

**Russian National Contact Point  
on «Biotechnology, Agriculture & Food»,  
(Bio-NCP of Russia on FP6-FP7 Programmes of EC)**



**Technology Platforms as a Tool for Involvement  
of Researchers in International Co-operation**

**Vladimir ERYOMIN**

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**Bakh Institute of Biochemistry, RAS**

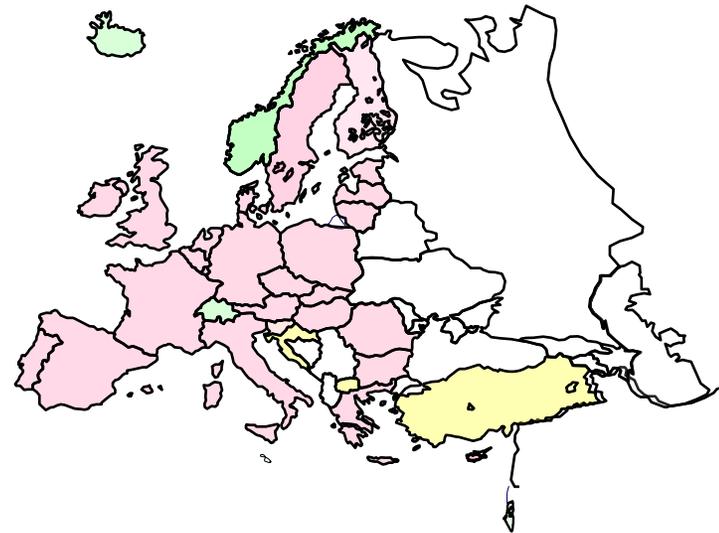
«InJoy&Train» Project, International Training Workshop:

“Opportunities for S&T Co-operation between Belarus and EU  
in Food, Agriculture and Biotechnologies”,

11-12 October 2007, Minsk, Belarus

# European Technology Platforms (TPs)

**Technology Platforms (TPs)** are the instruments for formation of priorities for International R&TD co-operation in countries of the European Union (MS and AC) and other 3-d INCO-countries co-operating with the EU.



**Technology Platforms (TPs)** are the **practical tools** for realization of **FP7 Programme of EC**

# FP6-FP7 Programmes of EC

## Short Summary:

**FP6-FP7 Programmes of EC** are financial instruments for enhancing R&TD development of the EU-countries with participation all other 3-d INCO countries, including **Belarus**, Armenia, Kazakhstan, Ukraine and Russia (**KRUAB-countries** of «InJoy&Train» Project)

## **Main objectives of FP6-FP7 Programmes:**

1. Formation of united **European Research Area (ERA)** in Europe
2. Realisation of the European Conception of  
**«Knowledge-Based Bio-Economy»**
3. **Consolidation of financial and human resources** on solving R&TD challenges for achieving aims of social and economic development of European countries
4. **Competitiveness enhancing** of European goods and technology transfers for development of European economy in whole
5. **These Programmes are not supporting «pure Academic Researches»**, but **aimed to the achievements of practical results suitable for realisation by SMEs and in industry**

## FP6-FP7 Programmes of EC

**FP6-FP7 Programs of the EU** are the way for stimulation of R&TD and social developments of EU-countries

### **Main Objectives of FP6-FP7 Programmes of EC:**

1. Revealing the most significant priorities and directions for R&TD, social & economical development of EU-countries
2. Formation of Work Programmes, i.e. Lists and Descriptions of thematic priorities for carrying out of R&TD projects in international collaboration
3. Holding thematic Calls for selection of the most strong and relevant International Consortia for carrying out of FP7 Projects
4. Providing financial resources for conducting of FP7 Projects
5. Dissemination of advanced experience and creation of appropriate R&TD infrastructure for formation ERA
- 6. Formulation of Conception for European Technology Platforms**
- 7. Selection of Thematic Priorities for formation and development of Technology Platforms**

# Conception of Technology Platforms

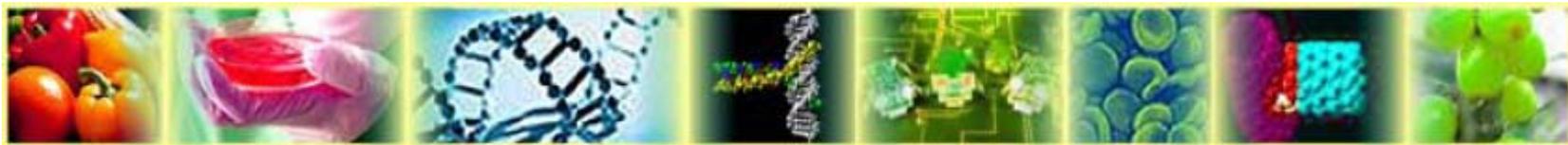
- **Selection of the most strategically important applied scientific challenges** for social and economical development of EU-countries
- **Analysis of Market needs and available technology transfers** potential for production of consumer's goods and service enhancing
- **Active involvement of all EU-countries and INCO-countries**
- **Mobilization of public and private financial resources** for FP7 Programme realisation
- **Mobilization of human resources** for Project realisation

# Conception of Technology Platforms

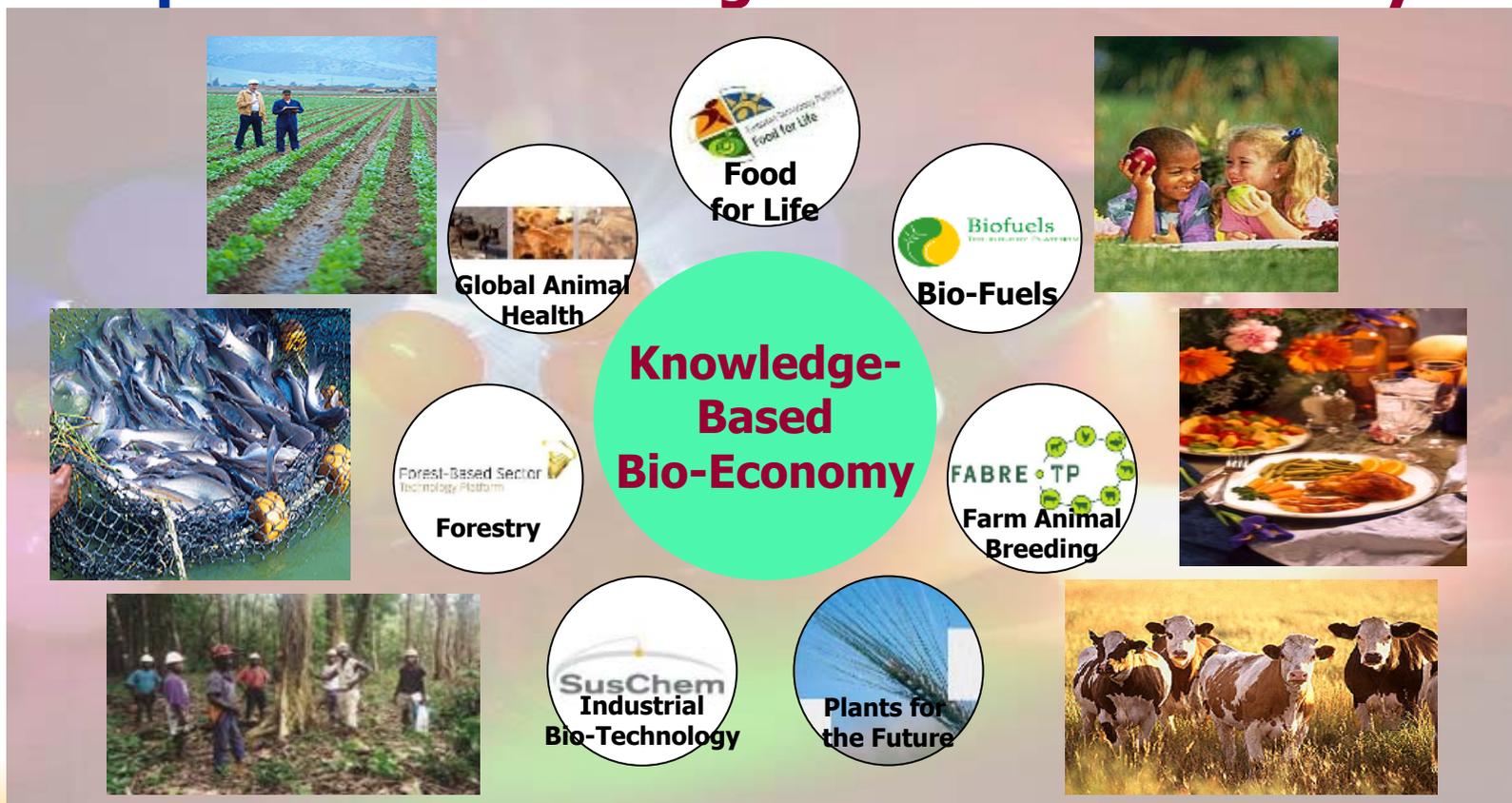
- **Taking into account all points of view:**  
(for all interested-in Sides)
- **Government Bodies**
- **Regulatory Bodies**
- **Representatives of Industry**
- **Scientific Communities**
- **SMEs**
- **Multipliers**
- **Consumers and Users**

**The European Conception of  
«KNOWLEDGE-BASED BIO-ECONOMY»**

# European Technology Platforms (TPs)



TPs of EC are formed on the basis of European  
Conception of «**Knowledge-Based Bio-Economy**»



# The European Conception of «KNOWLEDGE-BASED BIO-ECONOMY»

**QUALITY ASSURANCE  
 STRATEGIES TRACEABILITY,  
 CONSUMER SCIENCE**

## SOCIETAL NEEDS

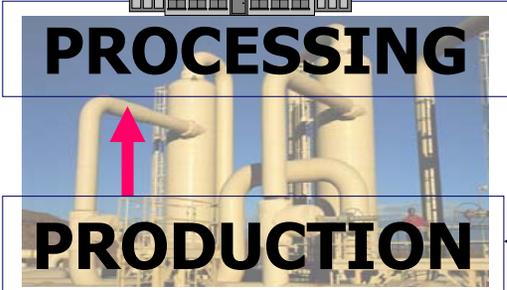
**STABILITY -  
 BIODEGRADABILITY  
 FUNCTIONALITY**



**“Fork to Farm”  
 Food, health  
 and well-being**

**Life Sciences &  
 Biotechnology for  
 Sustainable  
 non-food products  
 + processes**

**ADVANCED FOOD  
 TECHNOLOGIES, FOOD QUALITY  
 DETERMINANTS, NUTRITION**  
  
**LOW INPUT FARMING - BIODIVERSITY  
 ANIMAL HEALTH - RURAL DEVT.**



**WHITE BIOTECH  
 CLEAN BIOPROCESSES  
 RAW MATERIALS/WASTE**  
  
**GREEN/BLUE BIOTECH  
 OPTIMISED RAW MATERIALS**

**Sustainable production and management of biological resources  
 from land, forest, and aquatic environments**

# Food, Agriculture, Fisheries and Biotechnology: Rationale

- **Build an European Knowledge-Based Bio-Economy (**KBBE**)**
  - **Respond to social and economic challenges:**
    - High quality food and sustainable food production
    - Food-related disorders (cardiovascular, obesity ...)
    - Infectious animal diseases and zoonoses
    - Sustainable agriculture/fishery and climate change
    - Clean biomaterials from renewable bio-resources
  - **Involve all stakeholders (incl. industry) in research**
  - **Support CAP and CFP**
  - **Respond quickly to emerging research needs**
- **4 Fs: Food, Fiber, Fuel and Feed**



# European Technology Platforms (TPs)

## 2. Food, Agriculture, Fisheries and Biotechnology

### 2.1.

Sustainable production and management of biological resources from land, forest, and aquatic environments

### 2.2.

“Fork to farm”: Food (including sea-food), health and well being

### 2.3.

Life sciences, biotechnology and biochemistry for sustainable non-food products and processes



# Activity 1:

## Sustainable production and management of biological resources from land, forest and aquatic environments



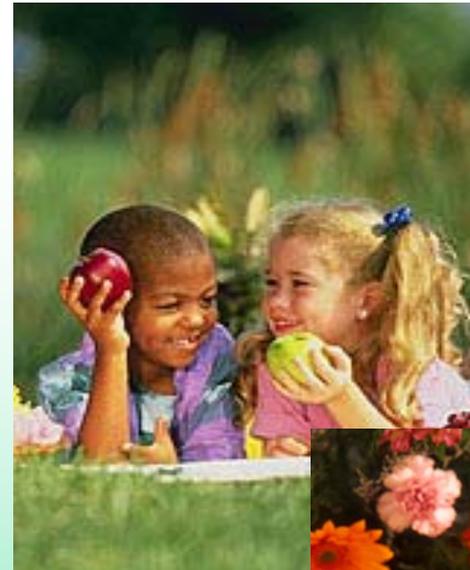
- Enabling research ('omics', converging technologies, bio-informatics, biodiversity) for micro-organism, plants and animals
- Competitive, sustainable and multifunctional agriculture, forestry, fishery and aquaculture
- Animal health production and welfare; animal diseases incl. zoonoses
- Marine resources, fishery, aquaculture
- Development of policy strategies for knowledge based bio-economy, agriculture, fishery as well as rural and coastal areas



## Activity 2:

# “Fork to farm”- Food (including sea-food), health and well being

- Consumer, societal, industrial and health aspects of food and feed
- Nutrition, diet related diseases and disorders
- Innovative food and feed processing
- Improved quality and safety of food, beverage and feed
- Total food chain concept



# FP7 Sub-Pillar: Fork to Farm

ПИТАНИЕ  
Food quality & safety

InJoy&Train

Consumers

Nutrition

Processing

Safety

Environment

From Fork to Farm

Health and well-being of consumers

Nutritional value / digestion / health impacts

Organoleptic impact

Safe, high-quality foods

Preparation

Storage / transport / retail

Processing

Environment

Production systems:  
Agriculture / Fisheries / Aquaculture

# Activity 3:

## Life sciences, biotechnology and biochemistry for sustainable non-food products and processes



- Improved crops, feed-stocks, marine products and biomass for energy, environment, and high added value industrial products; novel farming systems
- Bio-catalysis; new bio-refinery concepts and other bioprocesses
- Forestry and forest based products and processes
- Environmental remediation and cleaner processing



# FOOD, AGRICULTURE AND BIOTECHNOLOGY RESEARCH: DEVELOPING THE KBBE

## BIOMASS DEVELOPMENT & PRODUCTION

AGRICULTURE



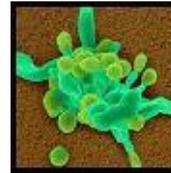
FISHERIES &  
AQUACULTURE



FORESTRY



MICROBIAL  
PRODUCTION



BIO-WASTE



Product  
embedded  
knowledge

optimized  
biomass

## BIOMASS PROCESSING

FOOD & FEED  
TECHNOLOGIES

BIOTECHNOLOGY

PROCESS  
TECHNOLOGIES

BIOCATALYSIS

FOOD

FOOD  
PRODUCTS

FEED

GREEN  
CHEMICALS

BIOFUELS

BIOMATERIALS KNOWLEDGE

## BIOECONOMY

KNOWLEDGE

EMPLOYMENT

PRODUCTS

CHOICE

SUSTAINABILITY

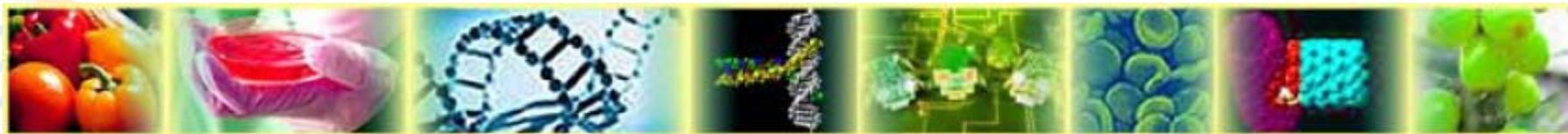
STAKEHOLDER FEEDBACK

ПИТАНИЕ  
Food quality & safety

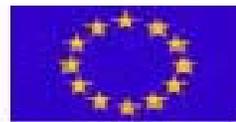
InJoy&Train



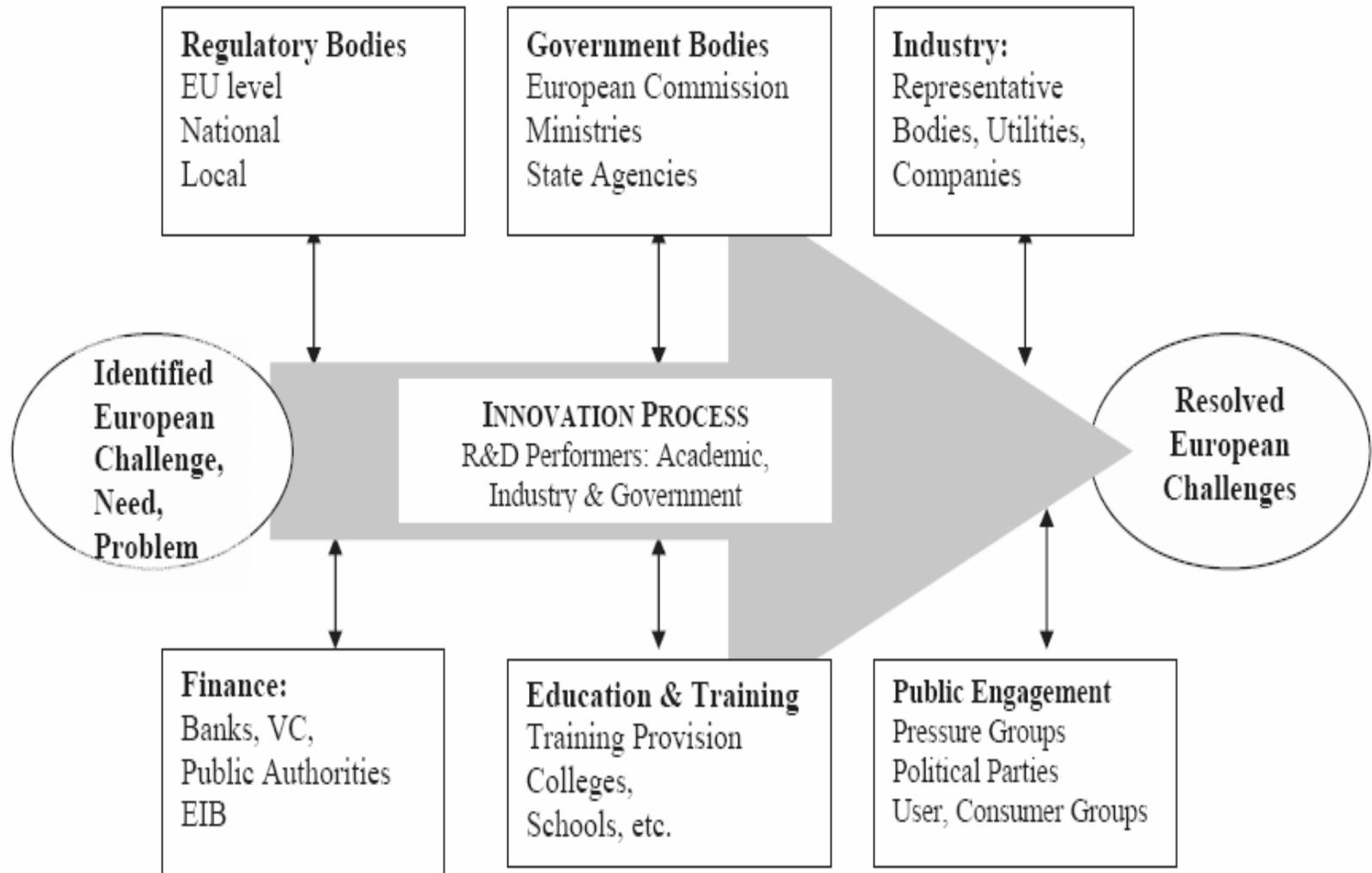
# EC-FP7 International R&TD Co-operation in «Biotechnology, Agriculture & Food»



## Technology Platforms of EC-FP7 Programme



# Mechanisms of Formation of TPs in EC-FP7 Programme

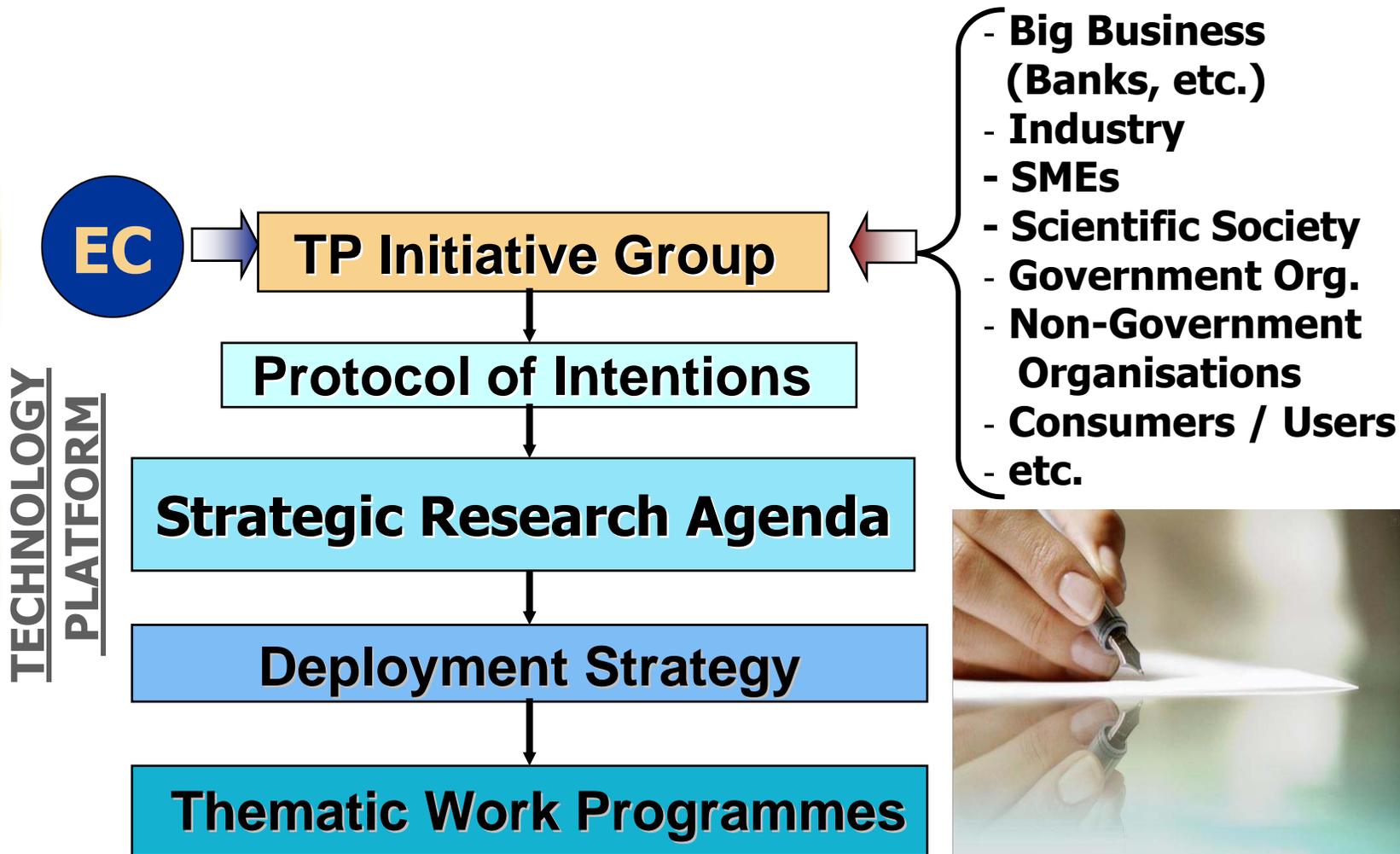


## Mechanism of TPs Formation in EC-FP7 Programme

### A EUROPEAN TECHNOLOGY PLATFORM

INPUTS	PLATFORM ACTIVITIES	OUTPUTS	BENEFITS
<p><b>Financial:</b></p> <ul style="list-style-type: none"> <li>• Framework Programmes</li> <li>• European Investment Bank</li> <li>• Commercial Banks</li> <li>• Structural Funds</li> <li>• Industrial Investment</li> <li>• Member State &amp; Regional Investment.</li> </ul> <p><b>Non-Financial:</b></p> <ul style="list-style-type: none"> <li>• High-level People</li> <li>• Organisational and Time Commitments</li> <li>• Political effort,</li> <li>• Etc.</li> </ul>	<p><b>Phase I:</b></p> <ul style="list-style-type: none"> <li>• Development of Road Map – vision, strategy and Action Plan.</li> </ul> <p><b>Phase II:</b></p> <ul style="list-style-type: none"> <li>• Oversight / Supervision of implementation of Action Plan by industry, government and researchers.</li> </ul>	<ul style="list-style-type: none"> <li>• Focussed Research Initiatives.</li> <li>• Coherent &amp; Stable Legislation &amp; Standards.</li> <li>• Consistent EU &amp; Member State Policies.</li> <li>• Education &amp; Training Programmes,</li> <li>• Political Market Initiatives,</li> <li>• Etc.</li> </ul>	<ul style="list-style-type: none"> <li>• New Products &amp; Services,</li> <li>• Industrial Competitiveness</li> <li>• Integrated EU Markets,</li> <li>• Improved Employment Prospects,</li> <li>• Better Trade Prospects</li> </ul>

# Mechanism of Formation of TPs in EC-FP7 Programme



# European Technology Platforms (TPs)

From: [http://cordis.europa.eu/technology-platforms/individual\\_en.html](http://cordis.europa.eu/technology-platforms/individual_en.html)

[Advanced Engineering Materials and Technologies](#) - EuMaT

[Advisory Council for Aeronautics Research in Europe](#) - ACARE

[Embedded Computing Systems](#) - ARTEMIS

[European Construction Technology Platform](#) - ECTP

[European Nanoelectronics Initiative Advisory Council](#) - ENIAC

[European Rail Research Advisory Council](#) - ERRAC

[European Road Transport Research Advisory Council](#) - ERTRAC

[European Space Technology Platform](#) - ESTP

[European Steel Technology Platform](#) - ESTEP

[European Technology Platform on Smart Systems Integration](#) - EPoSS

[Food for Life](#) - Food

[Forest based sector Technology Platform](#) - Forestry

[Future Manufacturing Technologies](#) - MANUFUTURE

[Future Textiles and Clothing](#) - FTC

[Global Animal Health](#) - GAH

[Hydrogen and Fuel Cell Platform](#) - HFP

[Industrial Safety ETP](#) - IndustrialSafety

[Innovative Medicines for Europe](#) - IME

[Integral Satcom Initiative](#) - ISI

[Mobile and Wireless Communications](#) - eMobility

[Nanotechnologies for Medical Applications](#) - NanoMedicine

[Networked and Electronic Media](#) - NEM

[Networked European Software and Services Initiative](#) - NESSI

[Photonics21](#) - Photonics

[Photovoltaics](#) - Photovoltaics

[Plants for the Future](#) - Plants

[Robotics](#) - EUROP

[Sustainable Chemistry](#) - SusChem

[Water Supply and Sanitation Technology Platform](#) - WSSTP

[Waterborne ETP](#) - Waterborne

[Zero Emission Fossil Fuel Power Plants](#) - ZEP

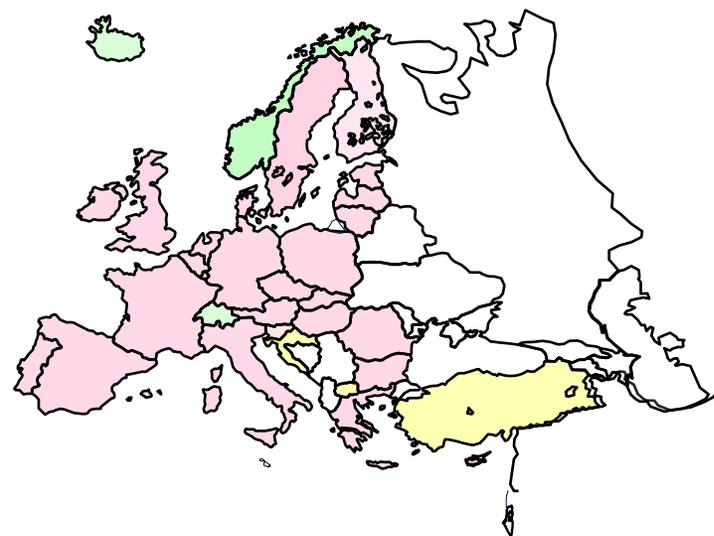
# Technology Platforms of EC-FP7 Programme

**Technology Platforms (TPs)** play a key role in better aligning EU research priorities to industrial needs. They cover whole economic value chain, ensuring that knowledge generated through research is transformed into technologies and processes, and ultimately into marketable products and services.



## European TPs affiliated with FAFB-Sector:

1. «Food for Life»
2. «Plants for Future»
3. «Industrial Biotechnology»
4. «Forestry»
5. «Fisheries & Aquaculture»
6. «Bio-Fuel»
7. «Animal Health»
8. «Animal Breeding»,
9. + some new TPs in the future





European Technology Platform  
Food for Life

<http://etp.ciaa.be>

[www.suschem.org](http://www.suschem.org)

SusChem

Industrial biotechnology

European Biofuels TP

# Knowledge Based Bio-Economy

FABRE • TP

Farm Animal Breeding

[www.fabretp.org](http://www.fabretp.org)

Forest-Based Sector Technology Platform

[www.forestplatform.org](http://www.forestplatform.org)

ETP

Global Animal Health

[www.ifah.be/Europe/EUPlatform/Platform.htm](http://www.ifah.be/Europe/EUPlatform/Platform.htm)

ETP

Plants for the Future

[www.epsoweb.org](http://www.epsoweb.org)

# General Information on Technology Platforms and Information on Related Technology Platforms and Initiatives

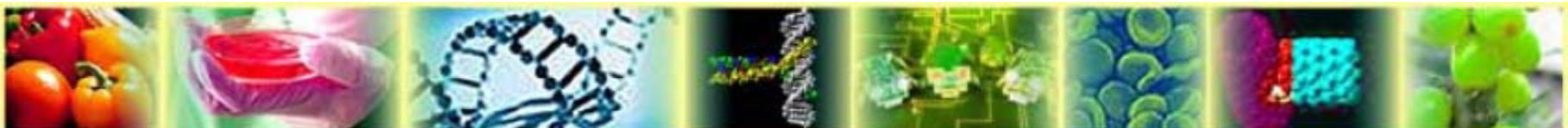
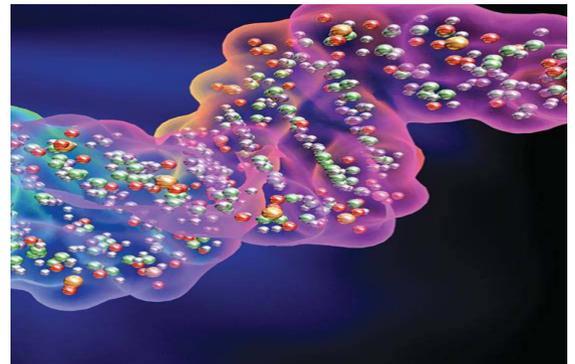
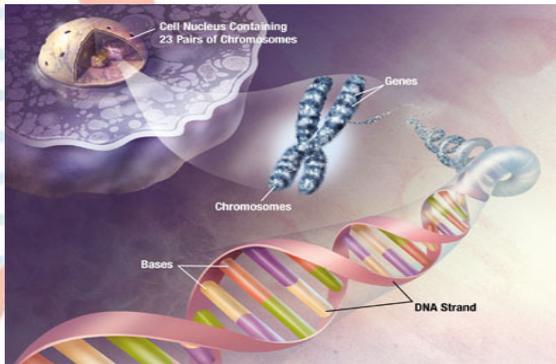
The Technology Platform “Plants for the Future” has established links to related platforms, these are:

1. ERA-Net [European Research Area on Plant Genomics](#) (ERA-PG) - Contact: [Willem Stiekema](#)
2. European Technology Platforms of the Knowledge Basde Bio-Economy, to which the ETP “Plants for the Future” belongs:

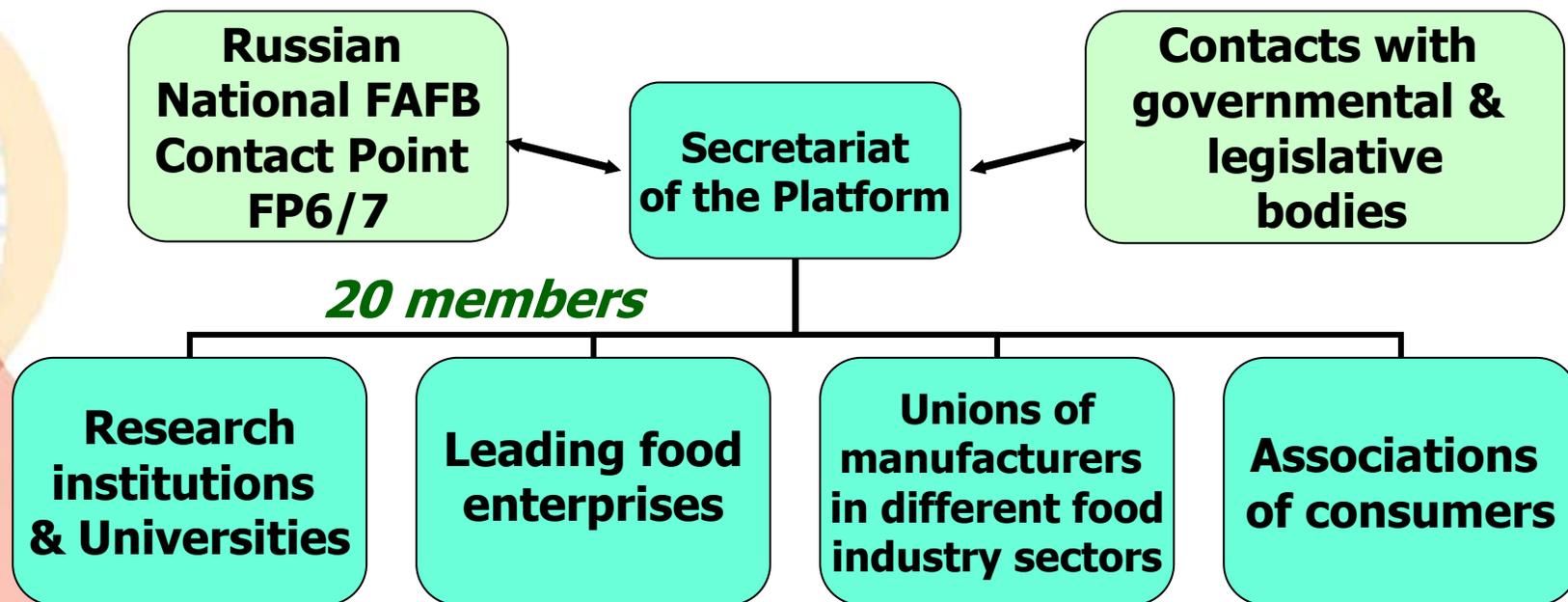
European TP	Vision (V), Strategic Research Agenda (S)	Contacts	Liaison to Plants TP	European Commission contacts
<a href="#">Plants for the Future</a>	V Jun'04 S Aug'05	<a href="#">Karin Metzloff</a> <a href="mailto:PlantTP@epsomail.org">PlantTP@epsomail.org</a>	n.a.	<a href="#">Waldemar KÜTT</a>
<a href="#">Forestry</a>	V Feb'05 S Dec'05	<a href="#">Claes-Göran BECKEMAN</a>	<a href="#">Konstantin von Teuffel</a> <a href="#">Yves BIROT</a>	<a href="#">Martin GREIMEL</a> (E.3)
<a href="#">White Biotech</a>	V Mar'05 S Nov'05	<a href="#">Dirk CARREZ</a>	<a href="#">Wim Soetaert</a>	<a href="#">Maurice LEX</a> (E.1) <a href="#">Gabriele SÜPTITZ</a> (E.1)
<a href="#">Biofuel</a>	V Jun'06 S	<a href="#">Alexandre RÖJEY</a>	<a href="#">Alexandre RÖJEY</a>	<a href="#">Jeroen SCHUPPERS</a> (J.3)
<a href="#">Food for Life</a>	V Jul'05 S Dec'06	<a href="#">Jan Maat</a>	<a href="#">Dick Toet,</a> <a href="#">Beate Kettlitz</a>	<a href="#">Jürgen LUCAS</a> (E.2) <a href="#">Valerio ABBADESSA</a> (E.2)
<a href="#">Farm Animal Breeding</a>	V Feb'06 S Dec'06	<a href="#">Jan MERKS</a>	<a href="#">Anne-Marie Neeteson,</a> <a href="#">Andrea Rosati</a>	<a href="#">John CLAXTON</a> (E.3)
<a href="#">Global Animal Health</a>	V Aug'05 S May'06	<a href="#">Declan O'BRIEN</a>	<a href="#">Declan O'BRIEN</a>	<a href="#">Isabel MINGUEZ TUDELA</a> (E.3)

# EC-FP7 International R&TD Cooperation in «Biotechnology, Agriculture & Food» Sector

## Russian Experience in the Formation of TPs in FAFB-Sector



# Russian Technology Platform “Food for Life” - Structure:



## *Lines of activities:*

**Food industry**

**Food quality control**

**Healthy nutrition**

# Russian Technology Platform “Food for Life”



## Priorities:

- Harmonization of legislation and methods in the area of food quality control between Russia and EU
- Biotechnologies for new food ingredients
- Development of functional food for specific categories of consumers
- Microbial growth and distribution of contaminants in food/feed chains
- Development of new analytical techniques to ensure manufacturing of safe foods
- Support in training and technology transfer for specialists in different areas of food industry
- Creation of open platform information resources about Russian food industry

# Principles of Russian Technology Platform Formation



European  
Biofuels TP



Bio-NCP  
of Russia

Coordinator  
Centre

Management  
Body

Scientific Centre  
Experts

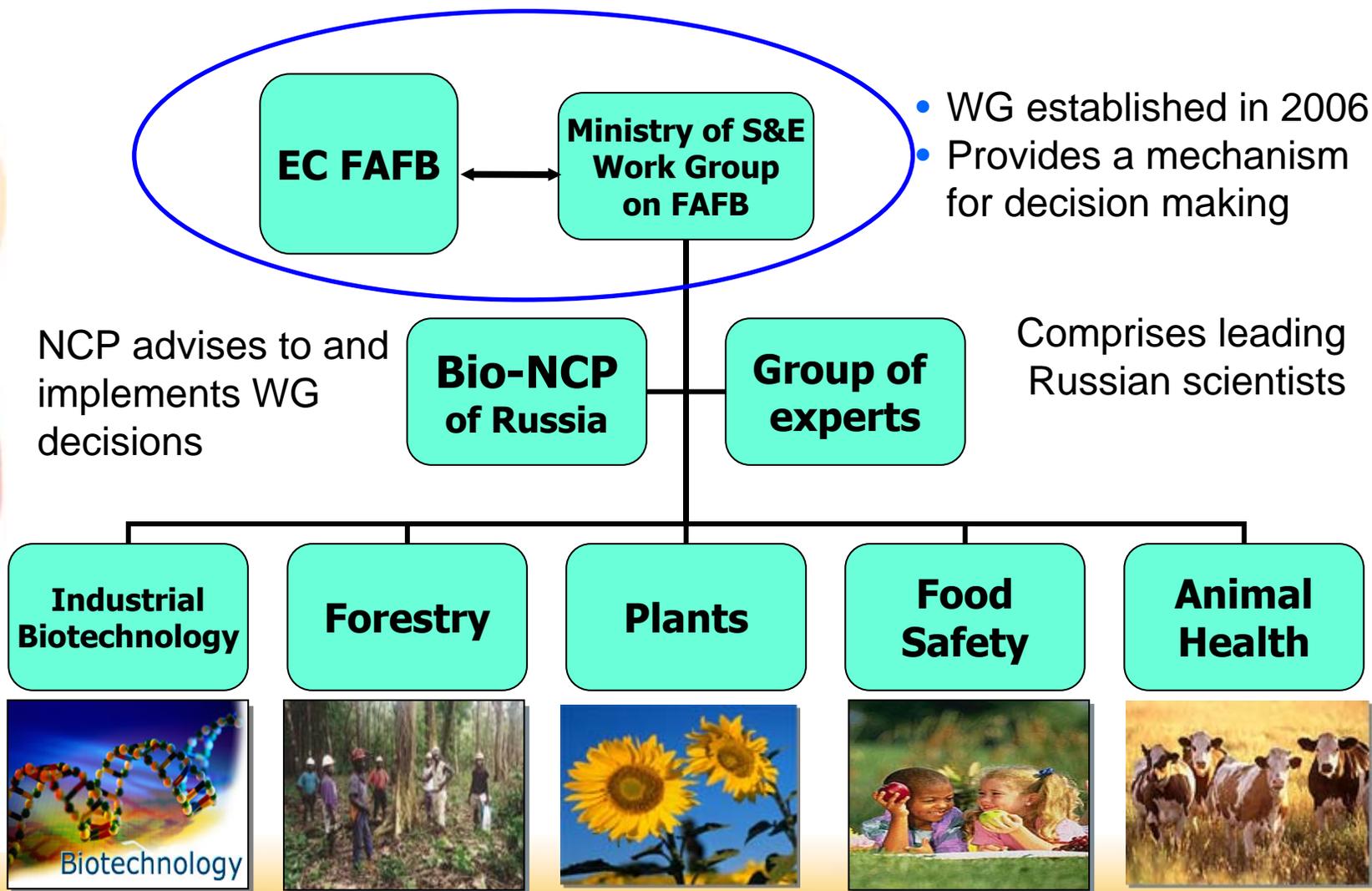
Scientific Centre  
Experts

Scientific Centre  
Experts

Scientific Centre  
Experts



# Structuring of Russian Biotech Community



## Main Activity of Bio-NCP of Russia in Formation of Russian TPs



- Selection of national thematic priorities for formation of Russian TPs for participation in FP7 Programme
  - **Food Biotechnology**
    - **MSU of Applied Biotechnology, Institute of Nutrition RAMS, etc.**
  - **Industrial Biotechnology**
    - **Institute Biochemistry RAS, MSU, SI of Genetics, etc.**
  - **Biotechnology of Plants**
    - **Centre of Bio-engineering RAS, etc.**
  - **Forestry**
    - **MSU of Forest, Centre of forest ecology and Production RAS, etc.**
  - **Animal Health**
    - **State Institute of Animal Feed, etc.**

# Examples of Russian Consortia in Technology Platforms



<b>A.N. Bakh Institute of Biochemistry, RAS</b>	<b>Moscow State University</b>	<b>GosGNIIGenetika</b>
<b>Puschino Research Centre of RAS</b>	<b>SME «VOSTOK»</b>	<b>Institute of Microbiology of RAS</b>
<b>SME «Rosalko»</b>	<b>Institute of Plastics</b>	<b>6 SMEs</b>
<b>Institute of Engineering Ecology</b>	<b>Textile Institute</b>	<b>Centre of Cardiac Surgery RAMS</b>



# EU-RUSSIA Symposia on FP6/7 FAFB Priorities



- An important instrument to strengthen EU-Russia co-operation in TPs
  - I Moscow 2004
  - II Moscow 2005
  - III St. Petersburg 2006
  - **IV Suzdal August 2007**



## Symposium "EU-Russia: Prospective of R&TD Co-operation in Biotechnology"



**March 2005,  
Moscow**



- 350 participants from R&TD Centres of the Russian Federation and NIS countries
- 140 R&TD Proposals on FAFB-Priorities from KRUAB-Countries potential participants
- CATALOGUE of FP7 FAFB-Sector potential participants from KRUAB-Countries («Injoy&Train» Project)

<http://www.fp6-food.ru/symposium/docs/catalog-cs.pdf>

<http://www.injoyandtrain.net/injoyandtrain>

<http://www.fp6-food.ru/ijt/home.htm>

# Symposium "EU-Russia: Prospective of R&TD Co-operation in Biotechnology in EC FP7 Programme"



**June 2006  
St-Petersburg**



# EU-RUSSIA Symposium “Prospects for R&D Co-operation in Biotechnology in FP7”

5-8 June 2006 St. Petersburg



## Objectives:

- Discussion of key issues and prospective of R&D cooperation between Russia and EU in Biotechnology in FP7
- Discussion of Russian participation in FP7 European Technology Platforms
  - Presentation of Russian Technology Platforms

## Main results:

- Joint Declaration of the EC-Russia Working Group on Agro-Bio-Food
- More than 200 scientists, SME representatives and multipliers from Russia and NIS countries
- About 50 experts from EU
- International School of Young Scientists «Biotechnology for the Future»
  - more than 60 young scientists from EU and NIS
- Brokerage Events and Poster Sections
- *InJoy&Train* meeting
  - posted Catalogue of Profile Forms (119 proposals) for participation in EC FP7 FAFB priorities
- Russian-German Satellite Symposium on Bioinformatics Network



«Восточно-европейская сеть сотрудничества для международного совместного обучения в области шестой и седьмой рамочной программы по направлению - пища, сельское хозяйство, биотехнология для стран ЕС — Казахстана — России — Белоруссии — Украины — Армении»

### События

**12-14 сентября 2006 г.** в г. Варна (Болгария) пройдет **"Transnational training on the 6th and 7th Framework Programme"** - обучение для тех, кто работает в области 6 и 7 рамочных программ.  
[Подробнее см. здесь >>>](#)

**7-8 сентября 2006 г.** в г. Алма-Ате (Казахстан) будет проходить **"Training on 6th and 7th Framework Programme for Research Kazakhstan"** - обучение по FP6 и FP7 для ученых из Казахстана в рамках гранта InJoy&Train  
[Подробнее см. здесь >>>>](#)

**Каталог потенциальных участников 7-ой Рамочной программы (CATALOGUE of EC FP7 TP-FAB Participants)**

[Архив](#)

**InJoy&Train** - это специальная акция поддержки, рассчитанная на 2 года, целью которой является увеличение квоты участия ученых, координаторов направлений и представителей инновационного бизнеса из Казахстана, России, Белоруссии, Украины и Армении в европейских научных исследованиях в рамках шестой рамочной программы по направлению "Качество и безопасность продуктов питания" и в рамках будущей седьмой рамочной программы по направлению "Продукты питания, сельское хозяйство и биотехнология".

ПИТАНИЕ

Food quality & safety

InJoy&Train  

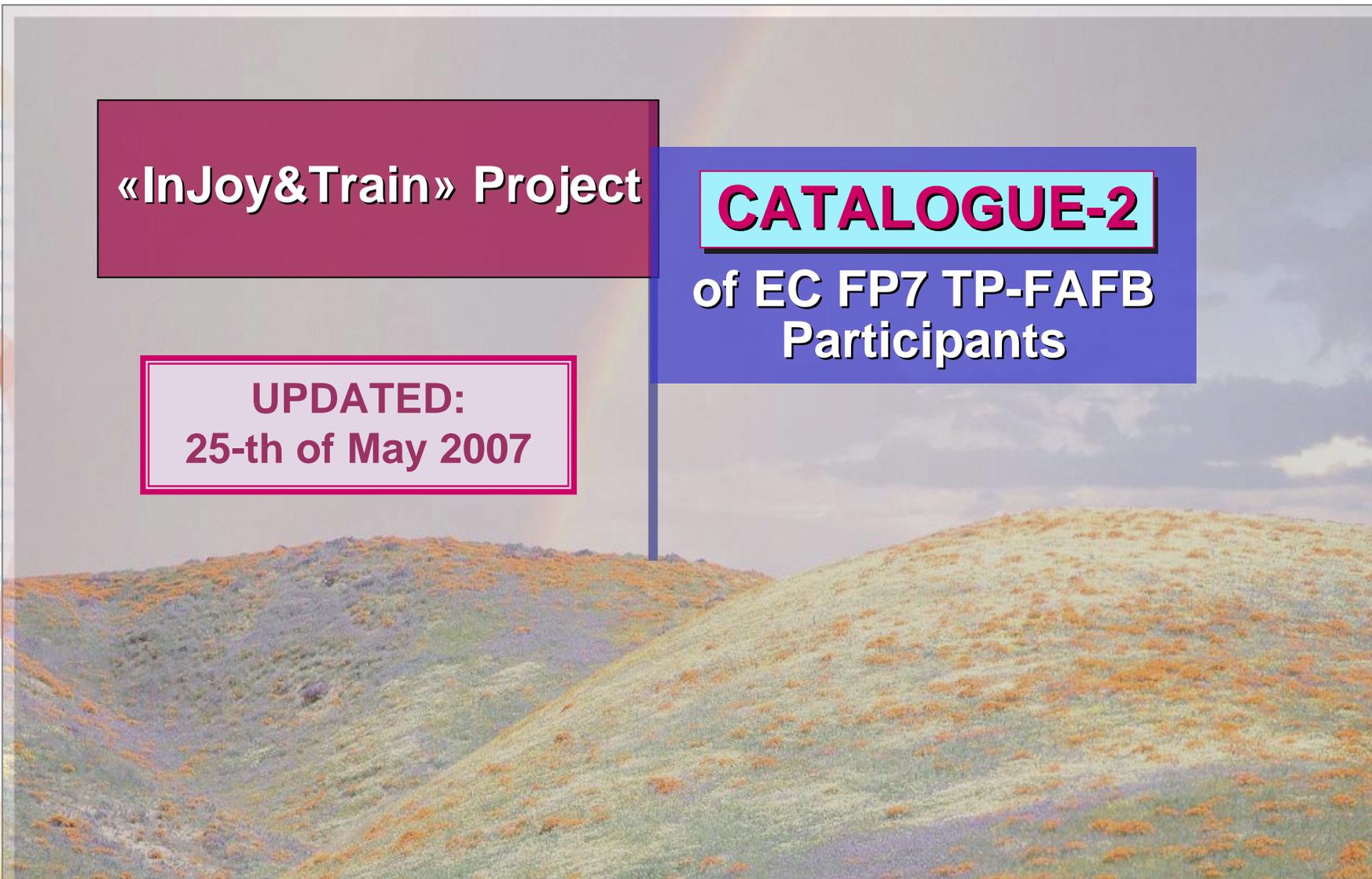

В рамках работы проекта будет создана База данных (России, Казахстана, Белоруссии, Украины и Армении) потенциальных участников будущей седьмой Рамочной программы (FP-7)  
[Подробнее см. здесь >>>](#)

«InJoy&Train» Project

**CATALOGUE-2**

of EC FP7 TP-FAFB  
Participants

UPDATED:  
25-th of May 2007



# CATALOGUE-2 of EC FP7 TP-FAFB Participants

## «InJoy&Train» Project

### Research Organisation Profile Form

Date: 2006 January Valid until: 2013 December

#### CONTACT DETAILS

Organisation Name (full name)	<b>Institute of Hydroecology and Ichthyology of National Academy of Sciences of Armenia</b>	Contact person:	
Organisation acronym (Abbreviation)	IHEI	Title	Dr
Department / Sector / Faculty		First Name	<b>Bardukh</b>
Address	24D Baghramyan Ave.	Family Name	<b>Gabrielyan</b>
Postal code	0019	Telephone	+374 10-525424
City	Yerevan	Fax	+374 10-523830
Country	Armenia	E-mail	<a href="mailto:gabrielb@sci.am">gabrielb@sci.am</a>
www address			

### Multiplier Profile Form

Date: 2006 January Valid until: 2013 December

#### CONTACT DETAILS

Organisation Name (full name)	<b>Ministry of Agriculture of the Republic of Armenia</b>	Contact person:	
Organisation acronym (Abbreviation)	Ministry of Agriculture of the Republic of Armenia	Title	Mr
Department	Raw Food Safety Department	First Name	<b>Tigran</b>
Address	3 Government Building, Republic Square	Family Name	<b>Gasparyan</b>
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City	Yerevan	Fax	(374 10) 523-793
Country	Armenia	E-mail	<a href="mailto:t.gasparyan@mail.ru">t.gasparyan@mail.ru</a>
www address			

### SME Profile Form

Date: 2006 October Valid until: 2013 December

#### CONTACT DETAILS

Organisation Name (full name)	<b>Wine-cellar "Getnatoun"</b>	Contact person:	
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ПИТАНИЕ  
Food quality & safety

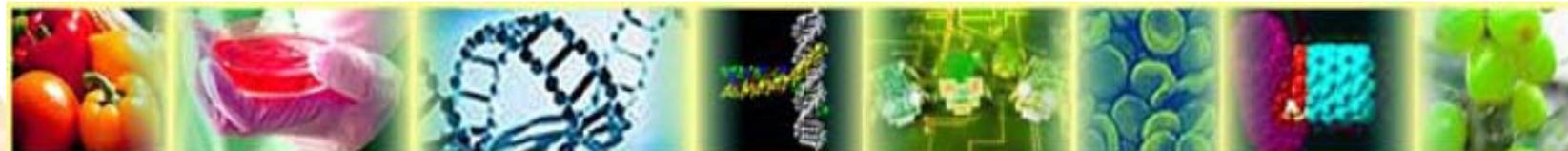


# Reference Guide of «InJoy&Train» Project



СПРАВОЧНОЕ РУКОВОДСТВО  
по Проекту «InJoy&Train»  
для участников FP7 Программы ЕС  
**Russian Version**

RERERENCE GUIDE  
of «InJoy&Train» Project  
**English Version**



ПИТАНИЕ  
Food quality & safety

InJoy&Train  


# Russian National Contact Point on «Biotechnology, Agriculture & Food», (Bio-NCP of Russia on FP6-FP7 Programmes of EC)



## Thank you for your attention

### Good Luck in FP7!

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