

Newsletters of this nature are often issued three to four times a year – but even an annual publication can serve as a useful update to information contained in a main project brochure.

A case history sheet serves as a concise reference to the nature and scope of a project or to specific deliverables. Typically contained within a double-sided A4 sheet, it forms an inexpensive first-line response to requests for information. It is equally suitable as a handout to site visitors and conference

Example of ISTOK-SOYUZ project promo-flyer cover page with logo, slogan

EECA ICT cluster projects' joint newsletter (cover page)

attendees, and as an element for inclusion in press kits or mailed approaches to prospective TV contacts. Converted into pdf electronic file format, it can be posted on your website or used as a moderately sized attachment to email correspondence.

In the scientific context, **posters/roll-ups** are commonly produced to describe individual strands of research at specialist conferences and meetings. However, posters of a more generic nature can be used to introduce complete projects and networks to the wider world. These are necessarily even more briefly than case history sheets, and can provide only the briefest of summaries. In addition to displays at exhibitions and public meetings, they can be supplied to universities and schools with a view to simulating student interest.

- All scientists have a *professional responsibility to communicate* their research to public audiences and to offer appropriate guidance and advice where appropriate. *The popular media is a major channel for such communication* and should be embraced rather than shunned.

- Get help where it is available – your organisation's press or media officer, for example.

- Keep up-to-date with media coverage of science in general and your area in particular.

- Attend workshops, seminars etc. that enable scientists and journalists to meet and discuss relevant issues. Get to know how journalists work and the constraints that they face.

- Where your work is at a preliminary stage or has yet to be published in a peer-reviewed journal, make this clear in interviews.

- If your findings and conclusions differ from those of other established scientists in the field, make this clear. At the same time, don't talk up the 'novelty' aspect of your work just to appeal to the media.

- Be especially careful when communicating risks or benefits identified in your research. Always express risk/benefit in a meaningful context that people can understand. Never talk of relative risk without clearly stating the absolute risk in simple terms.

- Where your research has implications for lifestyle changes or public policy, be particularly careful how you describe it. It is here that the maximum potential for distortion can arise. This may be the case when your work focuses on, say, dietary issues, personal security, the state of the environment, etc. Be prepared for social, ethical, political discussion and questions in this context.

- ENGAGE! Seek out opportunities to communicate directly with civil society groups and members and to discuss the implications of your work. After all, in alot of cases they will actually have paid for it. Maintain and build their trust in what you are doing whenever you can.

From the "Guidelines for scientists on communicating with the media[13]".

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[13]   These Guidelines , together with the full MESSENGER report, can be downloaded from   and may be distributed freely. The MESSENGER project was funded as a FP6 Specific Support Action by DG Research – Science in Society, Contract No. 013590

1.3.15 Using social media

Mainstream (traditional) media, presented in 1.3.14, continues to represent the most effective platform for disseminating scientific information to broad audiences; 66% of Americans get their news through television, 43% through the internet, 31% through newspapers, and 19% through radio (participants were allowed to name two sources) 2011 Pew poll[14].

Nevertheless, in the age of the internet social media tools offer a powerful way for scientists to boost their professional profile and act as a public voice for science. Although the type of online conversations and shared content can vary widely, scientists are increasingly using social media as a way to share journal articles, their thoughts and opinions, post updates from conferences and meetings, and circulate information about professional opportunities and upcoming events. Google searches now represent the standard approach for discovering information about a topic or person. Lack of an online presence can limit a researcher's visibility, and runs the risk that undesirable search results appear before desirable ones. Public visibility and constructive conversation on social media networks can be beneficial for scientists, impacting research in a number of key ways, including dissemination of the project results.

Social media enables new ways to communicate, interact and work with partners and other individuals outside the organization, as well as facilitate collaboration and knowledge sharing within the organization. Social media tools may include social networks (e.g. Facebook, Linkedin, etc.), microblogging (e.g. Twitter), blogs, internal wikis and/or other collaborative social software.

Understanding how social media is different from traditional media has a major impact on whether you are successful with social media.

Difference between social and traditional media[15]

Social Media	Traditional Media
Two-way conversation	One-way conversation
Open system	Closed system
Transparent	Opaque
One-on-one marketing	Mass marketing
User-generated Content	Professional content
Authentic content	Polished content
FREE platform	Paid platform
Metric: Engagement	Metric: Reach/ frequency
Unstructured communication	Controlled communication
Real time creation	Pre-produced/ scheduled
Bottom-up strategy	Top-down strategy
Informallanguage	Formallanguage
Active involvement	Passive involvement

14   *http://www.people-press.org/2011/09/22/press-widely-criticized-but-trusted-more-than-other-institutions/*

15   From *http://www.business2community.com/social-media/16-differences-between-social-media-and-traditional-media-0211995*

Using social media can be really beneficial

- to get new information,

- to increase the impact and visibility of research papers,

- to engage with fellow researchers and meet new collaborators,

- to improve a researcher's public profile, build your online reputation and thus competitiveness.

The internet represents an increasingly vast toolbox, and it can be difficult to choose among the long list of "core" resources. For those starting, it is critical to define what you want to achieve, and then set out to use the tools that are best targeted toward this goal.

Blogs – is traditional, long-form online narrative. Wordpress and Blogger are two of the most popular sites to offer free blog hosting, including easy graphical interfaces for constructing posts and changing blog layouts. There are also some thematic oriented sites for scientific communities.

Field of Science is an independent science blog network. Each blogger on Field of Science is free to run their own advertising on their blog, but the network itself is not for profit. Although part of a network, bloggers on Field of Science exercise complete editorial freedom and own their blogs and content. There are no requirements, quotas or restrictions.

Blog recommendations[16]

- Update your blog frequently (i.e.an article every fifteen days);

- Don't be a blog slave (don't write if you aren't inspired);

- Support the article with an amazing image;

- Include other references and links in order for the reader to contrast and expand the information;

- Thank and answer comments;

- Save rules of courtesy and respect both in article and in comments;

- Every time you publish, communicate it at your social networks.

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[16]   FP7project *http://haivisio.eu/*. Training course on Dissemination and Communication Techniques and Tools for European projects.

Twitter is a tool that allows you to communicate, through short messages updates, opinions, resources and information with followers.

Twitter is useful for in-the-moment conversations, customized news streams, and building and maintaining communities. Devices such as hashtags, a phrase beginning with a hash/pound sign, allow users to aggregate tweets according to topic. For example[17], conference attendees created a specific hashtag for a particular event, such as #asm2012 for the General Meeting of the American Society for Microbiology that took place in San Francisco (June 16–19, 2012). Tweets incorporating #asm2012 became so popular during the conference that this hashtag was listed as "trending" on the main Twitter homepage – a rare but impressive feat for online scientific discussions. Users however should note that Twitter itself quickly archives "old" content – for example, tweets united under a popular conference hashtag may no longer be visible via searches after a few days.

Twit recommendations[18]:

• Send out short (140 character) messages called tweets;

• Aim for at least one tweet a day;

• Be sure to retweet other people's tweets – it's all about sharing!;

• Try to include a link to something in your tweets;

• Good way to connect with other people with shared interests and build communities of practice.

FACEBOOK – is the most widely used social media site.

With Facebook you can easily:

• create a personal profile,

• create a conference or workshop page,

• create private or public spaces for themed discussions,

• promote your research to a wider audience and receive early feedback for research ideas,

• recruit research participants,

• publish research news as they happen.

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17   An Introduction to Social Media for Scientists, Holly M. Bik,
Miriam C. Goldstein, Published: April 23, 2013 DOI: 10.1371/journal.pbio.1001535

18   FP7project *http://haivisio.eu/*. Training course on Dissemination and
Communication Techniques and Tools for European projects.

It allows you to share updates, links, resources and have discussions. People can follow your updates and activities and post questions or comments on your wall. You can see who visits your page.

Nevertheless there are divided opinions about Facebook among researchers, and they tend to view this tool in two ways[19]:

1) they create a public profile that may reach a different audience than Twitter or blogs, or

2) they use Facebook for non-research-related purposes at all, perhaps maintaining private profiles for only their closest friends and family.

19   An Introduction to Social Media for Scientists, Holly M. Bik, Miriam C. Goldstein, Published: April 23, 2013 DOI: 10.1371/journal.pbio.1001535

Pros and Cons on different social media[20]

Platforms	Props	Cons
Blogs	• Longevity; posts are accessible via search engines • Robust platform for building an online reputation	• Time investment for preparing thoughtful posts • Posts should be disseminated and advertised via other platforms
Twitter	• Low time investment, short posts • Ability to rapidly join in on online conversations • The most current source for breaking news and topical conversation	• Posts are quickly buried under new content • Twitter does not make its archive database accessible to search • Gaining followers can be a slow and difficult process
Facebook	• Established juggernaut in the social media world • Ability to create "groups" and "pages" for a person or cause	• Privacy concerns • Frequent changes tolayout, features, and settings
Google+	• Integration with Google tools • Easily manage privacy/visibility by grouping contacts into "circles"	• User base not unique compared to other sites • Users still unsure how to use it

LinkedIn is an online social network for business professionals and the largest professional networking site available today. It's different than other social networking sites like Facebook because it's designed specifically for professional networking (finding a job, connecting with potential business partners) rather than simply making friends or sharing media like photos, videos and music. LinkedIn is strictly used for exchanging knowledge, ideas, and opportunities and has increasingly become a leader in helping individuals find groups of interest as well as jobs in their field.

LinkedIn is usually one of the first to show up in search engine results when using it to find people. Updating your LinkedIn profile keeps others abreast of what you're doing and what changes you are making in your professional life. By using LinkedIn tools such as Search, Answers, and Groups you can stay informed of the latest information in the field.

With the LinkedIn you may:

Upload your online resume or CV

Connect with colleagues and others in your field

Add your publications, research activities or projects to your profile

Be easily found by Google

Connect easily to people you meet at conferences

Create or join debate groups and engage in discussions with peers

Build a professional network beyond the boundaries of academia

Example: The largest and the official HORIZON 2020 group on LinkedIn (Created: January 1, 2011, Members: 170,865, Subgroups: 20) provides excellent networking opportunities for R&D and Innovation, Funds, Grants, Call for Proposals, H2020 Projects and Partner Search within 170,000+ members from around the World, and Everything from Idea to Market, from Business Plan to Start-up, from Research to Development to Implementation to Prototype to Product to Invention to Patents to Valorisation, Incubation, Acceleration, Commercialization and Technology Transfer activities.

Conclusion

The increasing use of online resources may eventually transform and expand the culture of science as a whole.

For instance, there is evidence that an active online presence may directly impact a researcher's credentials as measured through traditional metrics. One UK researcher observed that tweeting and blogging about her own papers led to spikes in the number of article downloads, even for older literature that had been available for years without much previous attention. Eysenbach[21] reported that highly tweeted journal articles were 11 times more likely to be highly cited versus articles without strong social media coverage.

Along with improving links between scientists, online interactions have the potential to enhance "broader impacts" by improving communication between scientists and the general public. A well-thought-out online communication strategy can satisfy broader impacts criteria that are required by EC in the framework of European research projects.
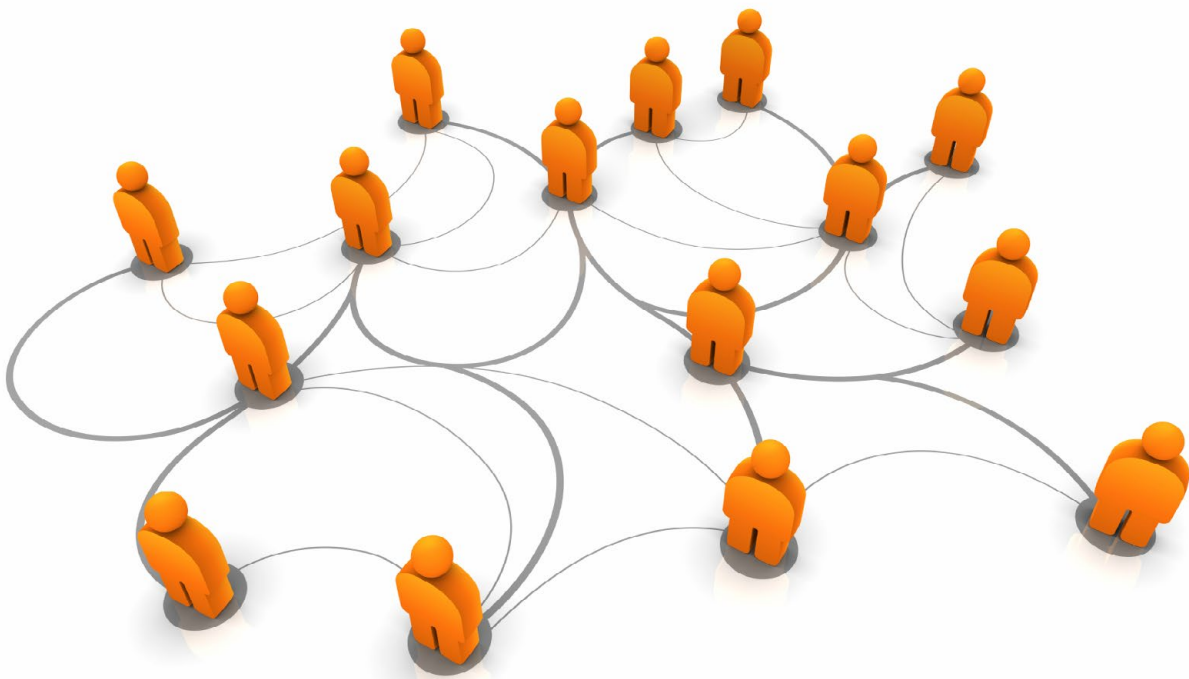
[21]   Eysenbach G (2011) Can tweets predict citations? Metrics of social impact based on twitter and correlation with traditional metrics of scientific impact. J Med Internet Res 13: e123. doi: 10.2196/jmir.2012

Develop
Successful
Networking
in International
R&D projects

EU funding and bilateral funding schemes have successfully generated durable links between international collaboration partners; as one result a clustering of scientific organisations has increased over time, who are still willing to continue and to enlarge the international collaboration networks and access additional resources.

Building on that framework, the BILAT-RUS-Advanced project has implemented an analysis to get insights into the functioning of EU-RUS R&D cooperation. One of the outcomes of the analysis is: for strengthening competitiveness and innovation, potential cooperation partner search cannot be limited to regional or even national borders. Russian research organisations offer valuable scientific excellence and specific knowledge and on the other hand EU research organisations are attractive due to modern laboratories and equipment and moreover with regard to the integration into the EU Research Area and its networks.

What have been the outcomes of international cooperation? According to the participants of the analysis, the research aims of EU and Russian researchers have been satisfactorily fulfilled. The collaboration and communication in general has been professionally organised. The partners were able to build long-lasting networks and contacts. All used public funding schemes for R&D projects in order to finance the international collaboration. More information about public funding is offered at intermediary institutions. In addition intermediaries act as a broker to conferences and matchmaking events.

The praxis-oriented recommendation at the end of Chapter 2.1 which have been mentioned by the interviewees may avoid surprises for newcomers within the EU-RUS S&I research cooperation.

Networking is one of the major elements of capacity building activities and a very important indicator for integration into the global science and technology space. Integration of Russian innovation actors into European networks provides them with access to the European research market and, vice versa, for European partners - to Russian science and industries. Joint workshops organized by the BILAT-RUS-Advanced project aimed at raising awareness about the European Networks and Russian innovation players and discussion of cooperation ideas showed good efficiency as an integration tool. The main practical output of three integration workshops is the development of recommendations on future integration of Russian innovation actors into European Networks (Chapter 2.2)

Intermediary institutions play important role in R&D cooperation and networking activities. Generally they execute the following functions:

- demand articulation: articulating R&D needs and corresponding demands in terms of technology, knowledge, funding, and policy;

- network formation: facilitation of linkages between relevant actors (scanning, scoping, filtering, and matchmaking of possible cooperation partners);

- innovation process management: enhancing alignment and learning of the multi-actor network, which involves facilitating learning and cooperation in the innovation process

And when it comes to the topic of internationalization of EU R&D actors the key intermediaries are National Contact Points (NCPs) for European Research Programs, Enterprise Europe Network (EEN), Technology Transfer Offices and Networks to name a few. The Chapter 2.3 "The role of intermediary institutions in Internationalization" outlines mostly the role of NCPs and EEN centers in international networking with concrete success stories.

A particular impact of communication and dissemination activities in networking is hard to be overestimated. Effective communication and dissemination is of great importance in networking, since networking is about sharing information, ideas, resources, opportunities. This is why the more communication and dissemination channels are used while implementing the international STI project, the better understanding between the Project partners, the closer and more efficient the collaboration within the network.

Thus effective communication and dissemination is one of the necessary conditions for the successful international R&D collaboration. Chapter 2.4 presents findings and conclusions for communication and dissemination strategies in international R&R projects, gives some tips and practical recommendations on this issue.

2.1 Impact of the international R&D cooperation

There is evidence that the Framework Programmes have had a major influence on networking, both in strengthening existing networks and creating new networks. Consortia shaped under the FP are clear examples of international R&D cooperation, since they involve partners from different nationalities which invest their own resources in R&D activities, in order to obtain appropriable results. The integration between collaborating R&D organisations has increased over time. The size and length of the ventures has increased also. The networks have shown themselves to be highly durable with cooperation, both between individual researchers and between research institutions, continuing after the initial joint projects. All this indicates a move towards a more integrated European Research Area, and that collaboration within European funding frameworks has lead into more durable links between collaboration partners.

There has also been a significant tendency for the same organisations to participate in consecutive Framework Programmes and that there is recurring collaboration between the same organisations within the Framework Programmes. Furthermore, the clustering of organisations seems to have increased over time.

Inter-organisational/international cooperation, be that in the form of networks, consortia or other types of arrangements, presents an opportunity to access additional resources which each organisation would not otherwise have.

The measurement of the impact of international cooperation is rather diffuse and often depending on the individual assessment of each participant within the cooperation. Nevertheless the partners of BILAT-RUS-Advanced have been keen to identify exactly these individual views on international cooperation, with focus on the cooperation between the EU Member States/Associated Countries and the Russian Federation.

In order to identify the "evolution of the EU – Russian STI cooperation: FP7 and other programmes and their impact on innovation and scientific excellence", the BILAT-RUS-Advanced team designed an online survey and conducted telephone interviews. A questionnaire has been developed, which has been made available via an internet website for the directly invited participants. In order to maximise the response rate of the online survey, emails were sent to all experts with information about the BILAT-RUS-Advanced project, the objectives of the survey and the direct link to the survey. In total 658 experts (403 Russian as well as 255 EU MS/AC) have been invited to the survey. The team received 90 responses (55 Russian and 35 EU MS/AC), this is a response rate of 14 %. The findings (Chapter 2.1.2 – 2.1.5) underline the successful cooperation between Russian and European researchers and are able to give valuable hints for future cooperation out of their personal experiences.

Within the survey the participants had the possibility to agree to a telephone interview. The voluntary interviewees received the likewise a developed questionnaire for the telephone interview in advance as well.

The telephone interviews deepened the results of the online survey, as most of the questions aimed at short and long term results of the respective research project, the EU or RUS experts have been cooperated. In total 12 experts (six Russian experts and 6 from EU MS/AC) have been willing to answer to the questions, which have been identical to all interviewees.

This twofold inquiry revealed interesting insights on the topic of international collaboration, as regards networking in general, the quality of research results, funding schemes and eventual barriers for an efficient cooperation. To wrap up the results, all experts have been very pleased with their success rate to reach the projects objectives.

The results of both, the online survey and the telephone interviews has been made available within another publication, which can be downloaded on the BILAT-RUS-Advanced webpage.

2.1.1 Different forms of international R&D cooperation/networking

The rapidly increasing globalization process and global challenges affect the demands on the R&D community. New forms of international cooperation are becoming a key feature of good scientific endeavour.[22] International cooperation in science often arises from individual contacts through the growing international mobility of students and researchers. Enterprises often are stimulated to start cross-border R&D projects through their commercial presence in foreign markets.[23] Thus, international R&D cooperation is initiated by a small range of actors (companies, research institutes or other organizations) and without public contribution. Regarding, for example, informational and financial barriers that most actors face in internationalization of R&D activities, funding from public authorities remains nevertheless essential.[24] In this context, the national public sector's activities in funding R&D have to be linked to the international level. Some selected examples from this sphere can be introduced at this point.

The EU offers several funding instruments for R&D-focused cross border collaboration. Within H2020 – which is the biggest EU research and innovation programme ever – European researchers are given the opportunity to apply for financial support and cooperate with their counterparts around the world in H2020 projects on any topic.[25] Generally all H2020 calls are open to Russian participants. In addition, in some parts of H2020, topics have been flagged as being particularly suitable for international cooperation and consortia are encouraged to include non-EU partners. Furthermore, the ERA-NET Cofund under the framework of H2020 allows participating funding agencies to launch joint calls for proposals with a contribution from the EU Commission to the national funding amount.[26] Besides the H2020 co-funding, in the framework of the EU Joint Programme Initiatives (JPI) calls which require the participation of certain non-EU partners are initiated.[27] Moreover, Russia is a member of EUREKA network, in which cross-border cooperation projects to conduct market-oriented industrial research and development are promoted.[28]

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[22]   *http://ec.europa.eu/research/participants/portal4/desktop/en/home.html*

[23]   Dachs et al. 2012: Internationalisation of business investments in R&D and analysis of their economic impact, (p. 3), *https://ec.europa.eu/research/innovation-union/pdf/internationalisation_business-rd_final-report.pdf*

[24]   Edwards et al. 2010: Patterns and barriers for innovation and R&D cooperation between Argentine and Spanish firms, (p.16), *http://www.ingenio.upv.es/sites/default/files/working-paper/patterns_and_barriers_for_innovation_and_r_d_cooperation_between_argentine_and_spanish_firms.pdf*

[25]   *http://ec.europa.eu/programmes/horizon2020/*

[26]   *http://ec.europa.eu/research/era/era-net-cofund-h2020-infoday2014.htm*

[27]   *http://ec.europa.eu/research/era/joint-programming-initiatives_en.html*

[28]   *http://www.eurekanetwork.org/countries/russia*

Some of the most important funding sources for international R&D projects in the Russian Federation are the Ministry of Education & Science, the Ministry of Industry & Trade and e.g. Rosatom or specialized agencies like Foundation for Assistance to Small Innovative Enterprises (FASIE) or Russian Foundation for Basic Research (RFBR). Collaboration with EU countries is addressed within the framework of the Federal Targeted Programme "R&D in Priority Areas of Development of the Russian S&T Complex 2014–2020" managed by the Ministry of Education & Science. FASIE is offering direct financial, informational and other aid to foster international collaborations of Russian SMEs.[29] RFBR supports establishing scientific links and distribution of information in the area of basic research in Russia and abroad, and international scientific cooperation in the field of basic scientific research.[30]

Apart from the introduced examples, there is a broad range of bilateral R&D cooperation agreements between EU countries and Russia, which also offer financing and promotion possibilities.

Enterprises and research institutes that are willing to internationalize their R&D activities are facing a complex field of institutions and funding opportunities. Thus establishing first sustainable cross-border contacts to potential R&D partners may prove difficult. International cooperation networks – which are largely the result of bi- and multilateral cooperation agreements – are indispensable in this context. These allow multiple interactions and transferences between the heterogeneous groups of enterprises, research institutes, as well as societal and governmental actors. Intermediary institutions within the networks supply access to specific information and connect different types of actors (see more details in 2.3). Thus getting into contact with an intermediary agency can be very fruitful. In addition to insider knowledge and arrangement of first contacts to potential R&D partners, intermediaries provide access to conferences and matchmaking events. Frequent participation in different exchange formats is not only advantageous to individual actors, but also is crucial for shaping the international R&D community.

2.1.2 Why is it important to engage in international R&D cooperation?

The overarching mega-trends of globalization generate enormous economic, energy, demographic, environmental, cultural, security and political interdependencies. The role of science, technology and innovation is emphasized in addressing critical issues and providing the economic, societal or political spheres with appropriate solutions.[31] From the macro point of view, contemporary challenges such as, for example, climate change, keeping access to natural resources, safeguarding food and drinking water security or managing the increasing digitalization are characterized by their transnational nature and are not only beyond the scope of individual organizations but also place excessive demands on national innovation systems. In this context, appropriate solutions can only be generated within an internationally linked R&D community.[32]

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[29]   *http://www.fasie.ru*

[31]   *http://www.rfbr.ru/rffi/eng/about*

[32]   *http://www.unesco.org/new/en/media-services/single-view/news/science_technology_and_innovation_critical_means_of_implementation_for_sustainable_development_goals/#.Va4_6Pm8SUk*

From the micro point of view, research institutes and enterprises are faced with a demand for knowledge they cannot satisfy with their internal resources alone. Fast growing technologies and rapid changes in innovation has triggered the organizations to face the challenge of competitive advantages, which hardly can be addressed within a local or regional context. Thus, while screening the R&D landscape for potential cooperation partners organizations cannot limit themselves by regional or even national borders. Cooperation activities with other firms or institutions generate opportunities to access complementary technological resources, for faster development of innovations, to improve market access, to realize economies of scale and scope, and to share costs and spread risk. In this context, the exploitation of location-specific innovation advantages not only complements the problem solution process, but also promotes the organizations' competitiveness.[33] The main driving factors for European organizations to engage in R&D collaborations with Russian organizations were the scientific excellence and specific knowledge of the Russian researcher teams and their very satisfying concrete deliverables. Russian organizations were mainly motivated by the opportunities of increasing experiences in international teamwork, gaining access to EU funding as well as to modern laboratories and equipment, and promoting of own competences on EU market.

The following quotations are aimed to strengthen the information provided within this guide. The quotations are originating from the interview series, which has been conducted in the framework of the BILAT-RUS-Advanced project.

"I'm very satisfied; as the Russian partners are delivering good results (studies, reports, events)." *Citation from a European researcher*

"It was an important project for our team development. We met and established contacts with leading EU scientists and groups in our sphere. As a result, we have become more integrated into the global scientific community." *Citation from a Russian researcher*

"This type of the projects allows Russian researchers to meet with such form of research as consortium, to increase their reputation on national level, to take part in international brokerage events and exhibitions and to extend their partners' network." *Citation from a Russian researcher*

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[33]   Bergfeld 2009: Global innovation leadership: The strategic development of worldwide innovation competence, (p. 86)

The table below refers to the statements the interviewees have done during the interviews with regard to their specific motivation to start an international collaboration.

Table 2.1. Motivation to engage in international STI cooperation, based on the results of the interviews with Russian and international stakeholders

Motivation to cooperate with EU / Russian Partners

EU interviewees	RF interviewees
Provision of good environmental conditions for projects	Cooperation with Europe is important for the competitiveness of Russian R&D teams
There are excellent researcher teams in Russia, with important knowledge for the EU	Opens new markets and increases experiences in teamwork and EU project management
There have been different experiences but normally they deliver their duties in a very satisfying way and are very committed.	Gaining access to funding and initiating new projects
Mostly the Russian partners have been known before and were integrated due to their specific knowledge and their unique features	Integration into the EU Research Area and its networks opportunity to work with internationally acknowledged scientists, to achieve better and more diversified results
	Access to modernlaboratories and equipment
	Promoting of own competences on EU market

2.1.3 The consequences of international R&D cooperation

International cooperation in R&D has manifold impacts on participating organizations and the R&D community as a whole. From a general and long term perspective, the improvement of international R&D infrastructures is the main contribution of cross-border R&D collaborations, which is especially of importance for research facilities or public authorities. Short term objectives – which are especially relevant for SMEs – can be addressed, for example, by a solution to a punctual technologic problem from abroad. However, impact of individual cross-border R&D projects varies due to individual and institutional circumstances.

Concrete results of EU-RUS collaboration, which has been identified within the online survey of Bilat-RUS advanced project were for example the increased scientific recognition (national and international), though publications in leading scientific journals, improved technological know-how and better career opportunities for participating researchers. The following table represents an overview of the results of the online survey, conducted in the framework of the analysis within the BILAT-RUS-Advanced project:

Table 2.2. Outcomes and important objectives identified within the online analysis

Mentioned outcomes in the online survey	Mentioned objectives, identified in the survey
Scientific publications and presentations in journals or conferences	Scientific recognition (national and international)
Scientific recognition	Improved technological know-how

Improved technological know-how	Establishment of new contacts (research and business)
Good contacts with other research institutions	Learning methodology of working in international teams
Working with international teams	Gaining experience in IPR issues
New tools or technological solutions have not been achieved within that group	Better career opportunities
No commercial benefits	

Within the telephone interviews, the experts have been asked about the concrete outcomes of the collaboration with international research partners. The answers have been continuously positive, even if the interviewees referred to obstacles; they have encountered during the research projects. The following citations impart an impression about experiences of international collaboration.

"The expectations were fulfilled. Cooperation was good, and research was performed successfully among the consortium (involving Russian and Ukrainian partners) in spite of the ups and downs of the political situation." *Citation from a European researcher*

"Our team and EU partners have initiated a few common projects." *Citation from a Russian researcher*

"With regard to the content the project has been very attractive. There are important synergies between the Russian approaches (theoretically) and the German ones (more use-oriented)." *Citation from a European researcher*

In addition to that the third table shows further mentioned benefits, an international R&D project offers to its participants.

Table 2.3. *The outcomes of international R&D cooperation*

EU	RF
Russian partners delivered good results within the projects (studies, reports, events)	Establishment of new contacts withleading scientists in their sphere and expansion of cooperation network
A new network has been successfully created	Preparation of publications inleading scientific journals
The contacts to the Russian partners continued well after the project has ended	Maintaining the working relationship with new partners and initiation of common projects
New successful EU research project applications	Increase of visibility within international research
Russia has complementary approaches in many aspects on variouslevels, joint solutions are necessary for transboundary projects (e.g. synergies between Russian approaches – more theoretically and EU ones – more use-oriented)	Long term impact such as continuing EU-RUS projects (research projects, joint events and staff exchange)

Nevertheless, also within R&D there are still difficulties in cross-border collaborations. The resilience of the national dimension in education, science and technology policy and public funding, proximity effects in the exchanges of tacit knowledge requiring face-to-face interactions, and the inertia of personal and institutional networks can

counterbalance international cooperation. Also cultural and language barriers – which are considered as major barriers for cooperation among partners – have deep influence on R&D collaborations outcomes.

In general the collaboration has been shaped by smoothness, openness, and high efficiency of communication. But in some cases, the collaboration partners have been confronted with unexpected problems. Please find below some of the mentioned problems.

- At the administrative level in Russia, there are too many people involved who slowed down the processes

- The severe Visa rules for Russians for travelling in Europe, there are too long planning periods

- Difficulties to measure aims of STI projects, because there are no mechanisms in finding out the long term effect of the project

- The political situation (from Dec. 2014) is influencing the STI cooperation between the Russian Federation and Europe, but here still differ the experiences

- Language barriers and cultural differences

- Lack of consulting and financial support for international projects participants from the Russian side

- International S&T cooperation is not presented as a priority in Russian Federal initiatives

"The main obstacle is the lack of understanding among the Russian bureaucrats that international cooperation is a factor for scientists' career." *Citation from a Russian researcher*

2.1.4 Relevant actors within international R&D cooperation

Apart from supporting funding programmes and advanced recommendations within international cooperation projects in the field of STI, there is one another very important characteristic. The actors themselves, active in collaborative projects, are important as they are shaping and influencing the course of the project; they are acting on a micro level. Furthermore on the meso level, there are actors respectively organisations or institutions, whose business it is to foster international cooperation in science, technology and innovation. The following table will give a short overview about relevant actors in international STI cooperation.

Table 2.4. *Actors within international R&D cooperation*

Actors within a project	Actors supporting international cooperation[34]
Researchers within universities	Chamber of commerce, Industry associations
Researchers within research institutes	International chambers
Suitable enterprises, able to adopt research results and support the implementation of innovation	Regional development agencies
Facilitators, supporting the administrative tasks within a project	Enterprise Europe Network (EEN)
Networker, keeping together the very heterogeneous group interacting in the framework of the project and beyond	National contact points for European research programmes

2.1.5 Recommendations of international stakeholders, active in R&D cooperation

With regard to the European Framework Programmes (FP6 and FP7) Russia has always had a cooperation agreement in the field of science and technology with the EU and as well other bilateral S&T agreements with a broad range of EU member states and countries associated to the FP. And amongst the all third countries, cooperating with the EU, Russia has been the most active. For both funding periods (2002-2006 and 2007-2013) Russia has the highest participation in the FP of all third countries (countries not being EU Member State or Associated Country to the FP).

International R&D cooperation does not occur only under the European Framework Programmes for RTD. There is a variety of different policies and instruments available to substantiate international R&D cooperation. Apart from Horizon 2020 there are other EU initiatives like EUREKA or COST, where Russian scientists already participate as a partner. Among all non-COST member countries, Russia had the highest participation in COST actions. Furthermore most of the EU countries and associated countries dispose of bilateral programs with the Russian Federation supporting the collaboration in the field of science and technology. Last but not least the RF has also implemented a big national funding programme for R&D and integrated the possibility to fund also international cooperation and is open for foreign researchers.

However, internationalization in Russia starts from low level. Still, many R&D organizations are isolated from each other and from the outside world. The main access obstacles are a lack of information about Russian research programmes, linguistic barriers and financial and legal issues. Nevertheless, enhancing internationalization of the R&D sector has been identified by Russian policy makers as one important aspect for improving the quality and results of the Russian R&D system.

The interviewees emphasized especially on really hands-on advices for researchers thinking about a future international collaboration. Their experiences are very valuable and can avoid potential oversights.

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[34]   Can be summarized as "intermediary institutions", see 2.3 in more details.

"That's clearly a lesson learned, that administrative procedures in Russia have to start early, to have everything ready in time. My recommendation: take enough time to discuss these things over." *Citation from a European researcher*

"I would strongly encourage other organisations to cooperate with Russian research organisations. They are a valuable partner in STI cooperation and are a priority research partner. The scientific cooperation should be promoted, especially in that times in order to overcome may be negative influences and to keep the dialogue alive." *Citation from a European researcher*

During the interviews in BILAT-RUS-Advanced with Russian and international stakeholders, the interviewees have formulated very divers recommendations. The fifth table summarises the advantages and disadvantages of the most prominent funding programmes.

Table 2.5. Recommendations for a suitable funding scheme

Pro	Con
Horizon 2020	
They have a good funding rate and are big	They are pursuing internal EU priorities
Most attractive scheme for international cooperation	No automatic funding for Russian entities
Provides access to international research networks	—
ERA Nets	
More balanced as they are dealing with topics of mutual interest and with regard to the structure of the partners	—
For smaller scale projects with a narrower thematic focus	—
Bilateral projects (in different countries with Russia)	
Easier to apply for and might pave the way to participate in Horizon 2020 projects	—
Cost Programme (European cooperation in science and technology)	
Aims: promotion of networking and cooperation STI	—
Federal Target Programme for Research and Technological Development	
Effective tool for international collaborations	Highly bureaucratized (the bilateral calls are identified as attractive but bureaucratic as well)

In the following there are recommendations, given by the interviewees, which are of interest for any researcher who intends to engage in international collaboration:

• Working with Russian researchers is highly recommended as they are a valuable partner in STI cooperation

• Scientific cooperation should be promoted, especially in the current state of the situation in order to overcome negative influences and to keep the dialogue alive.

• Russian partners should not be afraid to express their desires that should be included into the agreements

- EU organizations active in Horizon 2020 should have more information about the conditions in Russia regarding STI cooperation

- Work closer with National Contact Points from Russia, as the NCPs in Russia are very useful in providing advice and consultancy to Russian organisations interested in collaborating with EU partners

- EU organization should know more about EU-RU bilateral calls and should not be afraid to participate

- Russian stakeholders mentioned similar problems as funding issues, organizational procedures, high level of bureaucracy, complicated contracting procedures, differences in reporting and financial procedures, difficulties in opening project bank accounts

Recommendations regarding partner search:

- Partners should be well known in advance and reliable

- Partners should have already experiences in international cooperation

- Use of partner search engines such as Cordis or EEN

- Rely on personal contacts

- Another effective way to find project partners, is to join international scientific organisations: Russian scientists are traditionally underrepresented there, while in fact they represent a strong platform for partner search

Recommendations regarding project planning:

- The project should be precisely planned in advance (work packages and milestones)

- Maintain a good communication amongst the project partners

- Sensitive planning of financial resources is necessary (salaries and other costs)

- Keep in mind administrative procedures and start early with travel planning

The recommendations regarding the enhancement of STI cooperation between the Russian Federation and EU Member States / AC referring to a more generic approach and have been summarized into five major blocks – see Table below.

Table 2.6. Recommendations for international STI cooperation[35]

Major topics	Characteristics
1) Adjusting and implementing policy strategies	Supporting strategic STI policy making (internationally) by implementing international learning exercises (best practice, country representative exchanges)

[35] „Enhancing science and technology cooperation between the EU and Eastern Europe as well as Central Asia: a critical reflection on the White Paper from a S&T policy perspective" Klaus Schuch, George Bonas and Jörn Sonnenburg, Journal of Innovation and Entrepreneurship 2012, 1:3, a Springer Open Journal.

2) Strengthening research performing institutions	To empower the relevant actors (research institutions) to be able to compete and to cooperate in international S&T programmes, to be in the position to efficiently perform their duties and to adjust to changing demands of society and economy.
3) Strengthening human resources	Improvement of the quality of communication between science and societyTo set up joint training and twinning activities
4) Strengthening the role of the private sector	Supporting private R&D stimulation by offering training on innovation management and foster the private engagement in science, technology and innovation and improve the conditions for investments in innovation.
5) Strengthening sub regional cooperation	Stimulating networking between the science, technology and innovation communities and actors and identify possibilities of establishing regional centers of excellence.

2.2 Integration of Russian innovation actors into European Networks

Science has no borders. As a result of development in information and communication technologies, knowledge sharing and collaborative research became easier and more desirable. Thus, international cooperation in science and technology contributes immensely not only to scientific and technological development on a global context, but also to bridging the regions and nations.

Additionally, the grand challenges such as sustainable development, environment, health, energy that are interdependent and transnational cannot be tackled by any government or institution acting alone. Therefore, international collaboration among governments, international organizations, agencies, companies, universities, researchers is inevitable to tackle these challenges, achieve critical mass and increase efficiency.

Good quality of scientific knowledge is a base for international cooperation and advancing this knowledge is the major motive for international cooperation. In order to set the ground for cooperation, partners should be aware of each other's knowledge based on well-known proven techniques and indicators, such as publication and patent scores. In a highly open and connected world and a single dominant science language (English), this information can/must be easily accessible.

Results of the collaborative research must be transferable to the society. A strong scientific knowledge base is one of Europe's, as well as Russia's, traditional key assets. However, making a better use of publicly funded R&D and increasing its impact on society in the form of economic growth and jobs creation must be an integral part of the international cooperation actions.

Enhancing capacity refers to deploying necessary non-scientific knowledge and skills within organizations. It includes research linking to business sector and their needs and demands, knowledge and experience on international programmes, communication skills, consortium building, negotiating, management of research activities including financial and technical management of projects, development of business plans, etc. **Networking is therefore one of the major elements of capacity building activities and very important indicator for integration in international S&T world.** It requires many years for establishing trust and good working relations.

> Briefly, networking:
> - strengthens the bilateral and multilateral relationships by sharing and developing the knowledge;
> - generates new ideas as exchange of knowledge is a core element of innovation;
> - raises profile of the partners and bring new cooperation possibilities in international area.

2.2.1. Innovation Networks: motivation for participation and assistance to integration

Innovation network is defined as a set of actors interconnected by a series of relationships, ultimately targeted towards creation of a new innovation. There are formal (like Enterprise Europe Network, National Contact Point etc.) and informal (Community of Practice, Innovation Clusters etc.) networks.

In general, individual organisations can have five motives driving them to participation in such networks:

(1) high costs and risks of R&D projects,

(2) an attempt to shorten the period between a research result and its market introduction,

(3) exploration of potential new markets and new market niches,

(4) technology transfer, and

(5) monitoring of technological opportunities and trends.

Association of various actors into an innovation network generally aims to achieve several goals: sharing the costs and risks of innovation, taking advantage of the transaction costs, using strategic and resource advantages, benefiting from the trust the social and cultural fit between the actors. Another important aspect to be considered, when examining an organisation's innovation network activities, is the financial flow advantage that could be obtained as opposed to innovating merely internally. Start-ups and developing firms generally miss economic competencies required for financing R&D in-house and thus forced to find a cooperation partner.

Integration of the Russian innovation actors in the European networks provides them with access to the European research area and European market. Long standing scientific and engineering culture, as well as well-educated workforce, promises a big potential for cooperation. However, realizing this potential depends highly on better linking academia and business and enhancing innovation capacities and capabilities of these innovation actors, especially companies.

Within the BILAT-RUS-Advanced project, the following European initiatives/networks were identified as possible cooperation platforms to support the integration of Russian innovation actors into European networks, due to the fact that they have similar/comparable focuses, structures and activities both in Europe and in Russia, which might facilitate cooperation:

• Technology Platforms.

• Innovation Clusters

• Competence Centers Network

Organization of international workshops was considered as a tool to help the representatives of relevant target groups from Russia (R&D organisations, governmental bodies, companies etc.) and EU (representatives of the European Networks) to have face-to-face meetings for discussing forms and benefits of integration.

The following Workshops were organized:
- Facilitating Cooperation between Russian and European **Technology Platforms** (20 May 2014, Moscow)
- Bridging Russian Innovation **Clusters** to European Cluster Networks (1 October 2014, Bonn)
- State-of-the-Art **Competence Center** Programmes in Europe : Opportunities for EU-Russia Science and Technology Collaboration (28 May 2015, Moscow)

2.2.2 European R&D Programs as a way for integration into European Networks

"Horizon 2020" (H2020) Programme, the biggest Research and Innovation Programme in the world with nearly €80 billion of funding available over 7 years (2014 to 2020), is aiming to improve excellent science, industrial leadership and tackling societal challenges though cooperation, not only at the EU level, but also with the rest of the world. Therefore, H2020 is open to participation of researchers from anywhere in the world.

Regardless of location (an industrialized region, underdeveloped region or an emerging economy), depending on the national priorities and strategies as well as resources dedicated, the potential benefits of international cooperation in S&T can be outlined as follows:

- increase in the quality of research,

- access to key data sources and infrastructures,

- connection to top scientific talent,

- access to unique resources, laboratories,

- new perspectives on science,

- greater standardization of the scientific process,

- avoiding duplications in research and its funding, while increasing efficiency,

- as a mean to improve international relations (science diplomacy).

There is no a common guideline or instructions for international ST cooperation. Nevertheless, a good international S&T cooperation should have the following elements:

- good quality of the scientific knowledge (excellence);

- transferable results for the societies (increase impact on society);

- enhancing capacity (at the individual and organizational level) to conduct higher quality-multinational research and technological development activities.

S&T cooperation between Russia and the EU has along standing experience within the Framework Programmes, in which Russia was the leading international S&T partner of the EU. With the launch of the new European framework programme H2020, this relation entered a new era. On one hand, the changes in the funding rules for international partners explicitly put a new challenge to EU-Russia cooperation in S&T field. On the other hand, general openness of the H2020 provides opportunities to Russia for better connecting to the European Research Area. Parallel to these changes in H2020, new Russian State Programme and the Federal Targeted Programmes for R&D provide a ground for a new balanced relationship in science, technology and innovation, based on shared responsibility through co-funding and programme-level coordination.

Science, technology and innovation is very important to the prosperity of both Russia and Europe. Furthermore, global challenges such as climate change, as well as scarcity of resources such as water, energy and food will have a global impact in the coming years and require better cooperation at the STI area and even integration of policy making processes. Although long standing STI cooperation is embedded in core of EU-Russia relationships, it is not fully utilized by political actors on both sides.

First results of the H2020 Calls indicate a significant decrease in participation from international partners, including from Russia – mainly due to change in funding conditions, not only for Russia, but also for all major international partners of EU[36]. Unavailability of automatic funding might have caused reluctance and hesitation on both sides. Therefore complementary national funding will enable Russian scientists to stay in the European networks and participate in projects without having fear of not being eligible for funding.

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2.2.3 BILAT-RUS Advanced project workshops: assistance to integration of Russian innovation players into European Networks

Technology Platforms[37]

TPs are industry-led stakeholder fora charged with defining research priorities in a broad range of technological areas. European Technology Platforms, aiming to deliver solutions to major challenges of key concern to citizens, such as the ageing society, environment, food and energy security, develop research and innovation agendas and roadmaps for action at EU and national level to be supported by both private and public funding.

In Russia, first Technology Platforms were established in 2011. Currently, there are 34 technology platforms covering the following thematic areas: Medicine and biotechnology, Information and communication technologies, Photonics, Aviation

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37   European Technology Platforms: *http://ec.europa.eu/research/innovation-union/index_ en.cfm?pg=etp*

38   Russian Technology Platforms: *http://www.slideshare.net/RFTRpresents/ development-istitutions-astana*

and space technologies, Nuclear and radiological technologies, Energy technologies, Transport technologies, Technologies of the metal industry and new materials, Extraction of minerals and oil/gas processing, Electronics and mechanic engineering technologies, Environmental development technologies, Industrial technologies, Agriculture and food industry technologies.

> The workshop titled **"Facilitating Cooperation between Russian and European Technology Platforms"** was organized on 20 May 2014, in Moscow, with 99 participants. The Workshop started with presenting the S&T and innovation policy in Russia and the role of Russian Technology Platforms in internationalization. It was followed by presentations of 10 technology platforms from Europe and Russia. Opportunities and challenges of cooperation between Russian and European Technology Platforms were also discussed during the workshop.

Clusters

Clusters aiming to increase regional growth and competitiveness provide a fertile business environment for companies, especially SMEs, to collaborate with research institutions, suppliers, customers and competitors located in the same geographical area.

In Europe, Clusters are well established structures. In Russia, the first national cluster programme was launched in 2012; 13 clusters were started to be supported in 2013 with annual €114M subsidies.

> Workshop titled **"Bridging Russian Innovation Clusters to European Cluster Networks"** was organized on 1 October 2014, in Bonn.
>
> About 40 participants from clusters, regional representatives, universities and research centers discussed the Cluster policies and funding instruments in Europe[38] and in Russia, as well as collaboration exercises including success stories, good practice, as well as challenges for cooperation.

Competence Centers

A Competence Center (also called as Center of Excellence) is a "Structured, long term RTDI collaborations in strategic important areas between academia, industry and the public sector. A competence center has the aim to bridge the gap between scientific and economic innovation by providing a collective environment for academics, industry and other innovation actors and creating sufficient critical mass. Its major difference from clusters is that competence centers focus heavily on human development aspect and more established structures (in the form of a limited company), whereas clusters are acting like a network and collaborate on a project base.

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[38]   EU clusters: *http://ec.europa.eu/enterprise/initiatives/cluster/index_en.htm*

Workshop titled **"State-of-The-Art Competence Center Programmes in Europe: Opportunities for EU-Russia Science and Technology Collaboration"** was organized on 28 May 2015, in Moscow.

Over 100 participants have discussed the innovation policies and tools in Europe and Russia forming and supporting Competence centers, cooperation practices (including experiences of cooperation) and presentation /networking of participating competence center representatives mainly in the field of nanotechnology, advance materials.

Competence center workshop provided an overview and practices of European competence centers to Russian STI stakeholders. As a good functioning model for fostering industry-academia collaboration, it was well received by the Russian stakeholders. Moreover, some cooperation interests have been generated between some European and Russian Competence centers/Centers of Excellences, due to the fact that the basic science is an integral part of the competence center setting and Russia, as indicated before, offers unique chance with its excellent scientific knowledge and understanding. It is recommended that this model should be closely followed by Russian authorities, as a measure for implementation of their national technology initiative. At the same time, Russian innovation actors (including universities, research centers) are recommended to be proactive in establishing cooperation and have a closelook on Competence Centers in Europe, since those centers are usually open for (and in some cases forced to) international cooperation[39].

2.2.4 Recommendations on integration of Russian innovation actors into European Networks

Regarding innovation capacity and framework conditions:

A long term perspective is essential in sustainable EU-Russia cooperation, and STI is the only field of cooperation that can ensure this perspective.

Without a solid scientific base, it is not possible to foster innovation and knowledge based economy. In this context, Russia has an excellent basic science and technology capacity based on its long standing tradition. Moreover, this excellence carried Russian scientists and researchers to the framework programmes and provided a good reputation and recognition. Although H2020 seems to put more focus on the innovation aspect, excellence in science is still in the core of the programme, as well as the starting point for H2020 partnerships, as it was for previous framework programmes. Therefore, Russia has a capacity to be a major international partner also in H2020.

The new Russian Governmental Agenda on the **National Technology Initiative** aims to upgrade its industrial sector and become one of the innovationleaders. The details of the programme, as well as implementation measures, will be defined by the **Agency for strategic initiatives**[40], **Russian Academy of Science** in collaboration with various Russian state organizations before the end of 2015.

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[39]   European Competence Centers can be reached through national innovation support agencies via TAFTIE (The European Network of Innovation Agencies): *http://www.taftie.org/content/task-force-compact-0*

[40]   *http://www.asi.ru/en/*

On the other hand, the new focus of H2020 can be interpreted as a new opportunity for Russian policy makers and innovation actors, as they aim to increase their innovation capacity at the national level. It requires various actions including improving conditions of regulatory and business environments, promotion of human capital (including industry-academia cooperation), improving market conditions, research and development capacities and infrastructures as well as increasing innovation output.

Regarding better utilization of existing networks and programmes:

Russia already has been involved very actively in the **NCP Network**. NCP network will continue to promote Russian participation also in H2020 programme. At the same time, it is very important that Russian NCPs continue to participate in European-wide NCP activities, meetings and be visible to their European colleagues, as well as inform them about the co-funding programme, which enables Russian researchers and other innovation actors to participate in H2020 projects. This information must be extensively promoted throughout Europe, so that the changed funding rules should not be perceived as a barrier (by potential European project coordinators) for Russian participation in H2020. Russian NCPs should also promote this information in their national activities, meaning that following the launch of the new WP 2016–2017, they should include this aspect to their nation-wide awareness raising activities.

Russia has been participating in the **Enterprise Europe Network (EEN)** since 2008 with an outstanding achievement. EEN is one of the European networks that support innovation partnerships of SMEs in Europe and beyond. It is a European-wide recognized instrument for business support.

The Annual Guidance Note 2015 sets the following priorities for the Enterprise Europe Network in the first year of its new period of operations:

- *Establish the new Network and ensure that all partners are fully integrated as soon as possible (including the Business Cooperation Centres outside the EU)*

- *Put in place and **deliver all core services to high quality standards** (including new services such as resource efficiency and support for innovation management).*

- *Enhance the **visibility** of the Network's services*

- *Develop cooperative relationships with local stakeholders to increase visibility of the Network's services and bring these services to a large group of SMEs (through synergies with other service providers).*

- *Encourage a **new generation of Sector Groups** in sectors of strategic interest to Network partners and their host organizations, in line with EU policy developments*

- *Progressively start implementing the policy focus areas of this guidance note, starting with those which provide greatest value added for your services to SMEs*

These priories should be taken into consideration by the new EEN Russia consortium and action plans must be implemented nation-wide.

Knowledge and expertise gained by the EEN consortia in the past should be used and further developed throughout Russia, covering all major ST active regions with a high innovation potential.

Policy makers should promote EEN activities in Russia at the regional level, in order to foster regional innovation capacity of SMEs through business and technological cooperation, as well as strong support services.

- **Eureka** has been an important network in supporting **market-oriented R&D** projects and gained more importance with the H2020, since innovation was put on focus. As known, Eureka projects bring mainly SMEs and large companies but also universities and research centers together in relatively simplified instruments. Russia is a member country since 1993, but took part in projects since 1985. The Ministry for Industry and Trade is in charge for EUREKA in Russia. Although there is a high interest from Russian organizations, it has been observed that the Ministry is not actively promoting participation since 2012. Therefore, there has been no projects with Russian participation after 2012. Eureka is a well-established strong European network that provides good cooperation possibilities to mainly SMEs in member countries. Therefore, it is recommended to regenerate the interest from the governmental side and offer this possibility to Russian innovation actors in order to foster their internationalization activities with Europe.

- **Transnational Programmes**[41] become one of the major multinational instruments aiming to bring the national research and innovation agendas together and aligning them to each other, in order to create a critical mass and increasing the impact on the society. In another words, together they are shaping the STI landscape and resources by aligning their national programmes. Era-Nets, for example, are among those programmes that Russia actively participates and benefits from cooperation.

- **Clusters and Competence Centers** are good and widely used examples of industry-academia cooperation in Europe and, to some extent, in Russia. After years of experience, discussions for improvements of these structures is still ongoing in Europe. Nevertheless, as found out during the workshops, they can provide good examples to Russian clusters and excellence centers in terms of operation, as well as provide opportunities for bilateral cooperation. It is recommended to emphasize these networks in the **National Technology Initiative of Russia**, which is currently under preparation.

- **Technology Platforms**, on the other hand, are also very important structures, and examples of public private partnerships in driving innovation, knowledge transfer and European competitiveness by focusing on advancing technology in specific fields, so called "major challenges" such as the ageing society, the environment and food and energy security. Russian TPs are much diversified in terms of wide variety of technology areas covered and lack of comparable activities and performance results among them. Therefore, cooperation between Russian TPs and European TPs is not very promising in current situation. It is recommended to conduct a review and assessment on Russian TPs. With this purpose, the Strategy for European Technology Platforms: ETP 2020 can be considered as a guiding document, which indicates various recognition criteria for ETPs:

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41   Transnational programmes refer to the following European initiatives: European Technology Platform, Joint Technology Initiative, Joint Programming Initiative, Public-Private Partnership Initiative, European Innovation Partnership, FET Flagship Initiative, Era-Nets, Article 185, European Institute of Innovation and Technology/ Knowledge and Innovation Communities (KICs).

– ETPs correspondence with national priorities as well as alignment with global challenges,

– Scale of the market opportunity

– Their added value to capacity, capability and skill-base to research, develop and exploit the technologies and/ or innovations in the proposed field,

– Transparency and openness in their activities

– Scope to foster interdisciplinary and cross-sector work without duplication,

– and their leverage effect which refers to the level of engagement and commitment of industry.

These initiatives are at different stages with regard to their internationalization, some are more advanced than the others. Considering Russia's national priorities and mechanisms, these initiatives should be examined and those of them that might be interesting for Russia should be closely followed.

2.3 The role of intermediary institutions in Internationalization

2.3.1 What are intermediary institutions – definitions and examples

Intermediary institutions or simply intermediaries in our context represent agents which act or mediate between different groups of the economy or of the innovation system. Intermediaries can be public, but also public-private or private institutions. They distribute information and provide help for decision making. In some cases intermediaries are also called multiplying agents since they use a bundle of different communication channels.

Intermediary institutions play important role in R&D cooperation. Generally they execute the following functions [Klerkx and Leeuwis (2009)]:

- **demand articulation:** articulating R&D needs and corresponding demands in terms of technology, knowledge, funding, and policy;

- **network formation:** facilitation of linkages between relevant actors (scanning, scoping, filtering, and matchmaking of possible cooperation partners);

- **innovation process management:** enhancing alignment and learning of the multi-actor network, which involves facilitating learning and cooperation in the innovation process.

When it comes to the topic of internationalization of R&D actors key intermediaries are:

- National Contact Points for European Research Programs

- Enterprise Europe Network (EEN)

- Technology Transfer Offices and Networks

- Chambers (International, Regional and National) of Commerce and Industry

- Regional Development organizations

- Industry associations

- Technological Consultants

These organizations usually provide a wide range of different services whereby the service portfolios of the institutions differ significantly. Chambers usually provide a general support to companies in their region/country whereas industry associations serve only firms from a certain industry sector. Regional development organizations have a focus not only on businesses but on all relevant regional actors. And the EEN network partners provide a defined set of services in the field of company development and technology transfer. In all those portfolios internationalization aspects play an important role.

How can intermediaries help in internationalization strategies?

The first and most obvious issue here is that the multiplying institutions help to establish contact to business and/or research partners abroad. Different approaches and tools are being applied for this. Important instruments are partner mediation bourses (brokerage events) and data bases with profile (technology offers or technology requests). Both of those will be explained later. However, the actual partner mediation represents only one step in a typical support process for the internationalization of companies.

From a general perspective, internationalization support for R&D actors, offered by intermediaries, can be implemented with the following steps

(1)   Motivation and awareness raising

(2)   Help to formulate an internationalization strategy

(3)   Elaboration of a profile of a potential international partner

(4)   Partner search support and partner mediation service
        (brokerage events, data bases)

(5)   Help to establish a partnership agreement

Intermediaries are becoming increasingly relevant to companies in innovation and knowledge transfer for many important reasons such as[42]

1)   to help to facilitate internal and external technology commercialization,

2)   to connect innovation seekers to innovation providers, (3) to help companies to screen external markets,

3)   to understand the technology market better,

4)   to make searching tasks easier for companies,

5)   to reduce search cost of the companies, and

6)   to in-license, co-develop and acquire external intellectual properties or technologies.

2.3.2 National Contact Points (NCP) and EEN networks services for FP participation

The NCP network has been in existence since 1999 with the launch of the 5th Framework Programme (FP) with the aim to provide information and support for the participation to the Framework Programmes at national level.

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[42]   Jeremy Howells, Intermediation and the role of intermediaries in innovation, 2006, Elsevier B.V.

As the NCPs are national structures, the type and level of services offered differ from country to country. In general, the following basic services are available in accordance with the Guiding Principles agreed by all countries participted:

• Guidance on choosing thematic priorities and instruments;

• Advice on administrative procedures and contractual issues;

• Training and assistance on proposal writing;

• Distribution of documentation (forms, guidelines, manuals etc.);

• Assistance in partner search.

The Enterprise Europe Network and the National Contact Points (NCP) network (21 in total, including the 10 FP7 thematic priorities NCP networks) are networks which have existed in parallel for a long time on occasion working together but without any formal collaboration between them. Whilst the Enterprise Europe Network is co-financed by the European Commission (under the Competitiveness and Innovation Programme) and the selection of its partners (at a consortium level) is based on competitive calls for proposals, the National Contact Points are individuals (based in hosting organisations) nominated nationally through various selection processes (e.g. competitive calls, administrative decisions, calls for tender) with their management and financing decided at a national level.

All consortia and individual partners of the Enterprise Europe Network work based on a structured work plan and common guidelines approved by the Commission (DG Enterprise) and are animated / monitored centrally by the Executive Agency for Competitiveness and Innovation (EACI)[43]. On the other hand, the National Contact Point network operates based on the Guiding Principles agreed by the member states and issued by DG Research and are animated and monitored by national authorities with DG Research (DG RTD) ensuring the information flow and co-ordination at European level.

The reasons why these two networks benefit from closer collaboration and can promote synergies are apparent:

• The National Contact Point network assists any type of proposers in their participation in FP7 – H2020 projects and, in line with their remit, should increase their engagement with SMEs with a view to increasing their participation in FP. The Enterprise Europe Network with its experience, long-term connection with the business community and focus on SMEs can increase the SME participation;

• The NCP network are normally centralised whilst the Enterprise Europe Network is set up in a very regional or local level, daily and directly reaching out to both existing and potential FP7 SME participants;

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[43]   Now EASME – Executive Agency for SMEs.

- The NCP network does not in many cases have funding to organise networking or other types of events whilst the Enterprise Europe Network has a dedicated budget in order to deliver networking and awareness raising activities;

- By co-operating, both networks can offer added value and more effective support to their clients, generating also satisfaction for the two networks – a real win-win situation.

The figure below (NCP Brussels presentation) illustrates on how the potential client could benefit from the cooperation with these two networks.
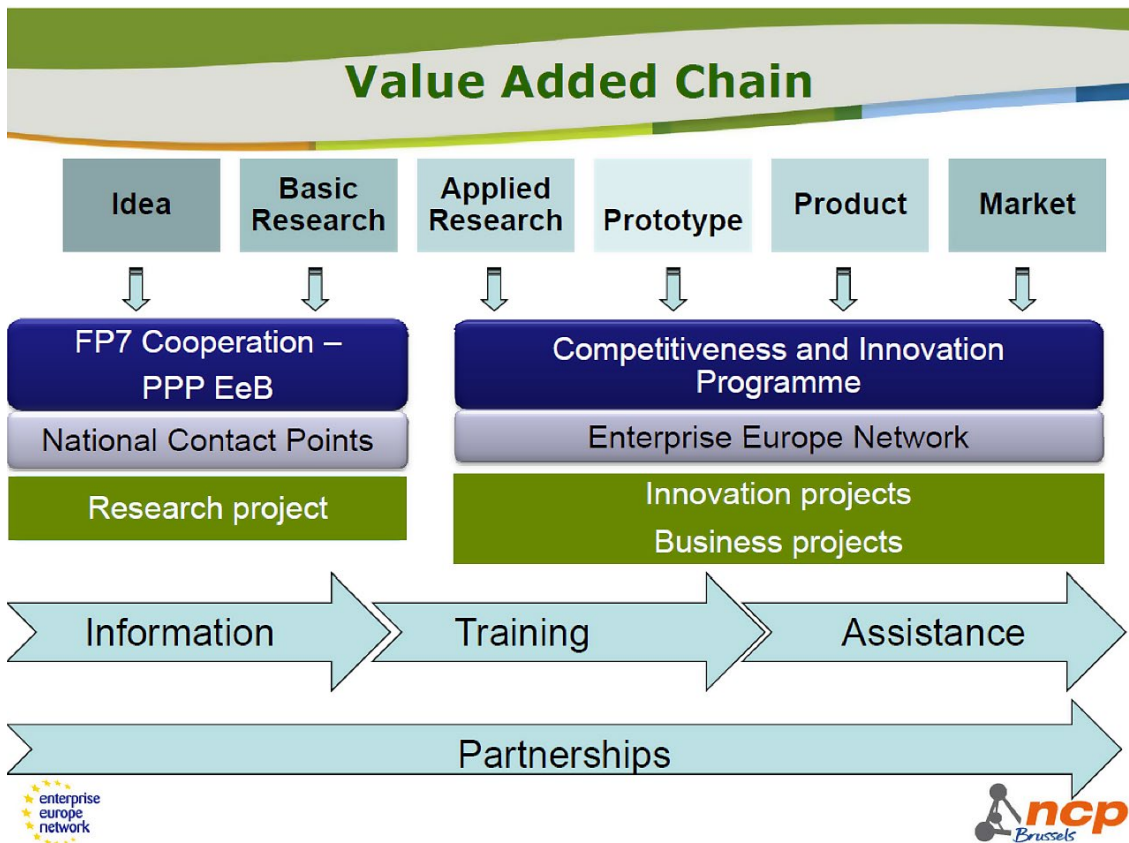
Figure 2.1. Cooperation with NCP and EEN networks

The main spheres for collaboration between the two Networks are the following:

1. Information sharing;

2. Support for awareness raising;

3. Capacity building of SMEs in their participation to FP7;

4. Cooperation in engaging new SMEs in FP7 proposals;

5. Mutual signposting;

6. Partner search;

7. National Working Groups to promote collaboration and joint actions;

8. Cooperation in the open consultation of call topics in Work Programmes.

2.3.3 Examples of innovation intermediaries good practice

EUROPEAN MARKET IS INTRODUCING RUSSIAN MULTI-AGENT TECHNOLOGIES

The Smart Solutions (SMRT), part of Knowledge Genesis Group (KGG), in Samara, Russia, is among Russia's first innovative IT companies to win a Smart Factory bid for an EU-funded integrated project Adaptive Ramp-Up Management (ARUM) under the Seventh Framework Programme (FP7). According to Petr Skobelev, founder and head of the company, a one of the key factors in achieving the EU level of collaboration has been the support provided by Russian Technology Transfer Network (RTTN) assisting in commercialization of knowledge-intensive technologies in Russia and search for partners in innovative projects.

Alongside SMRT, fourteen partners from seven EU nations are taking part in ARUM, a three-year project under the "Factories of the Future" European research initiative. These include TIE, Certicon, Almende, P3 Ingénieurs, universities of Cologne, Prague and Manchester and more, all coordinated by the EADS Group, a global leader in aerospace, defense and related industries, consisting of Airbus, Astrium, Cassidian and Eurocopter.

The ARUM project is designed to improve real time resource allocation, planning and optimizing in the production and ramp-up of new complex and innovative products such as aircraft and ships. The underlying multi-agent technologies are aimed at a new generation of intelligent systems for real-time management of production resources.

The total cost of the project is EUR 11.5 million, 8.5 million provided by FP7 and the rest to be covered by the partners.

The SMRT is part of Knowledge Genesis Group creating a new generation of multi-agent systems. Such systems enable real-time management of company resources and solving other complex problems, for instance, those related to patterns recognition, knowledge mining or text understanding. Experts believe that multi-agent technologies is a shift of paradigm in complex problems solving marking a new stage in IT evolution are becoming comparable to critical nano- and biotechnologies for future.

The explosive growth in that area is associated with the ability to create a new generation of open and flexible computing systems (systems of systems) employing the principles of self-organization and evolution typical of the behavior of living systems such as ant colonies or bee swarms. The Smart Solutions software products find practical applications in aerospace industries, highway and railroad transportation, production, management of mobile field services teams, supply chains and elsewhere.

"It was way back in 1998 that we first learned that we could take part in EU Framework Programmes," says Dr Petr Skobelev, the company's founder, head and technology leader. "Then we did not really face any competition in our field, so we quickly won a grant to form our first consortium. However, my talks with British, French and German

companies interested in multi-agent technologies that we had dreamed to introduce internationally since 1990 soon led me from the initial project to the concept of a company with partners and investors in Britain."

So Magenta Technology was opened in 2000 to develop multi-agent technologies for discrete optimization of mobile resources in transportation logistics. The co-founders were two big European investment funds. Skobelev now regards the eight-year collaboration within that entity as a major life lesson and invaluable experience. "To raise the capital, we successfully sold 12.5% of the company but unfortunately lost the control. We were working days and nights to pioneer the technology on its way to the market and had it commercialized, but our opinion was still not heard in key decisions. Developing self-organized systems we suddenly found ourselves under bureaucratic and hierarchical management with top-down instructions that stopped us from moving forward. That's why we settled for a fresh start after we finally diverged with the British investors and managers in our vision of the future in 2008."

It was not an easy venture to leave the well-established business built by themselves, with the headquarters in the London City, customers worldwide and high salaries. However, Petr did start from scratch in 2010 by bootstrapping. The Smart Solutions Company was founded then to explore the new area. They had gained much forward-thinking knowledge and top-level business experience but they needed serious financing and huge efforts to develop a new, more powerful generation of multi-agent systems. "We had very hard times," Skobelev admits. "We tried to take every opportunity to form a new resource base, to train personnel, and to solve all kinds of organizational problems. I invested my all personal savings, sold 2 family apartments and got into debt. Many folks gave up and left, but the fledgling Smart Solutions team never lost hope. We believed in the huge potential of this fundamentally new technology opening new horizons to solve the most complex problems that could not be solved well or even were totally insoluble by traditional mathematics."

The novel practical applications developed and commercialized together with the Russian companies Energiya, Axion Holding, Russian Railways and others have been recognized by the EADS Group and the leading universities working in this field of multi-agent technology. However, the road to European recognition has proved to be difficult, with many lessons to be learnt, some from the company's own mistakes.

According to Petr Skobelev, a one of the key factors in achieving the EU level of collaboration has been the support provided by Russian Technology Transfer Network (RTTN) assisting in commercialization of knowledge-intensive technologies in Russia and search for partners in innovative projects. "Thanks to RTTN, we attended every EU forum for three years learning how to form consortia and bid on projects. Executive Director Gennady Pilnov and his colleagues have always provided expert consulting support and helped find new contacts."

RTTN has been supporting the Skobelev team under the ISTOK-SOYUZ project aiming to promote the ICT component of the EU Seventh Framework Programme for Research and Technological Development, raise awareness about benefits of mutual collaboration and identify ICT landscape and potential for R&D ICT collaboration between European Union and all 12 addressed countries of Eastern Europe and Central Asia.

Nonetheless, four initial attempts were unsuccessful. "We submitted interesting projects but to our great disappointment they all failed," Skobelev said. "But the points we got for our bids gradually improved. As we understood from our own experience, to be a winner you need to team up the best scientists and manufacturers, the real leaders in
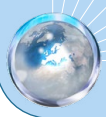
their business. It took us two years to find such a consortium and to prepare a proposal. We had to make presentations at serious international conferences and workshops, to convince and prove meaningful and viable results for people to believe us and understand our advantages and differentiation."

Finally, the fifth application submitted by the Smart Solutions in consortium with EADS was recognized the best of the nineteen competing strong projects. At the final stage of the call, the European partners helped convince the European Commission that the Russian company was really necessary and useful in their project. It is no secret that Russians are treated reservedly and watchfully in many commercial ventures. Such a policy has its own historical background and seems inevitable, Skobelev said, so you have to work hard to prove that you are not second-rate. So far, the Samara company has been able to do so. "We have a great consortium; every problem is successfully resolved," the head of Smart Solutions notes. According to him, what makes ARUM different from his past experience is more creativity and flexibility in project management. People enjoy more trust; everyone values their reputation and does not want to put it at risk; the reliance is on internal self-organization.
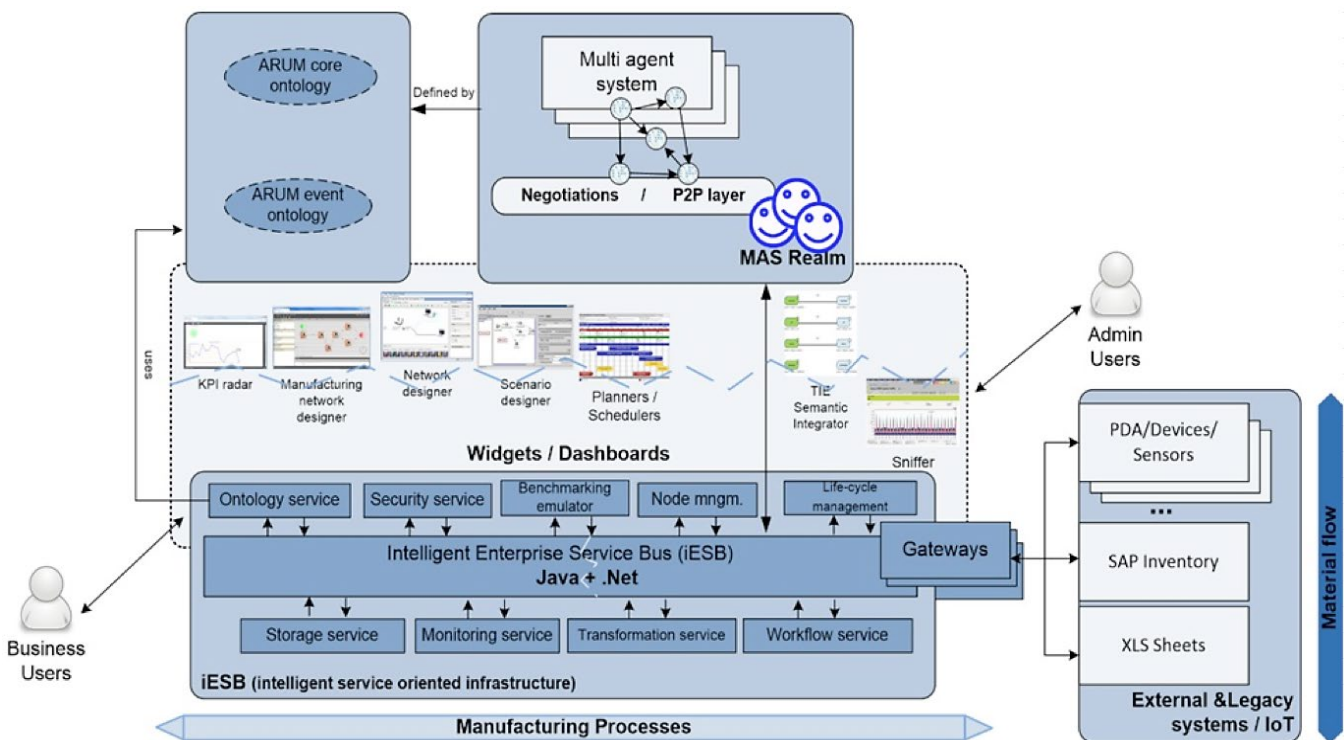

Figure 2.2. ARUM system architecture

"This is a unique opportunity for us in cooperation with the best European experts in our field to make a new product with strong competitive advantages, immediately test it with a big manufacturer and commercialize it in Europe, for instance, through a joint venture," Skobelev concluded.

According to him, one has to learn how to prove one's ability to do something and to get results even in the environment that initially seemed aggressive and hostile.

"There is no cooperation without competition – that is what we have tested on ourselves for sure," he said. "No one will receive us with outstretched arms. If we had not brought something new proving our case in practice, people would not have worked with us. You need to be in constant search of new ideas and technologies that are supplemental

to yours (that is called "coopetition" nowadays), to find partners for synergy, to try and face mistakes and challenges in pursuit of your goal."

As it has walked a thorny path to international recognition and rightful participation in a European program for a decade and a half, the Samara company recommends that other Russian enterprises should more proactively use RTTN mechanisms and capabilities to achieve serious joint projects with EU partners.

> Thanks to RTTN's assistance, we have received a unique opportunity to launch a new highly competitive product in cooperation with the best European experts, immediately test it at a major enterprise and enter the European market for the product's commercialisation.
>
> *Petr Skobelev, Director of Smart Solutions, Ltd.*

UNIQUE CLOUD SOLUTION FOR UP-TO-DATE ULTRA SOUND DEFECTOSCOPY

The company from Ulyanovsk, Cyber Systems Development, Ltd, in the partnership with an Israel company and a German institute, developed an innovation product «DSUNDT» (Distributed System for Ultrasonic Non-Destructive Tomography) in the area of ultra sound defectoscopy – a distributed system for ultra sound diagnostics with 3D visualization of defects.

The novel solution is a cloud environment that allows reduction of time and cost for most customers, since they so not need to purchase costly analytical and visualization systems for working with the ultra sound equipment. Basing on the many-years' experience, the partners developed a reliable and low-cost product for the non-destructive control industry. The project won the call of international innovation projects in the framework of ERA-NET.RUS initiative. The project was supported by FASIE.

Russian partner: Cyber Systems Development, Ltd has a great expertise in development and implementation of embedded hard real-time systems, various distributed information systems, in particular, for defectoscopy purposes.

Foreign partners: ScanMaster Systems, Ltd (Israel) is one of global leaders in developing and manufacturing ultra sound instrumentation, inspection & imaging systems and transducers, gaining high reputation among suppliers of important jet engines manufactures such as GE, Rolls-Royce, Pratt and Whitney.

University of Applied Sciences Darmstadt (Germany) is a major university in Hessen, famous for outstanding achievements in the engineering and informatics areas.

The ULSTU Technology Transfer Centre, Ulyanovsk, Gate2RuBIN project participant and the team of the Russian Technology Transfer Network helped Cyber Systems Development, Ltd. to find foreign partners and to submit the joint proposal to the ERA-NET.RUS call.

«Gate2RuBIN» (Gate to Russian Business Innovation Networks) is a large-scale long-term project for participation of Russian business and innovation support infrastructure in the Enterprise Europe Network. This project was the pioneer example of Russian large-scale participation in the EU business and innovation networks.

Thanks to the Gate2RuBIN activities, more than 150 small Russian companies and R&D organisations have established partnerships and carry out joint projects with EU partners. A significant part of these projects were supported under FP7.

The project on creating the test version of DSUNDT system was completed in 2014. The next stage is to determine the commercial model for application of this product and its launch to the market of ultra sound diagnostic systems.

«Membership of Ulyanovsk TT Centre in the Gate2RuBIN project allowed much faster search of partners required for starting the ambitious project on the technological cooperation in the area of ultra sound defectoscopy, and RTTN capacities helped to reduce the financial and time resources for its start».

Vadim Shishkin, co-founder of CSD, Ltd.

2.4. Communication & dissemination strategies in international R&D projects

"Activities to disseminate information and exploit research and innovation results as well as carry out communication activities will be an important and integral part of Horizon 2020. The European Commission will thus implement information and communication actions for Horizon 2020 which will include communication measures concerning supported projects and results. The communication efforts will also contribute to covering the overall corporate communication of the European Union's political priorities as far as they are related to the general objective of Horizon 2020. "

(HORIZON 2020 – WORK PROGRAMME 2014-2015)

2.4.1. Communication strategy

The success of any research project depends on its ability to bring its results to its market place and clearly demonstrate how these results will benefit its end users. This applies to all research meaning all projects need a structured communications policy to best achieve these aims.

The Project effective implementation implies sharing of ideas and knowledge which in turn requires a strong dissemination effort.

BILAT-RUS Advanced is a collaborative project, and effective open communication which enables active participation and trust within the project team is a critical element of the project's success.

Communication is important as it relates to rising awareness by explaining what you do and how the project contributes to EU development. Communication makes research within the project accessible to all audiences and gives the project the widest visibility.

The formulated communication strategy helps to present the BILAT-RUS Advanced project and its results in a standardised way to relevant target groups via templates and promotional material. Therefore, different document types are available for internal and external project communication.

Main elements of communication:

- Communication objectives

- Target audience

- Internal communication

- External communication

2.4.1.1. Communication objectives

Communications objectives must support and help progress the key objectives of the BILAT-RUS Advanced project on the whole.

Communications objectives need to be clearly defined, detailed, achievable and measurable. Its ultimate goals could be to improve legislation, to inform public policy on a particular topic, to improve public services, to change opinions of certain stakeholders or to raise public awareness of a specific issue.

It is important to make a difference between the project objectives and communication objectives. In addition, it is necessary to distinguish between internal and external communications objectives. Both need to be addressed: communication between the partners as well as communication which is targeted to stakeholders outside the project partners' organisations, including the general public.

The starting point is to understand and define what the project partners 'want to achieve, and develop project-specific communications aims.

2.4.1.2 Target audience

The target audiences for the Communication & Dissemination activities are defined in the Technical Annex: users (institutions and projects), end users (individuals) and user associations; EU politicians and policy makers; the research and education community at large, including other projects; industry players including relevant standards bodies, telecommunications infrastructure and equipment suppliers; relevant FP7 projects; the media and the general public; project participants.

Reconciling the communications goals of the consortium and those of the EU entails addressing a very broad range of recipients. Scientific, technical, business, institutional and governmental audiences are all prime targets. Fulfilling the societal objectives of spreading education and generating an enthusiasm for science also implies a need to reach the public at large, using all available means.

2.4.1.3 Internal communication

Internal communications is meant for project participants to foster inclusion, understanding, cooperation and cross-sharing of ideas and opportunities.

Email and internet technology provides the most efficient and cost effective means of everyday communication. Interviews with project investigators identified email as the preferred mode of first line communication on specific matters.

All BILAT-RUS-Advanced participants should use the different templates listed below to present BILAT-RUS-Advanced or WP results in official meetings or to other partners. These templates are:

- Information (promotional) materials

- Deliverables

- Meeting minutes

- Reports on WP

- Presentations

All templates are designed to guarantee a clear structure. Some of the above mentioned templates can also be considered as part of the external communication. All templates were made accessible to all colleagues via emails. They are also available on the web portal.

2.4.1.4 External communication

Project newsletters have been published to present and make widely available information about the project's progress and, in particular, its results and achievements.

2.4.2. Dissemination strategy

This strategy is an integral part of the overall strategy for the implementation of the Project BILAT-RUS Advanced and is applicable to the dissemination, promotion and sustainability enhancement activities implemented by the BILAT-RUS Advanced consortium. It is intended to streamline the continuous process of making and implementing decisions for promotion of research, awareness raising and capacity-building activities at different levels with the aim of achieving the project's objectives and ensuring sustainability of results and impact. The strategy is coherent with the objectives of the project, as well as with the project's work programme and timetable, the Project Management and monitoring.

Disseminating the project outputs helps to guarantee the durability of the project's results. Thus, the purpose of the strategy is to support the consortium's dissemination efforts in view of allowing all partner institutions to achieve maximum efficiency in initiating public discussion and collecting the views and opinions of various stakeholders on issues related to reforms, modernisation and innovation in higher education.

Several principles guide the implementation of the dissemination strategy:

• All activities are based on team efforts and involve all relevant members of the consortium. Coordination among the project consortium partners is essential for achieving effectiveness of communication and dissemination;

• The members of the project consortium identified individual persons who bear responsibility for implementing communication and dissemination activities;

• The members of the project consortium strive to coordinate with project management team any communication and dissemination activities;

• Each publication within the project is prepared with a clear audience and purpose in mind, and it has a preliminary message and dissemination schedule. In addition, the visualization rules are strictly observed.

The BILAT-RUS-Advanced consortium members strive to achieve the right balance between formal and informal mechanisms of communication with their broader institutional and policy environment. While the project workprogramme mostly focuses on the formal mechanisms of communication and dissemination, informal channels are equally important and would require involvement and commitment from the persons taking part in project implementation. One of the difficulties of projects of this nature is that, while the project team understands both what the project is trying to achieve and how the wider community within the institution could benefit from its successful implementation, the target audience – i.e. this very same community – need not

necessarily understand the precise objectives of the project or appreciate its potential beneficial impact. Therefore, at the institutional level – and often through informal channels – the project teams of each particular consortium member might need to search for ways to articulate in clear, concise and accessible way what the project is about and why it is important.

2.4.3. Communication & dissemination tools

Websites are a key tool to inform citizens and stakeholders about EU policies, legislation, their rights in the internal market, grants, employment opportunities and many other things that affect their daily lives. Furthermore, the web is a very cost-effective, accessible and efficient means of communication, which is particularly relevant in the current political and financial context where we must account for every euro of taxpayer's money we spend.

Tools:

- project website developed under the umbrella of a common BILAT web-portal and the S&T Gate.Rus;

- web-portal developed in BILAT-RUS maintained and further advanced;

- newsletters;

- flyers and other information material building on the deliverables of BILAT-RUS-Advanced ;

- events (Information days, etc);

- publishing;

- relevant documents/executive summaries;

- internal publications within the institutions (institutions' websites, bulletins, etc.

Dissemination and Communication Mechanisms and Channels

Project website and other web-based tools
The BILAT-RUS-Advanced website is one of the main dissemination channels. It is a key source of information available to different categories of stakeholders, the first point of contact, and a mechanism for ongoing communication with external audiences. It also enables effective consultation with motivated and proactive stakeholders. The website is publicized by the consortium partners at project events and at other related events. The individual partners also publicize the website within their own networks of contacts. The Project website is designed to be informative yet uncomplicated for use, with concise content that is ensure smooth communication with diverse categories of stakeholders and external audiences.

Conferences
Conferences are a means of developing national and international contacts and partnerships with key stakeholders and opinion leaders. They allow for direct, face-to-face communication and discussion.

Publications in printed and electronic media

As part of its dissemination strategy, the Consortium should utilize targeted publications in the media in order to communicate key messages and to inform the public about major events or achieved results. This is one of the specific dissemination activities. Each partner should seek to maximize the impact of the publications by selecting respected media outlets with wide coverage. In addition, consortium members will strive to ensure that – whenever possible – the media information they have published is also published online on the websites of the targeted medias. This would allow other web-based medias to re-publish or link to the information. The consortium should attempt to develop a basic common project narrative – i.e. key information about the project, the funding programme and the main objectives – that will serve as the baseline for media publications and will ensure consistency of the disseminated messages across the project countries.

Internal publications

As noted above, each consortium member produces internal publications, such as institutions' websites, printed and electronic bulletins, students' newspapers, etc. These internal publications are an excellent and cost-efficient way of promoting the project and disseminating its key messages and results to persons within the institutions, including students. Many of these publications also reach key stakeholders. It is the task of each project team at the particular institution to ensure the adequate presentation the project activities and products in such internal publications.

Workshops

Workshops are an essential means of knowledge dissemination. The project will use workshops to discuss, present and deliberate project-related matters and findings.

Additional dissemination channels during project implementation:

Dissemination at external events

The Project consortium establishes and maintains contacts with other relevant projects (financed by the EU or by other grant organizations) in order to ensure wider impact of project activities and wider dissemination of project results. The consortium partners utilize all opportunities to present the project and its activities at other relevant events, especially if the events have high dissemination potential and involve stakeholders that are key to the project. Major events organized by the consortium institutions – even if unrelated to the project workprogramme – are excellent opportunities to achieve wider dissemination in a cost-effective way. The consortium partners try to deliver presentations and talks that link the Project agenda to the agenda of the external events.

Activities aimed at dissemination

The work programme usually includes a number of activities aimed at dissemination:

- Online presentation of the project through the BILAT-RUS-Advanced website;

- Distribution of printed flyers, printed project leaflets and regular electronic Information Bulletins among stakeholders in the BILAT_RUS Advanced countries;

- Publications in printed and electronic media;

- press conferences held after major project events; etc.

2.4.4. Practical recommendations

- When building new relationships, take time to understand preferred working styles, including preferred modes of communication, preferred titles etc

- Share information about yourself and your culture, to allow others to understand you a little better

- Avoid making assumptions

- If unsure about an issue, ask the person

- Treat everyone as individuals

- Don't worry if you make a mistake, apologise and learn from it

- Build on people's strengths and value diversity

- Avoid making judgements etc.

Conclusions

There is no simple answer to "what networking is". What is clear is that "networking" should not be understood too narrowly, only as an organisation of events and information / document exchange. Networking is a much larger concept, it is about the stimulation of interaction processes between stakeholders institutions and their staff, between team members, between partners in international projects. Networking, is about our ability to learn, apply, communicate and share knowledge. Networking skills can be improved just like many other personal skills. This improvement will help to create better links with the international R&D community.

The Networking Guide can be used in the training and coaching activities by all of those who are willing to reinforce their networking capacities and to increase efficiency of cooperation between EU and EECA specialists – and this is relevant not only to the ICT area but also to other research topics. All suggestions for its improvements are welcome.

The authors hope that this Networking Guide will contribute to the development of the networking culture in Eastern European and Central Asian countries, and thus will bring its (modest) contribution to facilitation and reinforcement of R&D cooperation between EECA and EU researchers.

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Annexes

Annex 1

Introduction to the Guide 1st edition

The three FP7 Special Support Action clustering projects (EXTEND, ISTOK-SOYUZ, SCUBE-ICT) targeting Eastern Europe and Central Asia (EECA) countries is an ambitious activity, supported by the EC, have similar objectives to:

• identify the potential for the ICT cooperation between EU and EECA countries;

• raise awareness of the opportunities for this cooperation;

• promote and facilitate cooperation between the EU and EECA countries

Notwithstanding the commonality, the projects have the distinct priorities on the objectives and support measures:

• EXTEND focuses on the high level analysis of research priorities for cooperation between the EU and the target region;

• SCUBE-ICT seeks to facilitate policy dialogue between EU and the target region, resulting in policy recommendations to facilitate research cooperation;

• ISTOK-SOYUZ concentrates on building partnerships between researchers (mainly in the framework of FP7 ICT calls) in the EU and the target region.

All three projects coordinate their activities aimed in maximizing impact, avoiding overlap as well as producing compatible mapping and recommendations on future ICT research cooperation within the scope of EECA cluster.

The necessary condition for the successful international R&D collaboration between EU and EECA countries is the potentially attractive knowledge and know-how for the EU counterparts. But this knowledge could be exploited only with the capacity to share it.

This capacity is very much related to the capacities for networking on different levels of project participants (researchers, stakeholders, policy makers, project partners in EECA countries etc) interactions. The lack of networking skills could stay this R&D potential undiscovered.

The concept of networking is quite new for EECA countries. The lack of the networking culture could be explained from different points of view but the main factor is the legacy culture of the former closed centralised "soviet system". Many post-communist researchers, ICT professionals and policy makers do not have the necessary interaction skills even if they are experienced researchers and professionals. Support is needed to nurture new ways of networking within their respective countries and – most importantly with their EU counterparts. The networking culture is the crucial factor for international R&D projects success.

Some barriers for the international collaboration are difficult to overcome due to the deep country/nation's nature of the culture (even in EU level) and they simply should be taken into account. But some others – networking skills – could be significantly improved through their understanding, self-analysis, and further coaching.. Indeed, nowadays we live in the networking world, and the amount of information flows is incredibly high: the personal networking becomes one of the main channels to pass the information and to build partnerships.

The role of the cluster project partners both in EU and EECA countries is to create the necessary instruments/tools that facilitate the networking interactions between projects participants (for instance web based competence platform, networking events, delegation tours, policy workshops…) and gain the sustainability of products and services beyond the lifetime of the individual projects. The EECA cluster project partners represent reference points within EECA region and it is extremely important that the temporary network established in the framework of the clustering projects continue to remain after formal clustering projects completion for the benefit of the future EU-EECA projects. In this respect networking skills are of the outmost importance.

<div align="right">Annex 2</div>

Short guide on active participation in ICT-2010

Dear colleagues,

Next week you will take part in the ICT 2010 conference and exhibition.

From 27 to 29 September at Brussels Expo, the ICT 2010 event is the place for discovering Europe's exciting and groundbreaking developments in ICT. This biennial event is the largest in Europe gathering more than 5000 researchers, innovators and influencers who hold the future of ICT in their hands.

Research and innovation in ICT benefits 500 million European citizens and drives the competitiveness of European industry. At ICT 2010, "ICT made in Europe" demonstrated how new technologies meet the demands of today's society and economy as well as those that could arise in the future.

The ICT2010 is a unique gathering point for researchers, business people, investors, and high level policy makers in the field of digital innovation from all over the world. This event **focused on policy priorities such as Europe's Digital Agenda and the next financial programme of the European Union and is to be organized around** key elements:

- The European Commission will officially present its research priorities for the **€2.8 billion** of ICT research funding to be provided in 2011–2012. Currently EU ICT research funding supports around **15,000 of the best researchers** across Europe every year. The EU ICT budget supports research involving academia (35%) and industry (40%). About 15% of the industry participants are small and medium-sized businesses.

- The ICT 2010 conference will assess the potential of ICT solutions to promote sustainable growth in a **low carbon** economy and the constructive impact of **ICT in the daily lives** of citizens and businesses. These themes will be discussed and debated by leading figures from business, academia and politics.

- ICT 2010 will host dozens of **networking sessions**. These sessions are designed to facilitate contacts between researchers and innovators, engineers and investors from all fields of digital innovation.

- ICT 2010 demonstrates over **100 exhibits** of the latest advances in digital technologies funded by the EU in seven R&D villages, the Belgian pavilion, the international pavilion, and the SME pavilion.

The key objective of the ICT 2010 is to create an environment capable of promoting communication and networking between researchers, scientists and business people from different countries.

Your personal goal is to find potential partners for the preparation to ICT calls of proposals in the next two years.

How to achieve this goal?

1. The ICT Work Programme 2011-2012 is already available at the EU website. The Work Programme is however a compact text including bare facts, and at the conference the authors will tell about what is hidden between the lines and which aspects would be

of high importance for the evaluation of proposal. Special sessions of the conference will be arranged for each of the objectives of the work programme, where there will be the opportunity to listen to the programme's authors, ask questions and maybe even present the idea of your project in order to meet the biggest challenge in the preparation of a proposal – to find a fair number of European partners.

We recommend therefore that you *prepare one (or more) project idea to ICT 2010*. It is essential that the idea fit with the subject of the work programme. That is why you should start with the study of this basic document of the Seventh Framework Programme (of course, the question is ICT):

• Download the work programme from the website of European Commission:

• Select the challenges in the work programme you are interested in

• Select the objectives for which you have a project idea

• Outline your idea on an A4 half-page: project goal, expected results, your contact details. Paper version will be sufficient. If someone finds your idea interesting, you will be most certainly requested to send the project proposal by mail. With such a teaser you will not need much time for the preparation to make a text, but just send the document you have prepared in advance.

2. *Take promotional materials about your organization or project.* It is worth taking to Brussels a detailed presentation: your ICT experience, project idea on several slides. If you do not have your notebook in Brussels, you will be able to use our stand for your presentation.

3. At the ICT 2010 exhibition the ISTOK-SOYUZ project together with other partner projects arranged a stand. You have prepared a two-slide presentation about your company and its ICT competences to demonstrate it on the stand. If you need to make an appointment with someone, *let our stand be the location of your meeting*. Address: Zone D in the International Village, Stand number D09. (Map of Zone D

4. *Plan your participation in other ICT 2010 events.* The conference website allows you to make in advance a list of interesting sessions.

• Log in the website under your username and password;

• Look through a list of conference sessions, select the ones of your interest;

• In the lower part of the page you can put a tick against "Add this session to my Agenda". As a result, your personal schedule of sessions will be formed on your profile page in the section "Agenda".

5. After the conference we will ask you to prepare and send a report on your activity during the event. Please see these documents in advance to know what to expect.

REPORT on participation in ICT 2010
under financial support of the EU-EECA ICT cluster (FP7-funded projects)

Country:
First and Last name of the reporter:
Position:
Organisation/department:
Contact phone:
E-mail:

If someone else from your team participated in ICT 2010, please, specify *(Name, Position):*

Short information about ICT 2010 *(Place, Date, Target and Participants of the action)*:

1. **Key objectives and tasks of reporter's participation in ICT 2010**
   - Please, give short information about your organization
   - State the main reasons for you attending in ICT 2010
   - What were your primary objectives for attending this event?
   - What ICT competences and project ideas of your team did you plan to present at ICT 2010? Please, specify.

No more 0,75 pages

2. Preparation for ICT 2010
   - Did you elaborate a detail plan for your participation in the event? What ICT 2010 actions did you plan to visit?
   - Did you have preliminary contacts with your EU partners to meet during ICT 2010?
   - What promotion materials do you prepare for dissemination?
   - What kind of support did you receive from EU-EECA ICT cluster for participation in the ICT 2010?

No more 1,0 pages

3. Participation in ICT 2010
   - What key exhibition stands did you visit? Whom you met with?

Name of stand	Country	Organisation	Names of representatives
Please, mark your response:	This meeting was worth (1 – for not worth; 5 – for excellent):	Agreed next steps: Agreed to submit common proposal on following thematic Agreed meeting time or phone/Skype/ e-mail conversationAgreed to arrange meetingExchange informationNo agreed next stepsComments, if it's applicable:	

- What Networking sessions did you take part? Whom you met with?

Name of Networking session:	
Please, mark your level of participation:	• As a speaker • As a listener • Participation in discussion • Meetings with partners • Other:
Please, mark your response:	This Networking session was worth (1 – for not worth; 5 – for excellent):
Whom you met with?	Country	Organisation	Names of representatives
			Partner 1
	• Agreed next steps: • Agreed to submit common proposal on following thematic • Agreed meeting time or phone/Skype/e-mail conversation • Agreed to arrange meeting • Exchange information • No agreed next steps • Comments, if it's applicable:		
Whom you met with?	Country	Organisation	Names of representatives
			Partner...N
	• Agreed next steps: • Agreed to submit common proposal on following thematic • Agreed meeting time or phone/Skype/e-mail conversation • Agreed to arrange meeting • Exchange information • No agreed next steps • Comments, if it's applicable:		

- What contacts have you established with partners from EU or/and EECA countries, yet?

Country	Organisation	Names of representatives
		Partner1
• Agreed next steps: • Agreed to submit common proposal on following thematic • Agreed meeting time or phone/Skype/e-mail conversation • Agreed to arrange meeting • Exchange information • No agreed next steps • Comments, if it's applicable:		
Country	Organisation	Names of representatives
		Partner...N

Please, attach scan copies of signed Letters of Intent for Partnership

4. Results of reporter's participation in ICT 2010
- What main results were achieved in the framework of ICT 2010?
- How many effective contacts did you establish?
- Did you have possibility to promote your team competences / project ideas?
- Will the ICT 2010 alter your practice/ research/ work?
- Did ICT 2010 meet your primary objectives?
- Please provide description of at least 3 the most interesting impressions from the event

No more 1,0 pages

5. Next steps
- Do you plan to evaluate established contacts? What next steps are you doing?
- Do you plan to prepare common project proposal for ICT FP7 Calls with your partners?
- What kind of support do you need from EU-EECA ICT cluster for your participation in ICT FP7 Work Programme?

No more 0,5 pages

6. Annexes

1. Signed Letters of Intent for Partnership

2. ICT 2010 Expenses Report