FP7: How to build successful research cooperation

TRAINING MODULES
for Ukrainian Researchers

2013
National Aerospace University “KhAI”
FP7: How to build successful research cooperation

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for Ukrainian Researchers

Prepared in the frame of the FP7 KhAI-ERA project activities

2013
National Aerospace University “KhAI”
FP7: How to build successful research cooperation

This training modules collection was jointly prepared by the National Aerospace University “KhAI” and Intelligentsia Consultants in the frame of training development activities within FP7 KhAI-ERA project. It is intended for Ukrainian researchers and the others who are interested in international cooperation and research funding opportunities provided by the European Commission through the European Framework Programmes for Research and Technological Development.

Included to this issue training modules contain both basic information and expert tips & tricks on efficient partners search and FP7 proposal preparation and submission, describe generic experience of Ukrainian organizations that have already participated in FP6/FP7 projects, and present first information on the next EU Framework Programme HORIZON 2020.

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Foreword

This Training Modules collection is intended for Ukrainian researchers with minimal experience – or none – of the EU 7th Framework Programme (FP7). Preparing winning FP7 proposals is a challenging task for experienced European researchers. Naturally, it is an even harder task for Ukrainian researchers lacking such experience.

Consequently, 2 training modules included to this collection contain both basic information and expert tips & tricks on efficient partner search and FP7 proposal preparation and submission.

They are supplemented with a training module that is fully based on the accumulated experience of the most active and successful Ukrainian organization and presented different approaches to FP7 projects involvement that could be used by entities with different level of skills.

Taking into account FP7 Programme ending in 2013 we have added a specific training module dedicated to the next EU Programme for Research and Innovation HORIZON 2020. In our opinion, fully open to international participants, this Programme will be a perfect opportunity for Ukrainian researchers.

It is our hope that this training module will help to increase the number of Ukrainian researchers participating in advanced collaborative research with European partners.

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20+ years experience in R&D and innovation consultancy (EU, EIB, World Bank and NATO) and high-tech product development.  
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Partner of 2 FP6 and 5 FP7 projects, FP7 KhAI-ERA Project Coordinator

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Involved in both implementation and management of FP6/FP7 research projects and coordination & support actions since 2007.  
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Training Module 1

How to find “successful European partners” for FP7 proposals

GILES BRANDON

Intelligentsia Consultants

May 2012
Introduction

This training module was aimed at Ukrainian researchers with minimal experience – or none – of the EU’s seventh framework programme (FP7). Preparing winning FP7 proposals is very challenging even for knowledgeable European organisations. For this reason, it is recommended that Ukrainian research organisations learn how to identify ‘successful’ European partners – ones with a good track-record of EU project participation – and learn how to promote themselves effectively in order to participate in consortia with such European partners.

Training Objectives

- Learn how to identify ‘successful’ European aeronautics partners for FP7 proposals
- Learn how to approach successful European aeronautics partners for FP7 proposals
- Learn how to identify other aeronautics related calls for proposals

Target audience

- Aerospace researchers
- Rail transport researchers
- Road transport researchers
FP7 Training Session

Part I: How to find “successful European partners” for FP7 proposals

Giles Brandon
Intelligentsia Consultants

Agenda

1. Introduction
2. Step 1: Background work
3. Step 2: How to identify ‘successful’ European aeronautics partners
4. Step 3: Alternative routes to identifying European aeronautics partners
5. Step 4: How to approach successful European aeronautics partners
6. Step 5: How to identify other aeronautics related calls for proposals
Introduction (1/2)

1. Important to have a **realistic outlook**

2. Average success rate for all submitted FP7 proposals is about 10-20%, but tends to be less for Ukrainian organisations …

3. Ukrainian organisations have been involved in 10/438 projects in FP7 Transport and 8/175 FP7 Space (up to May 2012)

4. No one can promise you success … but you can do a lot to reduce the risk of failure

5. Preparing a competitive proposal is a challenging task even for experienced European aeronautics organisations

6. For ‘inexperienced’ organisations from ‘third countries’ (e.g. Ukraine), very difficult and time-consuming to form project consortia and write competitive proposals

Introduction (2/2)

6. Not put off yet?! So, what can you realistically do?

7. Identify ‘successful’ European aeronautics organisations who are preparing FP7 aeronautics proposals

8. ‘Successful’ European aeronautics organisations = Track record of successful EU funded project implementation

9. Persuade the ‘successful’ European aeronautics organisations to let you join their consortia by offering unique/specific research capabilities that they need
Step 1: Background work (1/2)

1. Study past and current EU objectives concerning Aeronautics research to understand if your research is relevant:
   - Examine DG Research’s Aeronautics webpages (http://ec.europa.eu/research/transport/air/index_en.htm)
   - Download and examine the latest FP7 Transport (including Aeronautics) work programme … also investigate others such as FP7 Space (http://ec.europa.eu/research/participants/portal/page/fp7_documentation)
   - Examine Advisory Council for Aeronautics Research in Europe (ACARE) webpages (http://www.acare4europe.org)
   - Register for research*eu – free magazine of the European research area (http://ec.europa.eu/research/research-eu/index_en.html)

Step 1: Background work (2/2)

1. Investigate FP6/7 Aeronautics projects in your areas of interest
   - Download and read FP6/7 Aeronautics Project Synopses:
   - Search through “all” FP6/FP7 projects on the Cordis database (http://cordis.europa.eu/search/index.cfm?fuseaction=proj.advSearch)
Step 2: How to identify ‘successful’ EU aeronautics organisations (1/3)

1. European aeronautics organisations who have successfully implemented FP6/7 Aeronautics projects:

   A) Search out contact details for project coordinator and partners in FP6 Aeronautics Project Synopses (Volumes 1 and 2) e.g. FP6 LAPCAT


   B.1) e.g. “Aero-Engine” under FP7 Transport

---

Step 2: How to identify ‘successful’ EU aeronautics organisations (2/3)


B.1) e.g. “Aero-Engine” under FP7 Transport
Step 2: How to identify ‘successful’ EU aeronautics organisations (3/3)

B.2) e.g. “Aero-Engine” under FP7 Transport

Validation of radical engine architecture systems

Start date: 01/01/2009
End date: 30/06/2011
Project acronym: DGEMEA
Project Web site: n/a

<table>
<thead>
<tr>
<th>Contact person</th>
<th>Organisation</th>
<th>Address</th>
<th>Email</th>
<th>Telephone</th>
<th>Facsimile</th>
<th>URI</th>
<th>Organisation Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project leader</td>
<td>Aero-Engine</td>
<td>London</td>
<td>Giles</td>
<td>+44 0845 300000</td>
<td>+44 0845 300000</td>
<td><a href="http://www.aero-engine.com">www.aero-engine.com</a></td>
<td>Organisation</td>
</tr>
</tbody>
</table>

Objectives: Show the potential of the ACEA engine, the commercial and political pressure to reduce CO2 emissions and safety. Critical in the succession of the aircraft industry to survive in the future. The technical output objectives are to design, develop and evaluate new engine concepts based on afterburner technology, and to create and implement the ACEA 2020 objectives. The project also aims to deliver high performance and low cost afterburner systems. Therefore it is necessary to provide information that will enable users to assess new technology improvements.

Step 3: Alternative ways to identify EU aeronautics partners (1/4)

1. FP6 and FP7 aeronautics support actions:
   - CEARES (www.ceares.eu) - Network of aeronautics research organisations in Central Europe
   - AirTN (www.airtn.eu) - European network of aeronautics research and air traffic management organisations
   - EASN (www.easn.net) - European Aeronautics Science Network
   - ECATS (www.ecats-network.eu) - European network on environmentally compatible air transportation system
     - Public membership lists and contact details
     - Organise awareness raising and networking events
     - Distribute free newsletters

2. European Commission organised FP7 Transport information-days
   - Presentations concerning call objectives
   - Networking
   - Next FP7 Transport info-day in Brussels on 19 July 2012

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Step 3: Alternative ways to identify EU aeronautics partners (2/4)

1. **AEROPORTAL** ([www.aeroportal.eu](http://www.aeroportal.eu))
   - Support to participation of SMEs in European aeronautics research projects
   - Partner search database
   - AeroPortal newsletter

Step 3: Alternative ways to identify EU aeronautics partners (3/4)

1. **Cordis FP7 Find Project Partners service** ([https://cordis.europa.eu/partners/web/guest/home](https://cordis.europa.eu/partners/web/guest/home))
   - E.g. Search on “aerodynamics”
Step 3: Alternative ways to identify EU aeronautics partners (4/4)

1. NCP SME Network (www.ncp-sme.net)
   - Partner searches for SMEs
   - Covers many fields of science and technology

Step 4: How to approach successful EU aeronautics partners (1/5)

1. Prepare marketing material
   - Even universities and research institutes need marketing material!
   - But, marketing material is often too long, unclear and uninteresting!
   - Prepare one page, A4 sized profile form – focused on a single research department or technology
   - Highlight past international research experience
   - Don’t forget to mention what you look for:
     e.g. “We want to join a consortium of European aeronautics organisations preparing a proposal for Area AAT.2010.4.1-2 Aerostructures under FP7 Transport Call 3”
   - Good example: technology profile form used by STCU (see http://www.stcu.int/documents/download/TPF_Example.pdf)
Module 1 – How to find “successful European partners” for FP7 proposals

Prepared in the frame of the FP7 KhAI-ERA project
Step 4: How to approach successful EU aeronautics partners (4/5)

2. Promoting your organisation
   - Use personal contacts and referrals (usually best method)
   - Attend networking events organised by EC (don’t hide, make a presentation!)

3. ‘Cold emailing’ successful EU aeronautics organisations (part A)
   - Send short email in English (100 - 200 words)
   - Attach your marketing profile form(s)
   - Provide full contact details and website address

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Step 4: How to approach successful EU aeronautics partners (5/5)

2. ‘Cold emailing’ successful EU aeronautics organisations (part B)
   - Successfully contacted someone by email … now what?
   - Be brave and follow up with a phone discussion on how to collaborate
   - If phone calls are too expensive, consider using Skype or Microsoft Messenger, and using a webcam, to enrich discussions
   - Stay in regular contact

2. ‘Cold emailing’ successful EU aeronautics organisations (part C)
   - Tried contacting by email but no response
   - Wait 1-2 weeks then follow up with another email or phone call (better)
   - Always be polite
     • maybe many unknown reasons why you get rejected
     • you may not succeed first time but later

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Step 5: How to identify other aeronautics related calls for proposals (1/1)

1. **FP7 Co-operation**
   (http://cordis.europa.eu/fp7/cooperation/home_en.html)
   - Other FP7 programmes: Space, Security, NMP (Nanosciences, nanotechnologies, materials and new production technologies) etc

2. **Joint Technology Initiatives**
   - Framework for stakeholders - led by industry - to define R&D priorities and fund collaborative R&D projects
   - **SESAR** (www.sesarju.eu) - EU air traffic control modernisation programme & **CLEANSKY** (www.cleansky.eu) - SMART fixed wing aircraft, green regional aircraft, green rotorcraft, ...

3. **Do your background research**
   - Download work programmes and search them for key research terms (e.g. aerodynamics, avionics, etc) and call deadlines
Be patient, persistent and polite … Good luck!

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References

1. DG Research’s Aeronautics webpages
   (http://ec.europa.eu/research/transport/air/index_en.htm)
2. Advisory Council for Aeronautics Research in Europe (ACARE) webpages
   (http://www.acare4europe.org)
4. FP6 Aeronautics Project Synopses / Volume 1:
5. FP6 Aeronautics Project Synopses / Volume 2:
7. Cordis project database
   (http://cordis.europa.eu/search/index.cfm?fuseaction=proj.advSearch)
8. Cordis FP7 Find Project Partners service
   (https://cordis.europa.eu/partners/web/guest/home)
9. NCP SME Network (www.ncp-sme.net)
Training Module 2

Introduction to FP7 proposal preparation and submission

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Intelligentsia Consultants

May 2012
Module 2 – Introduction to FP7 proposal preparation and submission

Introduction

This training module was aimed at Ukrainian researchers with minimal experience – or none – of the EU’s seventh framework programme (FP7). It provides an introduction to the main steps in preparing an FP7 project starting from project idea to proposal writing through to project start.

Training Objectives

✔ Learn about the main steps in preparing an FP7 project

Module components

❖ Overview of FP7 project preparation process
❖ Project idea
❖ Consortium building
❖ Proposal writing
❖ Submission
❖ Evaluation
❖ Contract negotiations

Target audience

❖ Aerospace researchers
❖ Rail transport researchers
❖ Road transport researchers
FP7 Training Session

Part II: Introduction to FP7 proposal preparation and submission

Giles Brandon
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From an Idea to a Proposal to a Project: An Overview

1. Project Idea
2. Consortium Building
3. Proposal Writing
4. Submission
5. Evaluation
6. Contract Negotiations
7. Project Start

Steps 2 and 3 are often iterative

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Project Idea

Develop an idea for a research project that is …

- Relevant to the objectives/priorities in the FP7 Transport work programme (so read the work programme carefully)
- Innovative (not done before)
- Realistic (objectives, skills, budget, duration)
- Requires a consortium with European partners

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Project Idea

Before proposal writing prepare a summary for consortium partners

- Objectives
- Work to be done
- Expertise needed
- Work plan

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**Collaborative Research – Funding Schemes**

1. **Collaborative Projects (CP)**
   - STREP “small or medium-scale focused research actions”
   - IP “large-scale integrating projects”

2. **Coordination and Support Actions (CSA)**
   - Coordination or networking actions
   - Support actions

<table>
<thead>
<tr>
<th>Activities</th>
<th>EC’s upper funding limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research and Technological Development activities.</td>
<td>50%</td>
</tr>
<tr>
<td>Exception: Public bodies, secondary and higher educational establishments, research organizations and SMEs</td>
<td>75%</td>
</tr>
<tr>
<td>Demonstration activities</td>
<td>50%</td>
</tr>
<tr>
<td>Other: support and coordination actions, training, career development of researchers</td>
<td>100%</td>
</tr>
<tr>
<td>Management and audit certificates</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Consortium Building**

**In accordance with Work Programme and Call requirements:**
- The right number of partners
- Type of organizations and countries
- Functions

**In accordance with project needs:**
- Experienced Coordinator
- Competent Partners
- Complementarity of Partners
- Needed expertise is covered
- Role in Project - Fitting tasks to the Organizations

**There are many different ways to find consortium partners:**
- See my earlier Powerpoint presentation
Proposal Writing

Preparation

- Download the FP7 Transport Work Programme and Guide for Applicants (Collaborative Project or Coordination and Support Action)

  See “Information Package” on [http://ec.europa.eu/research/participants/portal/page/cooperation](http://ec.europa.eu/research/participants/portal/page/cooperation)

- Read carefully the Guide for Applicants

Proposal Writing

Two parts to a proposal – Part A and Part B

Part A

Part A contains the administrative information about the proposal and the participants

A1: A brief description of the project
A2: Details and characteristics of the participants
A3: Project cost details
Proposal Writing - Part A (continued)

Part A completed via a set of online standard forms placed in Electronic Proposal Submission System (EPSS)

Project coordinator registers on EPSS and completes A1 and A3 forms


Consortium partners complete A2 forms (including PIC number)

Proposal Writing - Part B

Part B contains detailed description of project and working plan.

Part B is the difficult part to prepare well!

Part B comprises of the following sections:

• Cover page
• Summary
• Section1: Scientific and/or technical quality, relevant to the topics addressed by the call
• Section2: Implementation
• Section3: Impact
• Section4: Ethical Issues
Proposal Writing - Part B

Section 1 Scientific and/or technical quality, relevant to the topics addressed by the call

1.1 Concept and objectives
Explain the concept of your project. What are the main ideas that led you to propose this work?

1.2 Progress beyond the state-of-the-art
Describe the state-of-the-art in the area concerned, and the advance that the proposed project would bring about.

1.3 S/T methodology and associated work plan
A detailed work plan should be presented, broken down into work packages which should follow the logical phases of the implementation of the project, and include consortium management and assessment of progress and results.

Maximum length 20 pages (excluding Gantt chart and Pert diagram)

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Proposal Writing - Part B

Section 2 Implementation

2.1 Management structure and procedures
Describe the organisational structure and decision-making mechanisms of the project. Show how they are matched to the complexity and scale of the project.

2.2 Individual participants
For each participant in the proposed project, provide a brief description of the legal entity, the main tasks they have been attributed, and the previous experience relevant to those tasks.

2.3 Consortium as a whole
Describe how the participants collectively constitute a consortium capable of achieving the project objectives, and how they are suited and are committed to the tasks assigned to them.

2.4 Resources to be committed
Describe how the totality of the necessary resources will be mobilised, including any resources that will complement the EC contribution.

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Proposal Writing - Part B

Section 3 Impact

3.1 Expected impacts listed in the work programme
Describe how your project will contribute towards the expected impacts listed in the work programme. Mention the steps that will be needed to bring about these impacts. Explain why this contribution requires a European (rather than a national or local) approach.

3.2 Dissemination and/or exploitation of project results, and management of intellectual property
Describe the measures you propose for the dissemination and/or exploitation of project results, and how these will increase the impact of the project.

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Proposal Writing - Part B

Section 4 Ethical Issues

This is a table with boxes that need to be ticked

Normally only need to tick the last box

Proposal Writing – Evaluation Criteria

The proposal will be evaluated against 3 evaluation criteria. The criteria have equal weighting.

• Quality:
Scientific and/or technological excellence, relevant to the topics/activities addressed by the call (Marked out of 5 / Threshold 3)

• Implementation:
Quality and efficiency of the implementation and the management (Marked out of 5 / Threshold 3)

• Impact:
The potential impact through the development, dissemination and use of project results (Marked out of 5 / Threshold 3)

Typically, minimum overall threshold is 10. But, successful proposals usually have overall mark above 12.5 / 15
Proposal Writing – Finishing Touches

Before submitting the proposal do a quality check

• Logical objectives, structure and arguments for the project
• Clear and concise language
• Useful and understandable diagrams
• No typos, no inconsistency, no missing pages

If possible, get a researcher unconnected to the proposal to proof-read it

Submission

• Project coordinator submits proposal via the Electronic Proposal Submission System (EPSS)
• EPSS can be accessed via the call page on CORDIS
• Full instructions are found in the “EPSS preparation and submission guide” available from the EPSS entry page.
• It is the only way to submit a FP7 proposal
Module 2 – Introduction to FP7 proposal preparation and submission

Evaluation

Proposal

Evaluation Process

1. Eligibility

2. Individual Evaluation

3. Consensus

4. Thresholds

5. Panel Review

6. Commission Ranking

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Evaluation - Eligibility Checks

- Date and time of receipt of proposal on or before deadline
- Minimum number of eligible independent partners
- Completeness of proposal
- In scope of the call

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Prepared in the frame of the FP7 KhAI-ERA project
Evaluation - Evaluation Process

- Individual Evaluation
  - awarding of individual scores;
  - first assessment of the thresholds for each criterion
- Consensus+Threshold
  - overview over the evaluation of thresholds and the dispersion of scores
- Panel Review
  - comparison consensus results; final score and comments
- Commission Ranking
  - EC decisions

Contract Negotiations

- The Commission negotiates with some or all of those whose proposals have successfully passed the evaluation stage, depending on the budget available.

- If negotiations are successfully concluded, grant agreements providing for an EU financial contribution are established with the participants.
A Final Word …

• Preparing a proposal is a complicated process

• Seek the advice and support of people with experience

E.g. Ukrainian people/organisations involved in FP6/7 projects:

Igor Rybalchenko – Kharkiv Aviation Institution (FP6 ALCAS, SENARIO)
Nail Bagautdinov – Ivchenko Progress (FP6 CESAR)
Sergey Yershov – Podgorny Institute of Mechanical Engineering Problems NASU (FP6 UFAST)
Sergey Kutovoy – Yuzhnoye (FP6 MULFUN)
Oleksandr Zaporozhets – National Aviation University (FP6 X3-NOISE)

Thank you for your attention.

Good luck with your proposal submissions!
References

Training Module 3

FP7: Accumulated Experience, Opportunities and Problems for Ukrainian Organizations

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National aerospace University “KhAI”

May 2012
Module 3 – FP7: Accumulated Experience, Opportunities and Problems for Ukrainian Organizations

Introduction

Ukraine involvement into European Framework Programmes started within FP4. At the same time the 4th position of Ukraine (after Russia, China and Brazil) in top list of ICPC countries participation in FP7 demonstrates huge potential of Ukrainian researchers.

This training module presents possible approaches (appropriate for different level of skills and required different action intensity) that can help to be involved in FP7 proposal preparation. All of them were successfully approbated in Ukrainian practice and derived from the accumulated experience of the most active Ukrainian entities.

Module is proposed for Ukrainian researchers who have no experience in EU collaborative research at all or would like to intensify their involvement in.

Training Objectives

✓ Learn about different approaches to FP7 project involvement

Module components

 FP7 involvement strategy
 Ukrainian NCPs capabilities
 Common problems of Ukrainian participants of FP7 projects (internal and external)
 HORIZON 2020: new opportunities for Ukraine

Target audience

Ukrainian researchers interested in FP7 projects participation, policy makers.
Национальный Аэрокосмический Университет «ХАИ»

РП7 – от намерения к проекту. Пути, опыт, проблемы

Игорь Рыбальченко
Нач. Отдела международных научно-технических проектов
НКП – Транспорт (Авиация)

Год 2012:
- РП 7 завершается – повышенная конкуренция
- Украина накопила опыт – видны общие проблемы
- Первый опыт Национальных Контактных Пунктов РП7
- Впереди ГОРИЗОНТ 2020
Стратегия вхождения в РП7:

- Excellent Science!
- Продвижение компетенций
- Продвижение проектных идей
- Продвижение организации
- Продвижение персоналий
- Продвижение: «распределенное» vs. “централизованное”

Пути продвижения:

- Общие – CORDIS, NCP, ETNA, LinkedIn и т.п.
- Специальные – брокерские акции, сайты, сети (EASN)
- Поддерживающие проекты
- Личные контакты - networking
Продвижение компетенций:

- Мы можем «что-то» -- возьмите нас в проект!
- Работает – «общее» vs. «сфокусированное»
- Работает лучше – + уникальная компетенция
- Еще лучше - + публикации
- Еще лучше - + опыт проектов/партнеры
- Еще лучше - + личные контакты
- Совсем хорошо - + специальный конкурс

Продвижение проектов:

- У нас есть ИДЕЯ! Приглашаем партнеров.
- Идея = приоритет конкурса
- Работает – много отзывов
- В основном – периферия и SME (слабо сфокусированы)
- «Серьезные игроки» – мало
- Проблема коммуникаций
- Проблема координации
Сессия 2012 - стратегия Ансоффа

- Старый товар на старом рынке – вновь подан 1 проект предыдущего конкурса AAT
- Новый товар на старом рынке – 4 новые заявки AAT и SPACE
- Старый товар на новом рынке – 1 заявка на ENV

Что сработало:

- AAT ИнфоДень в Брюсселе
- Брокерская встреча ETNA
- Поддерживающий проект ERA-WIDE
- Специальный конкурс SPACE
- Цепочка партнеров
- Публикации
Что подано:

AAT
- CASCO -- Composite Aircraft Wing Section Concept Design based on Hybrid Micro-joints Approach
- Water Ice -- Water-Jetting with an Innovative Cryogenic Eco-friendly system
- CORSAIR -- Cold spray Radical Solutions for Aeronautic Improved Repairs
- EOLUS -- Reduction of the growth of space debris by integration of de-orbiting solutions at the End-of-Life of rocket Upper Stage
- ADRIANO -- Active Debris Removal Mission Architecture for In Orbit demonstration
- CEFIR -- Cost Effective Carbon Fibers Recovery Technology

Анализ 2012:

- Из 5 проектных идей 2 дошли до стадии аппликации – в основном, проблема координации
- Из 5 приглашений сработало 3
- 1 проект предыдущего года был доработан
- КПД на стадии подачи ≈ 50%
Опыт НКП «Транспорт» (Авиация)

- Возможности невелики – отсутствие поддержки государства
- Слабый интерес крупных структур
- Недопонимание клиентами роли и возможностей НКП
- Тем не менее – есть позитивные сдвиги

Проблемы (внутренние):

- Отсутствие стратегии государства
- Нет поддержки на национальном уровне
- Нет «национального представителя»
- Отсутствие координации ведомств
Проблемы (внешние)

- ЕС и РП7 – весьма бюрократизированные структуры
- Требования к составу консорциума завышены
- Партнеры ЕС – «процедурно-ориентированы»
- Квалификация партнеров не всегда высока
- Система принятия решений «демократична»
- Трудно с координацией
- Задержки платежей

HORIZON 2020

- Открыт для третьих стран
- Финансирование доступно НЕ ВСЕМ третьим странам
- Позиция Украины?
- НКП?
4.  **ENHANCING AND FOCUSING INTERNATIONAL COOPERATION ACTIVITIES**

4.1.  **Openness in international cooperation**

The Union will continue to engage with countries and regions across the globe. This will allow the Union's researchers and innovators to engage on a stakeholder-driven basis with their counterparts worldwide:

- Horizon 2020 will be fully open to participation from all over the world⁶;
- The European Research Council and Marie Skłodowska-Curie actions will operate on a fully researcher-driven basis, open to researchers from third countries.
- The Research Infrastructures activity will have a specific focus on international cooperation. Its e-Infrastructures component has an inherent international dimension by supporting collaboration through digital means.

However, not all third country participants will be automatically eligible for funding⁷. The list of countries eligible for automatic funding will be restricted, by complementing the current selection criterion, based solely on GNI per capita, with an additional criterion based on total GDP, excluding countries above a defined threshold. This will address the fact that some countries have established the critical mass needed to cooperate on a reciprocal basis with the Union. Similarly as for the

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**HORIZON 2020**

This said, while I expect Ukraine to remain in the category of countries whose participants in H2020 projects can generally be funded by the EU, one should always double-check the individual Work Programmes and the individual call announcements, because special provisions pertaining to that Work Programme or to that call may be announced.
Training Module 4

HORIZON 2020:
New Framework Programme
for Research and Innovation 2014 – 2020

LINA SMOVZIUK

National aerospace University “KhAI”

October 2012
Introduction

Horizon 2020, the next EU Programme for Research and Innovation is aimed at securing Europe’s global competitiveness. Running from 2014 to 2020 with an €80 billion budget, HORIZON 2020 will:

- Strengthen the EU’s position in science with a dedicated budget of € 24 598 million for providing a boost to top-level research in Europe.
- Reinforce EU industrial leadership as a result of € 17 938 million investments in key technologies, greater access to capital and support for SMEs.
- Provide € 31 748 million to help address major societal challenges such as climate change, developing sustainable transport and mobility, making renewable energy more affordable, ensuring food safety and security, or coping with the challenge of an ageing population.

Fully open to international participants, HORIZON 2020 will be a perfect opportunity for Ukrainian researchers to be involved into advanced collaborative research together with European partners.

Training Objectives

- Learn about the next EU Framework Programme for Research and Innovation
- Identify appropriate HORIZON 2020 Activities and learn about their key objectives
- Be ready for effective action when HORIZON 2020 is launched

Module components

- Europe 2020: Targets, initiatives and instruments
- HORIZON 2020 – new Research and Innovation Funding Programme of European Commission
- HORIZON 2020 pillars: Excellent Science, Industrial Leadership and Societal Challenges
- FP7 vs. HORIZON 2020: Priorities comparison
- HORIZON 2020: New rules and funding schemes

Target audience

All who are interested in collaboration with European research community and EC funding support receiving for innovative R&D activities.
The new Framework Programme for Research and Innovation
2014 - 2020

16 Oct 2012
Dr. Lina Smovziuk, National Aerospace University “KhAI”

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Europe 2020: targets

- **Employment**: 75% of the 20-64 year-olds to be employed
- **R&D**: 3% of the EU’s GDP to be invested in R&D
- **Climate change/energy**:
  - 20% reduction of greenhouse gas
  - 20% of energy from renewables
  - 20% increase in energy efficiency
- **Education**:
  - school drop-out rates below 10%
  - at least 40% of 30-34-year-olds complete third level education
- **Poverty / social exclusion**: at least 20 million fewer people in/at risk of poverty and social exclusion
Europe 2020 Strategy:
7 Flagship Initiatives

- Smart growth
  - Digital agenda for Europe
  - Innovation Union
  - Youth on the move
- Sustainable growth
  - Resource efficient Europe
  - An industrial policy for the globalisation era
- Inclusive growth
  - An agenda for new skills and jobs
  - European platform against poverty

Innovation Union:
more jobs, improved lives, better society

- Make Europe into a world-class science performer
- Remove obstacles to innovation which currently prevent ideas getting quickly to market
- Revolutionize the way public and private sectors work together

HORIZON 2020 is the financial instrument for implementing the Innovation Union
What is HORIZON 2020

Commission propose a 80 billion euro Research and Innovation Funding Programme (2014-2020) that will be based on three pillars:

1. Excellent science
2. Industrial leadership
3. Societal challenges

HORIZON 2020: budget breakdown

TOTAL: 79.3 billion Euro
Pillar 1: Excellent science

Background

- Support the most talented and creative individuals and their teams to carry out frontier research (ERC)
- Open up new and promising fields of research and innovation (FET);
- Excellent training and career development opportunities for researchers
- World-class research infrastructures accessible to all researchers in EU and beyond

Structure and budget distribution

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Research Council</td>
<td>13 268 M€</td>
</tr>
<tr>
<td>Future and emerging technologies (FET)</td>
<td>3 100 M€</td>
</tr>
<tr>
<td>Marie Curie Actions</td>
<td>5 752 M€</td>
</tr>
<tr>
<td>Research Infrastructures</td>
<td>2 478 M€</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24 598 M€</strong></td>
</tr>
</tbody>
</table>
Pillar 2: Industrial Leadership

Background

- Build leadership in enabling and industrial technologies, while also providing support for cross-cutting actions to capture the accumulated benefits from combining several Key Enabling Technologies
- Facilitate access to risk finance
- Provide Union wide support for innovation in SMEs

Pillar 2: Industrial leadership

Structure and budget distribution

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership in enabling and industrial technologies</td>
<td>13 781 M€</td>
</tr>
<tr>
<td>Access to risk finance</td>
<td>3 538 M€</td>
</tr>
<tr>
<td>Innovation in SMEs</td>
<td>619 M€</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>17 938 M€</strong></td>
</tr>
</tbody>
</table>
**Pillar 2: Industrial Leadership**

*Industrial and Key Enabling Technologies (KETs)*

- Nanotechnologies, advanced materials, advanced manufacturing and processing: 28%
- Biotechnology: 4%
- Micro- and nano-electronics; photonics: 11%
- Space: 11%
- ICT: 46%

**Pillar 3: Societal Challenges**

**Background**

- Concerns of citizens and society/EU policy objectives (climate, environment, energy, transport etc) cannot be achieved without Innovation
- Breakthrough solutions come from multidisciplinary collaborations, including social sciences & humanities
- Promising solutions need to be tested, demonstrated and scaled up
### Pillar 3: Societal Challenges

#### Structure and budget distribution

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health, demographic change and wellbeing</td>
<td>8 033 M€</td>
</tr>
<tr>
<td>Food security, sustainable agriculture, marine and maritime research, and the bio-economy</td>
<td>4 152 M€</td>
</tr>
<tr>
<td>Secure, clean and efficient energy</td>
<td>5 782 M€</td>
</tr>
<tr>
<td>Smart, green and integrated transport</td>
<td>6 802 M€</td>
</tr>
<tr>
<td>Inclusive, innovative and secure societies</td>
<td>3 106 M€</td>
</tr>
<tr>
<td>Climate action, resource efficiency and raw materials</td>
<td>3 819 M€</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>31 748 M€</strong></td>
</tr>
</tbody>
</table>

#### Pillar 3: Societal Challenges

**Budget breakdown**

- Health, demographic change and wellbeing: 12%
- Food security, sustainable agriculture, marine and maritime research, and the bio-economy: 25%
- Secure, clean and efficient energy: 18%
- Smart, green and integrated transport: 13%
- Inclusive, innovative and secure societies: 10%
- Climate action, resource efficiency and raw materials: 22%
### FP7 → Horizon 2020

<table>
<thead>
<tr>
<th>FP7</th>
<th>H2020 pillar</th>
<th>H2020 Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Societal challenges</td>
<td>Health, demographic change and wellbeing challenge</td>
</tr>
<tr>
<td>KBBE</td>
<td>Industrial leadership</td>
<td>Biotechnology</td>
</tr>
<tr>
<td>Societal challenges</td>
<td>Food security, sustainable agriculture and the bio-economy challenge</td>
<td></td>
</tr>
<tr>
<td>ICT</td>
<td>Industrial leadership</td>
<td>Leadership in enabling and industrial technologies: ICT</td>
</tr>
<tr>
<td>Societal challenges</td>
<td>Applications within relevant challenges</td>
<td></td>
</tr>
</tbody>
</table>

### FP7 → Horizon 2020

<table>
<thead>
<tr>
<th>FP7</th>
<th>H2020 pillar</th>
<th>H2020 Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMP</td>
<td>Industrial leadership</td>
<td>Leadership in enabling and industrial technologies: NMP</td>
</tr>
<tr>
<td>Societal challenges</td>
<td>Applications within relevant challenges</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>Societal challenges</td>
<td>Secure, clean and efficient energy challenge</td>
</tr>
<tr>
<td>Environment</td>
<td>Societal challenges</td>
<td>Climate action, resource efficiency including raw materials challenge</td>
</tr>
<tr>
<td>Transport</td>
<td>Societal challenges</td>
<td>Smart, green and integrated transport challenge</td>
</tr>
</tbody>
</table>
### FP7 → Horizon 2020

<table>
<thead>
<tr>
<th>FP7</th>
<th>H2020 pillar</th>
<th>H2020 Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space</td>
<td>Industrial Leadership</td>
<td>Leadership in enabling and industrial technologies: Space</td>
</tr>
<tr>
<td>Security</td>
<td>Societal challenges</td>
<td>Inclusive, innovative and secure societies challenge</td>
</tr>
<tr>
<td>Socio-economic science</td>
<td>Societal challenges</td>
<td>Inclusive, innovative and secure societies Challenge Applications within all other societal challenges</td>
</tr>
<tr>
<td>and Humanities</td>
<td></td>
<td><strong>Excellent</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Science</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>ERC, MCA, Research Infrastructures</strong></td>
</tr>
</tbody>
</table>

### “Top Down” vs. “Bottom Up” in H2020

- **Top Down**
  - Leadership in enabling and industrial technologies
  - Innovation in SMEs
  - Access to Risk Finance

- **Bottom Up**
  - Health, demographic change & wellbeing
  - Food security, sustainable agricultures, marine and maritime research and bio-economy
  - Secure, clean and efficient energy
  - Smart, green and integrated transport
  - Climate action, resource efficiency, raw materials
  - Inclusive innovative and secure societies

- **Top Down**
  - The European Research Council
  - Future and Emerging Technologies
  - Marie Curie
  - European Research infrastructures

- **Bottom Up**

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**Prepared in the frame of the FP7 KhAI-ERA project**
What’s new in HORIZON 2020

- A single programme bringing together three separate programmes/initiatives*
- Coupling research to innovation – from research to retail, all forms of innovation
- Focus on societal challenges facing EU society, e.g. health, clean energy and transport
- Simplified access, for all companies, universities, institutes in all EU countries and beyond

*The 7th Research Framework Programme (FP7), Competitiveness and Innovation Framework Programme (CIP), EU contribution to the European Institute of Innovation and Technology (EIT)

H2020: Rules for Participation
Rules for Participation:
Simplification summary

- Single set of simpler and more coherent participation rules
- Moving from several funding rates for different beneficiaries and activities to just two
- Replacing the four methods to calculate overhead or indirect costs with a single flat rate
- Major simplification under the forthcoming financial regulation
- Successful applicants to get working more quickly: reduction of average time to grant by 100 days (current average of around 350 days under FP7)
- New balance between trust and control

Rules for Participation (1)

1. A single set of rules
   - Adapted for the whole research and innovation cycle
   - Covering all research programmes and funding bodies
   - Aligned to the Financial Regulation, coherent with other EU Programmes

2. One project – one funding rate
   - Maximum of 100% of the total eligible costs (except for actions close to market, where a 70% maximum will apply)
   - Indirect eligible costs: a flat rate of 20% of direct eligible costs

3. Simple evaluation criteria
   - Excellence – Impact – Implementation (Excellence only, for the ERC)

4. New forms of funding aimed at innovation: pre-commercial
   - procurement, inducement prizes, dedicated loan and equity instruments
Rules for Participation (2)

5. **International participation:**
   - facilitated but better protecting EU interests

6. **Simpler rules for grants: broader acceptance of participants**
   - accounting practices for direct costs, flat rate for indirect costs, no time-sheets for personnel working full time on a project, possibility of output-based grants

7. **Fewer, better targeted controls and audits**
   - Lowest possible level of requirements for submission of audit certificates without undermining sound financial management
   - Audit strategy focused on risk and fraud prevention

8. **Improved rules on intellectual property**
   - Balance between legal security and flexibility
   - Tailor-made IPR provisions for new forms of funding
   - A new emphasis on open access to research publications

Evaluation Criteria

- Proposals shall be evaluated on the basis of the following criteria:
  - Excellence
  - Impact
  - Quality and efficiency of the implementation

- For proposals for ERC frontier research: sole criterion of excellence

- Proposals shall be ranked according to evaluation results - selection on the basis of this ranking
Funding schemes (1)

- **Research and innovation grant** (collaborative project)
  whole range of R&D activities, carried out by transnational consortium

- **Coordination and support grant**
  e.g.: dissemination, coordination, expert support, studies, etc.

- **Training and mobility grant** (Marie Curie Actions)
  For single beneficiaries, funding bodies or transnational consortia for training, mobility and career development of researchers

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Funding schemes (2)

- **Dedicated instrument for innovative SMEs**
  3 stages: feasibility / main grant / follow up

- **Programme co-funding**
  grants to national programmes for coordination and joint actions

- **Inducement prizes**
  to stimulate breakthroughs in science, research and innovations

- **“Access to risk finance” / loan and equity facilities**
  (loans, guarantees, venture capitals)
Horizon 2020 and partnering

Public private partnerships:
- Trough Joint Technology Initiatives or other formal structures
- Trough contractual agreements, which provide inputs for work programmes
- Only when criteria met, e.g. clear commitments from private partners

Public public partnerships:
- Trough « ERA-Nets » for topping up individual calls/actions (replacing current ERA-Net, ERA-Net Plus, Inco-Net, Inno-net)
- Trough participation in joint programmes between Member States
- Supporting agendas of Joint Programming Initiatives when in line with Horizon 2020
- Only when criteria met, e.g. financial commitments of participating countries

European Innovation Partnerships:
- Not funding instruments, but for coordination with broader policies and programmes

Strong participation by SMEs

Integrated approach - around 15% of the total budget for societal challenges and LEITs to go to SMEs.

Simplification of particular benefit to SMEs (e.g. single entry point).

A new SME instrument, building on the SBIR model will be used across all societal challenges as well as for the LEITs.

A dedicated activity for research-intensive SMEs in 'Innovation in SMEs'.

'Access to risk finance' will have a strong SME focus (debt and equity facility)
International cooperation

- **International cooperation is crucial** to address many Horizon 2020 objectives
- Principle of **general openness**: the programme will remain to be the most open funding programme in the world
- Horizon 2020 shall be open to the **association** of: acceding countries, candidate countries and potential candidates and selected third countries that fulfil the relevant criteria (capacity, track record, close economic and geographical links to the Union, etc.)
- Targeted actions to be implemented taking a **strategic approach to international cooperation** (dedicated measures in the 'Inclusive, innovative and secure societies' challenge)

Next steps

- **Ongoing**: Parliament and Council negotiations on EU budget 2014-20 (including overall budget for Horizon 2020)
- **Mid 2012**: Final calls under 7th Framework Programme for Research to bridge gap towards Horizon 2020
- **By end 2013**: Adoption of legislative acts by Parliament and Council on Horizon 2020
- **1/1/2014**: Horizon 2020 starts; launch of first calls
Thank you for your attention

More information:
www.ec.europa.eu/research/horizon2020 + NCP Network
References

1. HORIZON 2020 official website (http://ec.europa.eu/research/horizon2020/index_en.cfm)
3. HORIZON 2020 extended presentation (http://prezi.com/1fogw2zvbiek/horizon-2020-officialversion/?auth_key=affe016b17ca2bf0d96d1d4a44f6a6ad3bb6bd63)
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5. NIP Ukraine Information brochure on HORIZON 2020 in Ukrainian (http://www.fp6-nip.kiev.ua/assets/Horizont_2020/Horizon2020.pdf)